



**vedanta**

transforming elements

**VLL/HSE/ENV/2020/1240**

26<sup>th</sup> November 2020

To  
Additional Director,  
Ministry of Environment Forest & Climate Change,  
Eastern Region Office, A/3,  
Chandrasekharapur,  
Bhubaneswar -751023.

**Sub:** Six monthly compliance reports of 1 MTPA to 4 MTPA Alumina Refinery and 75 MW to 285 MW Captive Power Plant of **M/s Vedanta Limited** at Lanjigarh, Dist. Kalahandi, Odisha.

**Ref:** Environmental Clearance No. J-11011/53/2014-IA-II (I) dated 20<sup>th</sup> November 2015

Dear Sir,

We are herewith submitting the monitoring report of *April 2020 to September 2020* along with compliance status of the above environmental clearance conditions for your kind information.

Thanking you,

Yours faithfully,  
For Vedanta Limited, Lanjigarh

*B. Sivakumar* 26/11/2020

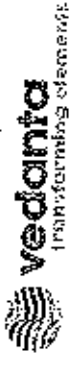
**B Sivakumar**  
(Head HSE & S)  
[HeadHSE.VLL@vedanta.co.in](mailto:HeadHSE.VLL@vedanta.co.in)



Encl: As above

Copy to:

1. Additional Director, Ministry of Environment Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110 003
2. Member Secretary, Central Pollution Control Board, Paribesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110032
3. Member Secretary, State Pollution Control Board, A-118, Nilakantha Nagar, Unit-VI(i), Bhubaneswar-751012
4. Regional Office, State Pollution Control Board, 1<sup>st</sup> Lane, Kasturinagar, Rayagada.



**Compliance**  
**To**  
**Environmental Clearance Conditions**  
**Of**  
**M/s Vedanta Limited, Lanjigarh**

**For the period: Apr'20 - Sept'20**

**(MoEF & CC Letter Ref No: J-11011/53/2014-IA-II (I), dated 20.11.2015)**

Name of the Project: Vedanta Limited, Lanjigarh

Clearance Letter/s No. and date: J-11011/53/2014-IA-II (I), dated 20.11.2015

Period of Compliance Report: Apr'20 - Sept'20

Specific Conditions:

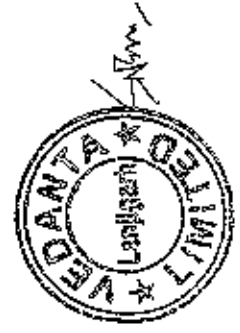
Sr. No.	Conditions	Compliance Status
1	The project proponent should install 24*7 air and water monitoring devices to monitor air emission and effluent discharge, as provided by CPCB and submit report to Ministry and its Regional Office.	Six Continuous Ambient Air Quality Monitoring Station (CAAQMS) has been installed inside the Refinery to monitor PM10, PM2.5, SO2, NOx & CO. The Real Time Data is being transmitted through Real Time Data Acquisition System (RTDAS) to OSPCB server continuously. In addition to the above, CRMS of all the stacks are connected to the RTDAS of the Board. Our refinery has been designed as per Zero Discharge Concept. Hence no effluent is being discharged. The monitoring reports of the above are submitted to Ministry and its Regional Office through half-yearly compliance reports.
2	The environmental clearance is for Phase - I (ZMTPA) and Phase - II (4MTPA) of the project only. No expansion or modification shall be carried out without prior approval of the Ministry of Environment and Forests.	Noted
3	The complete details of land acquisition for 883 ha required for Phase - I and Phase - II shall be furnished to MOEF & CC and RO, Bhubaneswar as part of the Compliance report.	No additional land required for Phase-I. For Phase-II, 53.4 ha of additional land required for which Section 4(I) & Section 6(I) Notification under the Land Acquisition Act has been initiated. The same will be submitted after acquisition of land required for Phase-II & Phase-III.



Sr. No.	Conditions	Compliance Status
4	The land acquisition of 53.4 ha required for Phase - II shall be completed and details furnished to MOEF & CC, its RO at Bhubaneswar and to Odisha SPCB for grant of CTO before commissioning the 4 MTPA expansion project.	The process of acquiring 53.4 ha has been initiated through Section 4(1) & Section 6(1) Notification under the Land Acquisition Act (was submitted in the six monthly compliance report dated 28 <sup>th</sup> May 2016 as Annexure-I). The details of the same will be furnished to MOEF&CC, its regional office, OSPCB for grant of CTO for 4 MTPA, once the process is completed.
5	For Phase - III (6MTPA), the proponent shall obtain amendment of EC after completion of land acquisition of the balance area of 666.03 ha details of which will be furnished to MOEF & CC.	The same will be done after complete acquisition of land. (Our Letter no. VLL/LAN/L.F/2020/21 dated 7th May, 2020 has been submitted in this regard to MoEF & CC based on the conclusion of land requirement given by Industrial Promotion & Investment Corporation of Odisha (IPICOL), the nodal agency of Government of Odisha after carrying out due assessment through Engineers India Limited (EIL), a Government of India Undertaking, that the total requirement of land for expansion upto 6 MTPA is of only 666 acres i.e. 269.52 Ha (inclusive of ongoing acquisition of 53.5 Ha meant for Red Mud Disposal facility) and communicated to us vide their letter dated 18th March, 2019. It has been further stated in the IPICOL letter of approval that the land requirement for rail project expansion will be separately assessed.)
6	Electrostatic Precipitator(s) shall be provided to Kiln and boiler stacks to control gaseous emissions within 50 mg/NM <sup>3</sup> . The height of the stacks shall be as per the CPCB guidelines. Gaseous emissions should be regularly monitored and records maintained and reports submitted to this Ministry including its Regional Office as part of the compliance report.	The Calciners and Boilers have been provided with ESPs having 99.5 % efficiency. Installation of bag filters in three ESPs of CPP are completed & PM emission is achieved as prescribed in the notification (PM< 50 mg/Nm <sup>3</sup> ). The heights of the stacks are designed as per the CPCB guidelines. The monitoring report is being submitted to SPCB on monthly basis & to regional office MOEF vide half-yearly compliance report. In addition to the above, CEMS of all the stacks are connected to the RTDAS of the Board.
7	The estimated 4.8 MTPA of red mud generated in Phase - I and II shall be stored in the red mud pond only designed as per the guidelines with proper leachate collection system and ground water all around the red mud disposal area shall be monitored regularly and report submitted to the Odisha PCB/CPCB and Regional Office of the Ministry at Bhubaneswar. Proper care shall be taken to ensure no run off or seepage from the red mud disposal site to natural	The red mud generated in Phase-I & Phase-II will be stored in red mud yard only through dry stacking of red mud. Observation: bore wells have been installed around Bauxite residue disposal area (RMP) for monitoring of ground water quality & reports of the same are being submitted to SPCB on monthly basis & to regional office MOEF vide half-yearly compliance report. Bauxite residue disposal area (RMP) is designed and provided with HDPE liners to prevent any seepage. In addition earthen drains are constructed along the periphery of Bauxite residue disposal area (RMP) and



Sr. No.	Conditions	Compliance Status
	drainage. Sewage sludge shall be used as manure within the premises.	connected to collection pits with pumping facility to recycle back the seepage water if any.
8	The red mud generated will have moisture and will not be in powder form but in cake form. The red mud from the storage area shall not be let off along with the rain water particularly during rainy season and an effective drainage plan has to be prepared to ensure that rainwater entering the project area is not contaminated with red mud.	To divert the rain water from red mud cake storage area, suitable garland drains are provided which are connected to the collection pits with pumping facility to recycle back the water to process.
9	The red mud slurry shall be converted into red mud powder using a high pressure filtration system by which, the red mud shall not be in a slurry form but in cake form and thereafter sold for use by cement manufactures. The stock piles shall be stored in areas which shall be lined.	Red mud slurry is being discharged through HCSD technology & as a step forward the red mud slurry is further processed with High Pressure Membrane Filtration Technology by Red Mud Filtration unit for dry stacking of red mud having 80% solids which eliminates completely the wet storage of red mud. This new system is first of its kind across the country.
10	A plan for utilization of red mud generated shall be implemented. Under the plan, the entire amount of red mud generated from the project would be sold to cement industry. MoU shall be signed with potential buyers including cement companies for long term supply of red mud.	Roadmap is prepared for utilization of Red mud. Purchase order from Cement company get placed based on the required quantity at each time. Studies are under progress for utilisation in Road construction and Iron recovery from Red mud.
11	Coal linkage shall be firm up and furnished as part of the Compliance report. The details of coal linkage (source and quantity)/procurement details for Phase - I and Phase - II of the project shall be furnished as part of the compliance report to MOEFCC and to RO, Bhubaneswar. Details of Coal Characteristics also shall be furnished along with specific quantity from domestic market/linkage/imports.	Coal for the expanded refinery will be sourced from linkage with the CIL and imports. Present coal linkage documents i.e. FSA with MCL & CCL (was submitted in the six monthly compliance report dated 28 <sup>th</sup> November 2019 as Annexure - I (A), Annexure - I (B) and is attached as Annexure - I (C)). The imported coal procurement agreement and amendment copy is attached as Annexure- I (D) & Annexure- I (E). The coal procurement details from Apr'20 to Sep'20 of domestic & imported coal are attached herewith Annexure - I.
12	All the fly ash generated from the Alumina Refinery shall be properly stored in ash storage pond and provided to cement and brick manufacturers for further utilization. Ash pond created for the existing project shall be used for storage of ash for the expansion project. Ash shall be evacuated through High Concentration Slurry Disposal (HCSD).	Ash is being disposed through High Concentration Slurry Disposal (HCSD) technology. Ash generated from refinery is being properly stored in ash pond and further the ash is also being used for the purpose of brick manufacturing, land development, dyke height raising & road making. 55.3% of the generated ash has been utilized in the FY2020-21 (till Sept'20).



Sr. No.	Conditions	Compliance Status																									
13	Green belt shall be developed in 33% area to mitigate the effects of fugitive emissions as per the CPCB guidelines. Plant species form local area shall be selected in consultation with DFO for green belt development.	Green belt has been developed in & around the refinery, township, rehabilitation colony, Bauxite residue disposal area (RMP), PWL and Ash pond, covering an area of 278.216 Ha (till Sept'20) as per the CPCB guidelines. All the Plant species selected for green belt development are of local varieties and has been planted in consultation with DFO. The year wise plantation details are given in Annexure-II.																									
14	Rehabilitation and Resettlement plan for the project affected population including tribal population should be implemented as per the policy of the Govt. of Odisha.	The same will be implemented as per the R & R policy of the Govt of Odisha.																									
15	For undertaking Phase - I and Phase - II of the project, the project proponent shall finalize the MOUs/ Agreements for firm availability of bauxite of 5.2 MTPA for Phase - I and 10.4 MTPA for Phase - II and details furnished to MOEFCC and its RO at Bhubaneswar.	We have been granted the Consent to Operate for capacity of 2MTPA (Phase-I) for which we require 5.2MTPA of bauxite. The details regarding procurement of bauxite from different sources has already been submitted as Annexure-V in the six monthly compliance report dated 28 <sup>th</sup> May 2016. However, the focus lies in procuring Bauxite from mines in Odisha, for which we are having agreement with Government of Odisha through OMC. The agreement copies was submitted in the six monthly compliance report dated 28 <sup>th</sup> November 2019 as Annexure -III (A) & Annexure -III (B).																									
16	All the recommendation made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Aluminium sector shall be strictly implemented.	Under Corporate Responsibility for Environmental Protection (CREP) for the aluminium sector, Red mud is being disposed through HCSD technology into Red Mud Filtration unit where red mud cake is being formed through high pressure filtration technology.																									
17	The gaseous emissions (PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>x</sub> ) from various process units shall conform to the standards prescribed by the concerned authorities from time to time. The OSFCB may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. The particulate emissions from the plant shall not exceed 50mg/NM <sup>3</sup> . At no time the emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.	All the emission levels are well within the standards. All the pollution control systems are working with desired efficiency. 6 number of AAQ monitoring stations have been installed in consultation with SPCB. The AAQ monitoring is being carried out regularly and records also maintained. The summary of the monitoring AAQ data is as follows: <table border="1" data-bbox="1129 188 1310 1003"> <thead> <tr> <th data-bbox="1129 936 1185 1003">In</th> <th data-bbox="1129 712 1185 936">Industrial</th> <th data-bbox="1129 555 1185 712">Standard Norm</th> <th data-bbox="1129 353 1185 555">Residential</th> <th data-bbox="1129 188 1185 353">Standard Norm</th> </tr> </thead> <tbody> <tr> <td data-bbox="1185 936 1217 1003">PM<sub>10</sub></td> <td data-bbox="1185 712 1217 936">63.0 - 77.0</td> <td data-bbox="1185 555 1217 712">100</td> <td data-bbox="1185 353 1217 555">51.0 - 73.0</td> <td data-bbox="1185 188 1217 353">100</td> </tr> <tr> <td data-bbox="1217 936 1249 1003">PM<sub>2.5</sub></td> <td data-bbox="1217 712 1249 936">29.4 - 47.4</td> <td data-bbox="1217 555 1249 712">60</td> <td data-bbox="1217 353 1249 555">21.3 - 42.4</td> <td data-bbox="1217 188 1249 353">60</td> </tr> <tr> <td data-bbox="1249 936 1281 1003">SO<sub>2</sub></td> <td data-bbox="1249 712 1281 936">7.2 - 11.2</td> <td data-bbox="1249 555 1281 712">80</td> <td data-bbox="1249 353 1281 555">4.1 - 9.4</td> <td data-bbox="1249 188 1281 353">80</td> </tr> <tr> <td data-bbox="1281 936 1310 1003">NO<sub>2</sub></td> <td data-bbox="1281 712 1310 936">14.2 - 21.4</td> <td data-bbox="1281 555 1310 712">80</td> <td data-bbox="1281 353 1310 555">9.2 - 19.2</td> <td data-bbox="1281 188 1310 353">80</td> </tr> </tbody> </table>	In	Industrial	Standard Norm	Residential	Standard Norm	PM <sub>10</sub>	63.0 - 77.0	100	51.0 - 73.0	100	PM <sub>2.5</sub>	29.4 - 47.4	60	21.3 - 42.4	60	SO <sub>2</sub>	7.2 - 11.2	80	4.1 - 9.4	80	NO <sub>2</sub>	14.2 - 21.4	80	9.2 - 19.2	80
In	Industrial	Standard Norm	Residential	Standard Norm																							
PM <sub>10</sub>	63.0 - 77.0	100	51.0 - 73.0	100																							
PM <sub>2.5</sub>	29.4 - 47.4	60	21.3 - 42.4	60																							
SO <sub>2</sub>	7.2 - 11.2	80	4.1 - 9.4	80																							
NO <sub>2</sub>	14.2 - 21.4	80	9.2 - 19.2	80																							



SKS

Sr. No.	Conditions	Compliance Status
18	In-plant control measures for checking fugitive emissions from spillage/raw materials handling etc. should be provided and particulate matter from Bauxite transport and crushing shall be provided with highly efficient bag filters and covered conveyers and adequate water sprinkling shall be done.	In-plant control measures have been provided to control the fugitive emissions. (Dust Suppression System of Dry fog type are provided at all transfer points at Bauxite Handling Area & Coal Handling area, Wet Scrubbers at Lime Plant, Bag Filter for Alumina Handling Plant, water sprinkler system through sprinklers and & mobile mist cannon on stockpiles have been installed in bauxite stockpile areas and sprinklers have been installed at Coal Handling area). To reduce the fugitive emissions through vehicular movement, in plant concrete roads have been laid and water sprinkling is done through mobile water tankers. All the raw material movement into the plant including bauxite is being done through rail. Stockpiles of bauxite are provisioned with permanent water sprinkling system and conveyed through closed conveyor system.
19	The additional water requirement to be met from River Tel for Phase - I and Phase - II shall not exceed the quantity sanctioned by the State Government from River Tel.	Noted.
20	The requirement of make-up water at present is 0.20 cumecs and shall not exceed 0.40 cumecs for the Phase - II expansion. The total make-up water requirement for the 6 MTPA project shall not exceed 0.6 cumecs.	Noted.
21	The existing raw water reservoir (2.1 lakh m <sup>3</sup> capacity), storm water pond (75,000 m <sup>3</sup> capacity); caustic water pond (94,350 m <sup>3</sup> capacity), red mud pond (7.2 lakh m <sup>3</sup> capacity) totaling 39 lakh m <sup>3</sup> shall be utilized as rain water harvesting ponds. In addition, about 1 lakh m <sup>3</sup> of rainwater shall be harvested from township which will be recharged to groundwater to meet the domestic requirement of an estimated 2300 people for a complete year. With this water harvesting measures the PP shall reduce fresh water consumption to an extent of about 40%.	Rain water collection is being practiced through raw water reservoir, storm water pond, caustic water pond, and red mud pond. Rain water harvesting project through ground water recharge has been implemented at township.
22	The plant will operate on a zero-discharge concept and all treated water shall be recycled and reused. No effluents shall be discharged outside the premises during the non-monsoon period and during the monsoon period water should be discharged only after proper treatment and meeting the norms of the OPCA/CPCB. There shall be	The plant is operating with zero discharge concepts by 100% recycle of waste water as well as other sources of effluents. No discharge is being made to outside water bodies from any of the facilities of the plant. Separate drains have been constructed in the entire plant area for collection of storm water (Storm water drain) and process water (Caustic drain). Storm water



Sr. No.	Conditions	Compliance Status
	<p>separate drain for storm water/rainwater. The company shall construct separate RCC drains for carrying storm water inside the plant. Decanted water from red mud pond is collected in the Process Water Lake during the monsoon and the same water recycled back to the process through pumping arrangements. The concrete drains shall be de-silted and regular supervision of the areas shall be carried out so that blocking of drains may be avoided for quick discharge of rainwater.</p>	<p>drains are connected to Clear water pond and caustic drains to caustic pond. At present, the process water lake is used only for storing rain runoff water from the red mud pond. This stored water is fully recycled and used in the process. Regular activities like de-siltation &amp; cleaning have been carried out prior to monsoon to avoid blocking of drains.</p>
23	<p>Of the total area of 1552.65 ha, an area of 512.37 ha (33%) shall be developed into green belt. Of this, a total of 215.20 ha green belt have been developed and the balance area of 297.17 ha shall also be brought under plantation, which includes plantation in a width of 15-20m along the remaining boundary wall of 3km of the 8km.</p>	<p>Green belt will be developed as mentioned in the condition once the total land acquisition has been completed.</p>
24	<p>Material transportation shall be by rail for which a dedicated railway line for transportation of both raw materials and product shall be established. Material handling areas shall have DFS.</p>	<p>All the material movement including raw materials and final product are being done through a dedicated railway management system. All the material handling areas i.e. coal handling area, bauxite handling area are provisioned with Dust Suppression System of Dry fog type.</p>
25	<p>The company shall comply with all the commitment made during public hearing/public consultation.</p>	<p>Noted</p>
26	<p>The details of quantity and source of bauxite procured shall be submitted as part of the six-monthly compliance report.</p>	<p>The details regarding procurement of bauxite from different sources has already been submitted as Annexure-V in the six monthly compliance report dated 28<sup>th</sup> May 2016. The bauxite procurement details from Apr'20 to Sept'20 is attached herewith Annexure - IV.</p>
27	<p>Provisions shall be made for the housing of construction Labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile SIP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.</p>	<p>Noted</p>
28	<p>At least 2.5% of the total cost of the project (Rs 10,000 crores) shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent shall prepare a detailed CSR plan for</p>	<p>Towards Enterprise Social Commitment (ESC) in addition to CSR plan of the company, the details has been submitted to the MOEF&amp;CC vide letter no. VIJ./HSE/ENV/2020/1160 dated 30.01.2020.</p>



SAS



Sr. No.	Conditions	Compliance Status
	<p>every next five years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill) Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc.) activities in consultation with the local communities and administration. The CSR plan will include the amount of 2% retain annual profits as provided for in clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 year towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO, Birbaueswar. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual report of the Company.</p>	<p>Keeping in view of the social development, LPADF is formed under the chairmanship of RDC, Berhanpur as per the guidance of Hon. Supreme court of India. AS per the decision of the LPADF, various sector-wise development activities are being taken up at both the district level. The CSR expenditure for FY 2019-20 has been attached in Annexure-V.</p>

### General Conditions

Sl no.	Conditions	Compliance Status
1	<p>No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.</p>	Noted
2	<p>At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, PM2.5, SO<sub>2</sub> and NO<sub>x</sub> are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional office at Birbaueswar and the SPCB/CPCB once in six months.</p>	<p>Six AAQ monitoring stations have been installed in consultation with SPCB at various locations in &amp; around the refinery. The AAQ monitoring is being carried out as per the guidelines of National Ambient Air Quality Standards. The monitoring reports for ambient air quality and stack emissions are being submitted to SPCB on monthly basis &amp; to regional office MOEF vide half-yearly compliance report.</p>
3	<p>Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.</p>	<p>The plant is operating with zero discharge concept by 100% recycle of industrial waste water. Hence, no discharge is being made to outside water bodies or used for any other purposes.</p>



Sl no.	Conditions	Compliance Status									
4	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 v/z. 75 dBA (daytime) and 70 dBA (nighttime).	<p>During detailed engineering stage, care has been taken by providing suitable acoustic measures to contain noise level up to 85 dB(A) in frequented areas and to contain plant overall noise level of 75dB(A) during daytime and 70dB(A) during night time. The noise monitored data is as follows:</p> <table border="1" data-bbox="470 156 566 436"> <thead> <tr> <th></th> <th>Daytime dB</th> <th>Nighttime-dB</th> </tr> </thead> <tbody> <tr> <td>Industrial</td> <td>72.0 - 72.5</td> <td>65.5 - 66.0</td> </tr> <tr> <td>Residential</td> <td>45.2 - 54.6</td> <td>32.9 - 44.8</td> </tr> </tbody> </table>		Daytime dB	Nighttime-dB	Industrial	72.0 - 72.5	65.5 - 66.0	Residential	45.2 - 54.6	32.9 - 44.8
	Daytime dB	Nighttime-dB									
Industrial	72.0 - 72.5	65.5 - 66.0									
Residential	45.2 - 54.6	32.9 - 44.8									
5	Occupational health surveillance of the workers be done on a regular basis and records maintained as per the factories Act.	Occupational health surveillance of the workers is being done on regular basis as mandatory by The Factories Act, 1948 & Oatisha Factory rules 1950. The records are being maintained and are being submitted to The Director, Factories & Boilers.									
6	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Rain water collection is being practiced through rain water harvesting structures like raw water reservoir, storm water pond, caustic water pond, and red mud pond. In addition to this, rain water harvesting project has been implemented at township to recharge the ground water table.									
7	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socioeconomic development activities in the surrounding village like community development programs, educational programs, drinking water supply and health care etc.	Noted									
8	Requisite funds shall be e-marked towards capital cost and recurring cost and recurring cost/ annum for environmental pollution control measures to implement the conditions stipulated by the Ministry as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bhubaneswar. The funds so provided shall not be diverted for any other purpose.	All the conditions imposed by MOEF and SPCB have been completed and no fund has been diverted.									



Sl no.	Conditions	Compliance Status
9	A Copy of clearance letter shall be sent by the proponent to concern panchayat, Zilla parishad/Municipal corporation, urban local body and the local Ngo, if any from whom suggestion/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	As there was no suggestion / representations from any such agencies, hence letter of clearance has not been sent  The clearance letter has been uploaded on the website of the company i.e. <a href="http://www.vediantaluminium.com">http://www.vediantaluminium.com</a> .
10	The project proponent shall upload the status of the compliance of the stipulated environment clearance conditions, including result of monitoring data on their website and shall update the same periodically, it shall simultaneously be sent to the Regional Office of the MOEF & CC at Bhubaneswar, the respective Zonal Office of CPCB and SPCB. The criteria pollutant levels namely: PM10, SO2, NOx (Ambient level as well as Stack Emissions) or critical sectoral parameter indicated for the project shall be monitored and displayed at convenient location near the main gate of the company in the public domain.	Noted.  The company has installed six CAAQMS where the parameters PM10, PM2.5, SO <sub>2</sub> , NO <sub>2</sub> , CO are being monitored and the same is being displayed near the main gate of the company.
11	The project proponent shall also submit six monthly report on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by email) to the regional office of MOEFCC, the respective Zonal office of the CPCB & SPCB. The regional office of this ministry at Bhubaneswar/CPCB/SBCB shall monitor the stipulated conditions.	The same will be done on regular basis while submitting six monthly report.
12	The environment statement for each financial year ending 31 <sup>st</sup> March in FORM- V as is mandated to be submitted by the project proponent to the concerned State Pollution control Board as prescribed under the Environment Protection Rules 1986 as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective regional office of the MOEF at Bhubaneswar by email.	Noted
13	The project proponent shall inform the public the project has been accorded Environmental Clearance by the Ministry and copies of the clearance letter are the available with the SPCB and may also be seen at the website of the Ministry of the Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall	The granted environmental clearance has been uploaded in the company website for the information to the public. The same has been advertised in two local newspapers 'The Odisha Bhaskar' and 'The Darshar' in both English & vernacular language (Odia) on 27th November 2015. And the



LSM

SI no.	Conditions	Compliance Status
	be advertised within 7 days from the date of the issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be vernacular language of the locality concerned and the copy of the same should be forwarded to the regional office at Bhubaneswar.	copy of the same was submitted as annexure-VI in the Half yearly compliance report submitted on 28 <sup>th</sup> May 2016.
14	Project authorities shall inform the Regional Office as well as the Ministry, the date of the financial closure and final approval of the project by the concerned authorities and the commencing the land development work.	Noted

**Conditions stipulated in the Environmental Clearances of Thermal Power Plants and Coal Mines in line with the Fly Ash Notification, and subsequent amendments**

SI no.	Conditions	Compliance Status
1	The guidelines prepared by CPCB for disposal of flyash for reclamation of low lying areas and in stowing/backfilling of abandoned mines/quarries shall be followed during disposal of ash in abandoned or working mines, as annexed.	Not Applicable.
2	There should at least be clearance of 500 m of safe distance be maintained from River and water body in case of ash disposal in abandoned mines to prevent embankment failures and flyash flowing into the nearby water body.	Not Applicable.
3	The top layer of the flyash disposal area in the abandoned mines shall be kept moist during disposal.	Not Applicable.



Sl no.	Conditions	Compliance Status
4	Top layer of the disposed area should have 70 cm overburden or gravels/stones and then 30 cm sweet soil cover. Subsequently, the vegetation shall be raised on the soil cover.	Not Applicable.
5	Bioaccumulation and bio-magnification tests shall be conducted on surrounding flora and fauna (tree leaves, vegetation, crop yields and cattle population) during pre-monsoon and post monsoon to find out any trace metals escaped through groundwater or runoff.	Not Applicable.
6	Surface runoff and supernatant water, in any case shall not be let into the surrounding areas. It shall be collected by providing adequate drains around the mine. The supernatant water along with surface runoff shall be treated and re-used for mixing ash and plant operations.	Not Applicable.
7	To the extent possible, only decanted water from mine, make up water from treated effluents such as cooling tower blow down and treated sewage water shall be used for making ash slurry.	Not Applicable.
8	Flyash to be used as soil conditioner in agriculture needs and to be applied in controlled manner to limit excessive application so as to prevent soil degradation. The optimize proportion of ash to be applied which is to be certified by the State Agricultural Universities/ Colleges based on the soil testing.	Not Applicable.
9	Approval from DGMS shall be obtained before disposing the ash in the mine voids.	Not Applicable.
10	Technology for conversion of fly ash into coarse granules for stowing in the underground mines to be explored.	Not Applicable.
11	All the power plants should install different silos for dry collection of flyash.	Complied.
12	Records pertaining to details of month-wise quantity of flyash disposed and water consumption along with nature/source of water shall be maintained and submitted to Ministry/Regional Office annually.	Complied and attached as Annexure-VI



Sl no.	Conditions	Compliance Status
13	Before starting the disposal of ash into mine voids, the NOC/Permission from the mine owner is to be obtained in case the mine closure activities are not completed or State Government in case the mine has been handed over to the State Govt. after its closure. A copy of such NOC/Permission is to be submitted to the Ministry and its Regional Offices.	Not Applicable.



Ministry of Environment & Forest  
Regional Office  
Monitoring Report  
Part-I

**DATA SHEET**

- 1 **Project Type** Alumina Refinery with Captive Power Plant
- 2 **Name of the Project** Vedanta Limited, Lanjigarh
- 3 **Clearance/Approval letter(S) , No data** J-11011/53/2014-IA-II(I) dated 20th November,2015.
- 4 **Locations**
- a) District(s) Kalahandi
- b) State(s) Orissa
- c) Latitude/longitude Lat 19<sup>o</sup>43' 01"  
Long 83<sup>o</sup>24' 26"
- 5 **Address for Correspondence**
- a) Address of concerned project Chief Head-Operations & Factory Manager, Vedanta Limited,Alumina Engineer (with pin code and Refinery Project,P.O.Lanjigarh, Dist.Kalahandi, Orissa- telephone/telex/fax number) 766027.Tel :06677-247312/13/14/15/16 Fax :06677-247311
- b) Address of Executive Project Same as above engineer/Manager(with Pin Code& Telephone/ telex/ fax Nos.
- 6 **Salient features**
- a) Of the project Production of 2.0MT Alumina per annum using Bayer's process & Coal fired steam and power plant.
- b) Of the Environmental Management As given in chapter 3 (Environmental Management plan) of the plans Environmental Impact Assesment report for 6 MT alumina refinery and 285 MW captive power plant, Lanjigarh, Kalahandi, Orissa
- 7 **Break up of the project area (in Ha)**
- Forest area Nil
- Non- Forest area 833.31 Hectares
- Total 833.31 Hectares



*SRM*

8 Break up of project affected : Village-wise details along with R&R package to be given Number of ousters:  
population

Sl.No	Type	Kinari	Borbhata	Bankdhaguda	Kotinduer	Sindhbahal	Bundof	Total
1	SC-Homestead	0	0	0	12	8	0	20
	SC-Land Oustees	12	7	8	14	8	0	49
2	ST-Homestead	51	0	0	1	6	0	57
	ST-Land Oustees	17	7	19	36	24	34	137
3	OBC-Homestead	0	28	0	0	0	0	28
	OBC-Land Oustees	20	4	22	11	7	0	64
4	Others-Homestead	0	0	0	0	0	0	0
	Others-Land Oustees	0	0	5	4	0	0	9
	<b>Total</b>	<b>100</b>	<b>46</b>	<b>54</b>	<b>78</b>	<b>62</b>	<b>34</b>	<b>364</b>

8 Financial Details

a) Project cost as originally Planned and : Original Estimation =Rs. 4500Cr. (approx) as on 2002 subsequent revised Estimates and the years of price reference

b) Allocation made for environmental : Construction completed management plans, with item wise & yearwise break up (in Lakh)

Sl.No.	Items	2004-05	2005-06	2006-07	2007-08
1	Environmental Monitoring and Appraisal Cost	12.00	15.00	120.00	15.12
2	Pollution control equipment and system	0.00	200.00	12836.00	50.00
3	Plantation and Green Belt Developmet	0.00	12.00	25.00	100.00
4	Corporate social responsibility	393.00	709.00	194.35	530.00
5	Pollution Control equipment and System Maintenance				1280.80
6	Red muddy ash and other solid waste handling				1000.00
	<b>Total</b>	<b>405.00</b>	<b>936.00</b>	<b>13175.35</b>	<b>2975.92</b>

c) Benefit cost ratio/internal rate of : Not Applicable. Return & the year of assessment

d) Whether includes the cost of : Not Applicable. environmental management as shown in (b) above

e) Actual expenditure incurred on the : 4357.54 Crore (The same is Gross Block of Fixed assets as per SAP.) project so far (Upto 30th Nov 2013)

10 Forest land requirement:

a) The status of approval for a diversion : No diversion of forest land is involved. of forest land for non forest use

b) The status of compensatory : Not applicable.

c) The status of clear felling : Not applicable.

d) Comments on the viability & : Not applicable. sustainability of compensatory afforestation programme in the light of actual filed experience so far

11 The status of clear felling in non-forest : Nil.

areas (such as sub-mergence area of reservoir, approach roads), If any, with quantitative information

12 Status of construction:

a) Date of commencement (actual and/or : 22nd September 2004 planned)

b) Date of completion (actual and/or : Plant commissioned on Aug 2007 & Commercial production started from Dec 2007 planned (1st phase)

13 Reason for the delay if the project is yet : Not applicable. to start (Please attach a separate sheet if required)





**Environmental Budget**

Sl No	Activity	Expenditure FY 2019-20
1	Green Belt Development & Land scaping	107.46
2	O&M of STP & Biogas plant	32.19
3	Environmental monitoring cost	19.96
4	Water sprinkling system inside refinery	6.86
5	Environmental awareness program	4.59
6	CAAQMS, RTDAS & Piezometer	10.86
7	O&M of Red mud filters & mud shifting cost	1549.71
8	Corporate Social Responsibility	671.77
9	BSP Maintenance of Calciner	14.1
10	Purchase of Mist Cannons	27.0
11	CEMS of Calciner: Maintenance cost	27.25
12	Purchase of Bag Filters	0.56
13	IMS surveillance audit	3.75
14	Tailing dams audits & stability study	22.18
15	Waste Disposal Cost	10.0
16	Procurement of waste bins	4.20
17	Fencing cost of BRDA, PWL & GJJ area	61.0
18	Purchase of RMF filter cloths	462.02
19	Hiring & operation of Mist Cannons	51.0
20	Service cost towards Operation & Maintenance of Coal handling Plant & Ash Handling Plant	773.96
21	Spare cost of Coal Handling & Ash Handling Plant	237.62
22	Sprinkler cost at New coal shed	30.00
23	Clean Storm Pond dredging Cost	29.73
24	Fencing cost of Ash pond	17.55
25	2nd Ash disposal line Cost - Pedestrian work	8.05
26	Ash Dyke height raising	54.70
27	Inspection for ash dyke height increasing	3.54
28	Fly Ash Road Construction	25.13
29	Piezometer installation at Ash Pond	2.92
30	Water sprinkling at Ash pond	6.00
31	Drain cleaning at CHP	3.75
32	CEMS Maintenance Cost	9.63
33	Procurement of Noise Meter	2.74
34	AMC of Environmental Laboratory Equipments	0.88
35	Civil Maintenance cost (Flooring, sump pit & trench liner, RCC road, Sewage line etc.)	126
	<b>Total</b>	<b>4418.6</b>

Note : All the units are in Lakhs



## ANNEXURE - I

<b>DETAILS OF COAL PROCUREMENTS FOR FY 2020-21 (from Apr'20 to Sept'20)</b>		
<b>MONTH</b>	<b>DOMESTIC (In MT.)</b>	<b>IMPORTED(In MT.)</b>
Apr-20	46199	4120
May-20	59705	11874
Jun-20	79361	19661
Jul-20	63640	15697
Aug-20	3804	55143
Sep-20	12793	72848



**ANNEXURE-II**

**PLANTATION IN AND AROUND VEDANTA LTD, LANJIGARH**

Name of the Industry	Year	Area in Ha	No of Plantation	Replacement*
VEDANTA LIMITED Lanjigarh, Kalahandi	Till 31 <sup>st</sup> March 2006	32.3	79200	0
	2006-07	14	37800	0
	2007-08	34	57300	0
	2008-09	37	64535	0
	2009-10	0	0	0
	2010-11	13.866	19409	0
	2011-12	37.2	53459	7100
	2012-13	7.2	17100	85416
	2013-14	14.6	24089	10205
	2014-15	36	73930	50030
	2015-16	10	20000	20500
	2016-17	25	58600	10500
	2017-18	16	35000	49000
	2018-19	1	2500	33040
	2019-20	0	0	25900
2020-21 (Upto Sept'20)	0	0	11360	
<b>Total</b>		<b>278.216</b>	<b>542922</b>	<b>303051</b>

\* The replacement is only for gap filling and has not been included in total calculation.



*SAM*

ANNEXURE- IV

BAUXITE PROCUREMENT (APR'20 - SEPT'20)	
<i>Sources</i>	<i>In MT</i>
OMC-VL	1276712
EGA-Guinea	1364713
RTA-Guinea	74
<b>Grand Total</b>	<b>2641499</b>



S/R

## CSR EXPENDITURE FY 2019-20

S.No	CSR Projects Categories	CSR Project or Activity Identified	Implementing Agency	FY20 Budget (In lakhs)	FY20 Actual (In lakhs)
A		<b>EDUCATION</b>			
A1	EDUCATION	Child Care Centre	FIDR	63	58.3
A2		Support to school (teachers)	Direct	14	10.59
A3		10th coaching Program Shiksha Sambal	FIDR	18	14.85
A4		Scholarships - VQA and DAV MS	Direct	5	4.12
B		<b>HEALTH</b>			
B1	HEALTH	Promoting Preventive health through Vedanta Hospital	PVO	370	325.86
B2		Ambulance Services	Sumitra Ambulance Services	17	17.57
B3		Maa Santoshi Jankalyan Hospital, Bankakundru	Maa Santoshi Jankalyan Foundation Hospital	13.25	11.53
B4		Drinking Water	RWSS & Direct through contractor	12	6.47
C		<b>LIVELIHOOD</b>			
C1	WOMEN EMPOWERMENT	SAKHI SHG strengthening & mobilization	Mahashakti Foundation	31.25	24.86
C2		Dhokra Art & Tribal Art	Mahashakti Foundation	30	15.98
D		<b>PRAGATI</b>			
D1	Rural Infrastructure	Village Infrastructure & school Infra	Direct	183.5	131.27
D2	Sports & Culture	Tournaments	Direct	9.75	4.24
E	Program Management	Assessment, Audit, Village Coordinator, Stakeholder Engagement	Direct	82.25	46.13
F	Admin Cost	Admin Salary	Direct	84.9	-
		<b>Total Cost</b>		<b>933.9</b>	<b>671.77</b>



SRM

## ANNEXURE- VI

Month	Total ash generated (MT)	Total ash utilized (MT)	% of ash utilization	Water Consumption (m <sup>3</sup> )	Nature/Source of Water
Apr-20	24543	6206	25.3	16716	Plant Water recycled/reuse
May-20	27357	24641	90.1	18127	
Jun-20	31518	12205	38.7	18075	
Jul-20	30489	15940	52.3	17938	
Aug-20	28776	11035	38.3	19183	
Sep-20	29643	25307	85.4	18141	
FY2020-21 (Upto Sept'20)	172326	95334	55.3	108180	



*S.R.M.*

# GLENCORE

INTERNATIONAL AG

CXL 94082

Contract No. CXL 94082

Dated: 25<sup>th</sup> April 2020

## CONTRACT FOR SALE AND PURCHASE OF STEAM COAL

**SELLER:** GLENCORE INTERNATIONAL AG  
Baaremattstrasse 3,  
CH – 6340,  
Baar, Switzerland

**BUYER:** VEDANTA LIMITED  
Registered office at  
1st floor, C wing, Unit 103, Corporate Avenue,  
Atul Projects, Chakala, Andhari (East),  
Mumbai-400093, Maharashtra, India

And has one of its Units at  
Vedanta Limited – 90 MW power Plant  
Viewanathpur, Kalahandi District,  
Lanjigarh, Odisha 768027

By this agreement the Seller agrees to sell and the Buyer agrees to buy the following material on the under mentioned terms and conditions:

### 1. DEFINITIONS :

In this Agreement, unless the context otherwise requires, the following terms shall respectively have the following meanings:

- a) A fraction of a cent in any calculation shall be rounded up to the nearest cent if such fraction is one half of a cent or more, and shall be rounded down when otherwise.
- b) A fraction of a tonne in any calculation shall be rounded up to the nearest tonne if such fraction is one half of a tonne or more, and shall be rounded down when otherwise.
- c) "ASTM" means the American Society for Testing and Materials and "ISO" means International Organization for Standardization.
- d) "Coal" means Steam coal of South African origin in bulk.
- e) "Dollars", "US Dollars", "USD", "US\$", "\$", "Cents" where used shall refer to the currency of the United States of America.
- f) "FOB" (Free on Board) shall refer to the completion of the loading of the Coal in the vessel designated by Buyer at the loading port and has the meaning set forth in INCOTERMS – 2020.
- g) "Kcal" means Kilocalorie (s) as defined in the "International System of Units".
- h) "Kg" means Kilogram (s) as defined in "International System of Units".
- i) "mm" means Millimeter as defined in "International System of Units".
- j) "Port of Loading" means the port at which the coal is to be loaded. For this contract it would be Richards Bay Coal Terminal, South Africa.
- k) "Pratique" means permission to do business at a port by a ship that has complied with all applicable local health regulations.
- l) "Statement of Facts" means a document that is drawn up covering the time, the breakdown that occurred and relating to the loading of cargo as well as the duration of and reason for any stoppage of work and is used as a basis for the calculation of laytime.
- m) "Ton (s)", "Tonne (s)", and "MT" means metric tonne of 1,000 Kgs as defined in "International System of Units".
- n) "Working day" means a day upon which business is regularly transacted and unless expressly stated, the term "day" shall be deemed to mean "calendar day".
- o) "Demurrage" means the amount payable by the Seller to the Buyer if time actually used in loading the vessel is greater than the allowed laytime. Demurrage rate shall be notified by Buyer to the Seller at the time of vessel nomination and must be in line with market rate prevalent for similar sized vessels.
- p) "Despatch" means the amount payable by the Buyer to the Seller if allowed laytime is greater than the time actually used in loading the vessel. Despatch rate shall be half of the demurrage rate.
- q) "Laycan" means the period of time agreed for loading the vessel.

Registered address: Baaremattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baaremattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94082

2. **CARGO DESCRIPTION**  
Steam (Non Coking) Coal of South African origin in bulk.
3. **QUANTITY**  
150,000 mts +/- 10% at Vessels option.
4. **SHIPMENT PERIOD (Loadport/Laysan)**  
21-30 May 2020
5. **ORIGIN**  
South African
6. **PORT OF LOADING**  
Richards Bay Coal Terminal, South Africa.
7. **TYPICAL SPECIFICATIONS:** As per ISO/ASTM standards at Seller's option.

Parameter	Typical	Rejection
Total Moisture (arb)	8%	>12%
Moisture In Analysis Sample (adb)	2 - 4%	No rejection
Ash (arb)	20%	>29%
Volatile Matter (arb)	20%	<18 %
Total Sulphur (arb)	1%	>1.1
Net Calorific Value (arb)	4800 kcal/kg	<4800 kcal/kg
Size 0-80mm	90%	No rejection
API - IDT (reducing) deg C	1360	<1150
Hard Groove Grindability Index (adb)	45-70	<45 & >70

The above mentioned are typical specifications as contractually agreed. Nevertheless, if the certificate of sampling and analysis reflects results that do not exceed the rejection confines of specifications listed in the rejection column, the beneficiary of the letter of credit may negotiate LC without discrepancy.

ARB = As Received Basis, NCV = Net Calorific Value = Net Calorific Value Constant volume, ADR = Air Dry Basis, DB = Dry Basis

**8. PRICE**

USD 26.50 per mt (US Dollar twenty six and fifty cents only) FOB RBCT, basis Net Calorific Value (arb) 4800 Kcal/kg scale pro-rata.

**9. PREMIUM / PENALTY**

**Net Calorific Value (ARB)**

If the actual Net Calorific Value (ARB) of coal as declared by independent Inspection Agency is above or below 4800 kcal/kg, then the FOB price will be adjusted as per following formula:

$$\text{Adjusted price} = \frac{\text{FOB Price} \times \text{Actual Net Calorific Value (ARB)}}{4800 \text{ kcal/kg}}$$

No CV cap applicable.

No other price adjustments applicable on any other parameters.

**10. LOAD PORT AND LOADING TERMS:**

The loading terms to be governed strictly in accordance with the latest Shipping Regulations issued by the Richards Bay Coal Terminal Company Limited (RBCT rules) and all such rules, regulations, requirements and restrictions are fully

Registered address: Baarer mattstrasse 3, CH-6340 Baar, Switzerland  
 Mailing address: Baarer mattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
 Telephone +41 41 709 2000, Telefax +41 41 709 3000



# GLENCORE

INTERNATIONAL AG

CXL 94082

Incorporated into this contract by this reference, Any time lost, demurrage, or costs arising from Buyer/charterer/vessel/master/owner's non-compliance with RBCF rules shall be for the buyer's account.

## **Nomination**

The Buyer warrants and represents that it will not nominate any vessel in the performance of its obligations under this Contract in violation of US sanctions, European Union sanctions, Swiss sanctions or any other applicable sanctions (hereinafter, "Sanctions") or which would put Glencore in breach, or under designation risk, of Sanctions.

Glencore will have the right to reject any nomination which (a) violates any Sanctions, (b) puts Glencore in breach, or under designation risk, of any Sanctions, or (c) otherwise involves a vessel that is the subject of any Sanctions (including, but not limited to, vessels that are the subject of Sanctions due to ownership or country of registration, or that appear on any Sanctions list), by serving a rejection notice on the Buyer detailing the grounds for the rejection. Service of such notice shall not constitute a breach of this Contract and Glencore shall not be liable to the Buyer for any losses, claims, costs, expenses, damages or liabilities arising in connection with any such rejection. If Glencore rejects a nomination on these grounds it shall be entitled, at its sole discretion, to (i) require the Buyer to promptly nominate a suitable substitute vessel; or (ii) terminate this Contract.

To the full extent permitted by applicable law, the Buyer shall indemnify Glencore against any and all costs, expenses, losses and liabilities it incurs as a result of the Buyer nominating a vessel in breach of this clause.

## **ISPS Compliance**

The buyers warrant that any vessel which they nominate in connection with this contract complies with the requirements of the ISPS Code and/or the US Maritime Transportation Security Act 2002 ("MTSA"). The seller warrants that any port at which the goods sold under this contract are or are intended to be loaded complies with the requirements of the ISPS Code and/or MTSA (if applicable).

The buyers shall be responsible for any and all costs and/or expenses and/or losses and/or damages and/or delay arising out of or in connection with the failure of the vessel or its owners or charterers to comply with the requirements of the ISPS Code or, if applicable, MTSA and any time thereby lost shall not count as laytime or time on demurrage or detention, as the case may be. The sellers shall be responsible for any and all costs and/or expenses and/or losses and/or damages and/or delay arising out of or in connection with any failure by the vessel to comply with the requirements of the ISPS Code and/or MTSA, if applicable, and any time thereby lost shall count as laytime or time on demurrage or detention, as the case may be. The parties' liability for any breach of these clauses is limited to the direct costs and expenses caused thereby and neither party will bear any responsibility for consequential losses, as defined in the attached ISPS Clause.

The respective responsibilities and obligations of the buyers and the sellers pursuant to this contract are set out fully in the attached ISPS Clause for Loadport (FOB/FAS Contracts), the terms of which are incorporated into this contract and copies of which have been made available to you. In the event of any difference, ambiguity or discrepancy between this Short ISPS Clause and the attached ISPS Clause for Loadport (FOB/FAS Contracts), then the latter shall prevail.

ISPS clause as per Annexure A shall form part of the contract.

## **11. INSPECTION, SAMPLING AND ANALYSIS**

Seller shall, at their own cost appoint an independent Inspection Agency SGS South Africa (SGS, RBCF Terminal Lab) to perform Sampling and analysis at loading port and issue certificate of Sampling and Analysis in their standard format. Results so determined shall be regarded as final and binding on both the parties.

The representative sample shall be divided into three parts to provide:

one sample for analysis by the independent Inspection Agency SGS South Africa (SGS, RBCF Terminal Lab) at the loading port (the "Loading Port Sample");

one sample to be delivered to the Buyer/Buyer's inspection agency if requested in a suitable airtight container properly sealed and labeled

one sample to be retained by the independent Inspection Agency SGS South Africa (SGS, RBCF Terminal Lab) in a suitable airtight container properly sealed and labeled until 90 (ninety) days after the bill of lading date for the vessel (the "Umple Sample").

The Certificate of sampling and analysis issued by such independent Inspection Agency (SGS, RBCF Terminal Lab) will be final and binding for all Commercial and Contractual purposes.

---

Registered address: Baarer mattstrasse 3 . CH-6340 Baar . Switzerland  
Mailing address: Baarer mattstrasse 3 . P.O. Box 1363 . CH-6341 Baar . Switzerland  
Telephone +41 41 709 2000 . Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 84062

In the event that either Party wishes to challenge the results as certified in the Certificate of Analysis, it shall do so by giving written notice to the other Party within 90 (thirty) working days from the date of completion of discharge of the shipment at the discharging port. In such event the Umpire Sample shall be sent for analysis to an independent laboratory, of international repute, mutually agreed on by the Parties (the "Umpire Analysis").

To the extent that the results of the Umpire Analysis for the parameter(s) in question are within ISO/ASTM reproducibility limits of the value(s) obtained by independent inspection Agency SGS South Africa (SGS, RBCT Terminal Lab) at the loading port, the value(s) obtained by such Agency shall be final, and the cost of the Umpire Analysis shall be paid by the challenging Party. To the extent that the results of the Umpire Analysis for the parameter(s) in question are not within ISO/ASTM reproducibility limits of the values obtained by the independent inspection Agency SGS South Africa (SGS, RBCT Terminal Lab) at the loading port, then the results of the Umpire Analysis will replace the values obtained by such Agency, and the cost of the Umpire Analysis will be paid by the Seller.

## 12. DETERMINATION OF QUANTITY

The Seller shall at their own cost appoint an independent inspection Agency SGS South Africa (SGS, RBCT Terminal Lab) at the loading port to carry out draught survey at the loading port. Certificate of weight issued at load port shall be regarded as final and binding for the purpose of this contract and shall form the basis of settlement absent fraud or manifest error.

## 13. PAYMENT

100% cargo value will be paid by irrevocable, confirmable Letter of Credit opened by the Buyer, payable at Sight in a format agreeable to the Seller. Such Letter of Credit shall be opened by a first class bank and payable at the counters of confirming / advising bank nominated by the Seller. 100% Invoice to be payable against presentation of Loadport documents. For UPAS LC, beneficiary to be paid at sight and Usance Interest cost of Libor + 0.65%p.a. (including confirmation cost from negotiation until maturity) to the account of Buyer. No Intermediary bank will be allowed.

LC must be received by Sellers at least 6 (five) days prior to the commencement of laydays or vessel arrival whichever is earlier and Vessel will not commence loading unless clean and workable LC is received by Sellers through advising bank. Any direct and indirect costs associated with delays in berthing vessel as a result of not having workable/confirmed LC to be solely for Buyer's account.

Buyer to advise Seller name and city of opening bank through which the LC is to be advised. The Seller to advise any amendments required once the LC has been received by them through advising bank.

Seller, upon written request from Buyer at its sole discretion may accept that a letter of credit in form and substance fully acceptable to Seller and as otherwise provided for in this payment clause.

The LC shall cover 100% the value of the quantity to be loaded and shall be valid at the advising bank's counter by negotiation until 40 days from the Bill of Lading date.

Applicant's bank charges will be to applicant's account and Beneficiaries bank charges will be to beneficiaries account.

Release of the Payment: 100% of the value of the Coal supplied shall be released against the documents stipulated in the LC as follows:

- i. Seller's signed commercial Invoice in 1 original + 3 copies showing details of calculation and stating LC Number.
- ii. Full set (3/3) original clean on board Charter Party Bill of Lading marked "Freight Payable as per charter party".
- iii. Certificate of Sampling and Analysis in 1 original + 3 copies issued by independent inspection Agency SGS, South Africa (Pty) Ltd.
- iv. Certificate of Weight in 1 original + 3 copies issued by independent inspection Agency SGS, South Africa (Pty) Ltd..
- v. Certificate of Origin in 1 original + 1 copy evidencing the goods are of South African origin issued by Zululand Chamber of Commerce.

Other terms of the Letter of Credit:

- a. T. T. reimbursement shall be allowed.
- b. Third party documents shall be acceptable, except Bill of Exchange and Commercial Invoices.
- c. Over/Under drawing of LC due to quality/quantity adjustment acceptable.
- d. A tolerance of +/-10% in both quantity and amount are acceptable.
- e. If Buyer requires split Bills of Lading, Buyer shall confirm same to Seller at least 3 working days prior to the performing vessels ETA at loading port. A maximum of 5 split Bills of Lading are allowed.

---

Registered address: Baarermaattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarermaattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94082

- f. Letter of Credit to permit 40 days presentation period.
- g. Complete set of copy documents to be provided within 10 working days from vessel sailing.

Notwithstanding any other terms herein, in the event that the Buyer fails to open an L/C in accordance with the terms above, the Seller shall not be obligated to load the vessel and may, in its sole discretion and without liability, delay and/or terminate the shipment and/or terminate this contract. In the event that the Buyer fails to open an L/C in accordance with this clause 13, the Buyer shall be responsible for any and all costs, losses and expenses arising from or relating to its failure to open the L/C on time and in accordance with the terms above, including, without limitation, any costs, losses or expenses incurred by the Seller due to delays in berthing. The Buyer shall pay any and all such amounts on demand by the Seller and in any event prior to discharge of the Coal at the discharge port.

Without prejudice to the Seller's rights under clause 13, if the L/C is received by the Seller's nominated bank by latest 5 (five) days prior to the commencement of laydays for a shipment but is not received in a formal fully acceptable to the Seller, the Seller is, in its sole discretion, entitled to send a notice to the Buyer requiring the Buyer to amend the L/C so that it is in a form fully acceptable to the Seller. In the event that the Seller sends such a notice, the Buyer is obliged to amend the L/C at his own cost according to Seller's instructions within three (3) business days of receipt of the notice.

For the avoidance of doubt, whether for the purposes of clause 13, the Buyer's obligation to open and/or amend the L/C is fulfilled only on the (a) receipt of the swift message(s) at the counters of Seller's nominated bank (if such receipt occurs during the office hours of the Seller), or (b) 09.00 hours on the consecutive business day after receipt of the swift message(s) at the counters of Seller's nominated bank (if received at the counters of Seller's nominated bank occurs outside of office hours of the Seller).

To note, GIAG will not be able to accept any position wherein GIAG will be paid only once original documents are received at opening bank counters

#### 13A.1

Any and all telegraphic transfer payments due from the Buyer to the Seller under the terms of this contract shall be made to the following account:

Beneficiary : GLENCORE INTERNATIONAL AG  
IBAN/Account of Beneficiary : DE14 2007 0000 0125 5038 00  
Bank of Beneficiary : Deutsche Bank AG, Hamburg, Germany  
SWIFT/BIC : DEUTDE33HAN  
Cover through : Deutsche Bank AG, New York, USA  
SWIFT/BIC : DEUTUS33HAN

Any and all telegraphic transfer payments due from the Seller to the Buyer under the terms of this contract shall be made to the following account:

BENEFICIARY : VEDANTA LIMITED  
ADDRESS : 1st floor, C wing, Unit 109, Corporate Avenue, Atul Projects, Chakala, Andheri (East), Mumbai 400083, Maharashtra, India And has one of its Units of Vedanta Limited - 90 MW power Plant Vishwanathpur, Kalahandi, District, Lanjigarh, Odisha 758027  
IBAN / A/C NO. 054451000039  
BANK : ICICI BANK LIMITED  
ADDRESS : Commercial Complex, Opp. Ram Temple, Vedanta Meadows, Badmal - 768201, Odisha  
SWIFT CODE :  
US CORRESPONDENT :  
SWIFT :

13A.2 In the event a Party (the "Requesting Party") wishes to change its account details for the purpose of clause 13A.1 above, it shall make a written request to the other Party (the "Receiving Party") by way of a letter signed by authorised signatories.

Such written request shall:

- (a) be received by the other Party no later than fifteen (15) days prior to the due date for any affected payment, and

---

Registered address: Baarenmattstrasse 3 . CH-6340 Baar, Switzerland  
Mailing address: Baarenmattstrasse 3 . P.O. Box 1363 . CH-6341 Baar, Switzerland  
Telephone: +41 41 709 2000 . Telefax: +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CKL 94082

- (b) Identify the beneficiary/account name, the bank name, the bank's address/branch, the account number/IBAN, and the swift code (the "New Account").

The Requesting Party shall, upon the other Party's first request, provide the other Party with:

- (i) proof of the signatories' authority to sign (such proof to be satisfactory to the other Party, acting reasonably), and  
(ii) written confirmation from the bank at which the New Account is held that the New Account is held by the Requesting Party.

If the written request complies with (a) and (b) above, and if the documents identified at (i) and (ii) are provided upon the Receiving Party's first request, the Parties shall execute an amendment to this contract in a form to be mutually agreed, recording the change of account.

The Receiving Party shall not be liable to the Requesting Party for any reasonable delays in effecting payment that occur as a result of requesting or awaiting receipt of the documents identified at (i) and (ii), and/or as a result of the required amendment being executed.

#### 14. TITLE & RISK:

**Title:** The Seller shall retain title to and ownership of the material of each delivery until the payment for such delivery has been received in full by Seller in accordance with the terms and conditions of this contract.

**Risk:** The risk shall pass to Buyer in accordance with INCOTERMS 2020

#### 15. TAXES, DUTIES ETC.

All taxes, duties, levies, dues, etc. on the coal at the load port, if any, shall be to the Seller's account. All current and/or future taxes, duties, levies, etc. necessary for the import, at its destination or transit through any country, if any, shall be to the Buyer's account.

#### 16. LAYTIME CALCULATIONS AND SETTLEMENT:

Laytime calculation to be confirmed and accepted within 20 days of the vessel completing loading at load port. Demurrage/despatch amounts to be settled for individual shipment within 30 days from the BL date by both the parties i.e. Buyer and Seller. Demurrage / despatch rates to be market related and advised at the time of vessel nomination.

#### 17. INCOTERMS

Unless otherwise specified herein INCOTERMS 2020 shall apply.

#### 18. FORCE MAJEURE

18.1 Neither Party shall be liable for any delay in performing or failure to perform its obligations (except for delay or failure to pay money when due) due to events of Force Majeure including but not limited to acts of public enemy, war, blockade, revolution, riot, insurrection, civil commotion, strike, lockout, explosion, fire, flood, storm, tempest, earthquake, power failure, regulations or orders, including but not limited to prohibition of export or import and/or any other cause or causes beyond the reasonable control of the Seller, the Seller's supplier, or the Buyer whether or not similar to the causes enumerated above. Failure to deliver or to accept delivery in whole or in part because of the occurrence of an event of a Force Majeure event shall not constitute a default hereunder or subject either party to liability for any resulting loss or damage.

18.2 Upon the occurrence of a Force Majeure event, the Party affected by the Force Majeure shall promptly give the other Party written notice of the event of Force Majeure, and shall specify in reasonable detail the facts constituting the event of Force Majeure. Where such notice is not given promptly, Force Majeure shall not justify the non-fulfillment of any obligations under this contract.

18.3 The Party affected by the Force Majeure shall give the other Party (a) regular written updates during the period of the Force Majeure, and (b) prompt written notice when the Force Majeure circumstances cease to exist.

18.4 Subject to below points (a,b,c) both Parties agree to use their respective reasonable efforts to cure any event of Force Majeure to the extent that it is reasonably possible to do so, it being understood that the settlement of strikes, lockouts, and any other industrial disputes shall be within the sole discretion of the party asserting Force Majeure.

18.5 The Seller is not required to provide any of the following as a result of a Force Majeure event:

- a) substitute coal;
- b) alternate transport for the coal from the mine to the loading port; or
- c) alternate loading facilities for the coal.

18.6 In the event of Force Majeure preventing the Seller from shipping or delivering the material, or preventing the Buyer from accepting such material, respectively, deliveries shall be suspended for the duration of such Force Majeure event but if such Force Majeure shall last more than 60 (sixty) calendar days, the tonnage involved may be cancelled with immediate effect by the Party not having declared Force Majeure by written notice to the other Party.

18.7 Financial or economic circumstances shall not constitute an event of Force Majeure.

---

Registered address: Baarer Mattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarer Mattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94082

## 19. TERMINATION

Either Party may terminate this Contract with immediate effect by giving written notice to the other Party in the following circumstances:

If the other Party has an administrator, manager, liquidator, receiver or similar officer appointed over it or all or any of its assets, makes any arrangement with its creditors, is unable to pay its debts as they fall due, ceases to carry on business, or is the subject of a winding-up order; or if the other Party, without previous written approval of the other Party, purports to transfer its rights and obligations under this Contract to third parties save as permitted under clause 27 (Assignment).

The Parties' rights under this clause 19 are in addition to their other rights herein. Termination of this Contract pursuant to this clause is without prejudice to and does not affect (a) the accrued rights or remedies of either of the Parties arising in any way out of this Contract up to the date of such termination and/or (b) the Parties' common law rights.

## 20. AMENDMENTS

No amendment of this Contract shall be effective unless made in writing and signed by duly authorized representatives of the Buyer and the Seller. Such addendum if so signed shall hereafter form an integral part of this Contract.

## 21. NO WAIVER

Any delay or failure by either Party to exercise in whole or in part, in any one or more instances, any right or remedy under or in connection with this Contract shall not operate as a waiver of such right or remedy. A waiver of any breach of any provision of this Contract shall not be effective unless that waiver is in writing and is signed by a duly authorized representative of the Party against whom that waiver is claimed. A waiver of any breach shall not be, or be deemed to be, a waiver of any other or subsequent breach.

## 22. REPRESENTATIONS AND WARRANTIES

Each Party hereby represents and warrants to the other Party on the date of this Contract that

- It is duly incorporated, organized and in existence under the laws of its jurisdiction of incorporation;
- It has the power to enter into and perform this Contract and has taken all necessary corporate action to authorize the entry into and performance of this Contract;
- this Contract constitutes its legal, valid and binding obligations;
- this Contract does not conflict with any law or agreement to which it is a party or its constitutional documents; and
- all authorisations required by it in relation to this Contract have been obtained and are in full force and effect.

## 23. ADDITIONAL WARRANTIES

All terms, conditions and/or warranties, other than those expressly contained in this Agreement, whether implied, statutory or otherwise relating in any way to the subject matter of this Contract or to this Contract generally, are excluded. This Contract is subject to the Sale of Goods Act 1979, save that sections 10-14 do not apply.

## 24. TOTAL AND PARTIAL LOSS

In the event of total or partial loss or damage of the Coal during transport after risk in respect of the Coal has passed from the Seller to the Buyer (as set out in clause 14 Title and Risk), final settlement for the Coal that has been lost or damaged shall be made based on the Bill of Lading weights and at the time it would ordinarily have become due for payment in accordance with the terms of this Contract. For the purpose of this provision, in case of total loss, the estimated date of arrival at discharge port of the relevant vessel shall be considered the vessel's arrival date.

## 25. MATERIAL ADVERSE CHANGE

If the Buyer becomes insolvent or is adjudged bankrupt or a receiver or administrator is appointed over Buyer or any of its assets or insolvency or bankruptcy or similar proceedings are commenced in relation to the Buyer or its assets, or if the Buyer shall fail to make any payment to the Seller when due under this contract, or in the event of circumstances which, in the reasonable opinion of the Seller, has, or may have a material adverse effect on the credit worthiness of the Buyer and/or the Buyer's ability to perform its obligations under this contract, the Seller may at its sole option upon written notice to the Buyer thereof (a) terminate this contract, or (b) suspend or defer performance of this contract pending payments in advance and/or the opening of a letter of credit, as to shipment(s) in default or as to any future shipment, or both; and the Buyer shall become liable for any and all costs, liabilities and expenses whatsoever incurred by the Seller due to the Seller exercising its right hereunder. Any exercise by the Seller of its rights under this clause shall be without prejudice to any other rights or remedies available to the Seller under this contract or otherwise.

---

Registered address: Baarer mattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarer mattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94082

## 26. LIMITATION OF LIABILITY

Neither party shall be liable for any indirect or consequential damages whether in contract, tort or otherwise resulting from the manner of performance or non-performance whether in whole or in part of any of the obligations arising hereunder.

## 27. ASSIGNMENT

Neither Party may assign or transfer or purport to assign or transfer any of its rights or obligations hereunder without the other party's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), provided that nothing in this contract shall prohibit the Seller from entering into any merger or consolidation where the Seller merges or consolidates with any person, or any person merges into it, or sells, leases or disposes of all or substantially all of its assets to any person, provided that the surviving or transferee company is the Seller or the surviving or transferee company is a parent company of the Seller and shall have assumed or shall remain liable for the obligations of the Seller under this Contract. The Buyer shall be entitled to nominate any of its Subsidiary or other group companies to undertake some or all of the obligations and/or its rights under this Contract. Such nomination shall be construed as Assignment for the purpose of this Clause and will be effected after taking Seller's approval.

The terms and conditions of this Contract will be binding upon and inure to the benefit of the Parties' respective successors and assigns.

## 28. SET-OFF

Only the Seller may, at any time without notice to the Buyer, set off any liability of the Buyer to the Seller against any liability of the Seller to the Buyer (in either case howsoever arising and whether any such liability is present or future, liquidated or unliquidated and irrespective of the currency of its denomination) and may for such purpose convert or exchange any currency. Any exercise by the Seller of its rights under this clause shall be without prejudice to any other rights or remedies available to the Seller under this contract or otherwise.

## 29. SEVERABILITY

In the event any of the provisions hereunder are or become unenforceable under the applicable law of any jurisdiction, such provision shall be modified or limited in its effect to the extent necessary to cause it to be enforceable in such jurisdiction. Otherwise, such provision shall be severed and the remaining provisions of this Contract shall continue in full force and effect. Any modification, limitation or severance of any provision in this Contract shall only have effect in the jurisdiction referred to above, and not in any other jurisdiction.

## 30. ENTIRE AGREEMENT

This Contract contains the entire agreement solely between the Buyer and the Seller in relation to the subject matter of this Contract and supersedes all prior negotiations, understandings and agreements whether written or oral in relation to the subject matter of this Contract.

## 31. NOTICES

All notices, requests, demands, and other communications given by the Buyer or the Seller under or in respect of this Contract shall be in writing in English and sent by facsimile or e-mail and/or by registered mail or courier to the addresses as set out in the introductory part of this Agreement. Any such notice shall be deemed to have been received (a) in the case of registered mail or courier at the time of first service (pursuant to the delivery receipt), or (b) in the case of fax or e-mail at the time of transmission or on the consecutive working day if time of transmission has been outside normal business hours at the place of receipt. A Party shall notify a change of address to the other Party.

### If to BUYER:

#### VEDANTA LIMITED

Registered office at  
1st floor, C wing, Unit 103, Corporate Avenue,  
Atul Projects, Chakala, Andheri (East),  
Mumbai-400033, Maharashtra, India

And has one of its Units at  
Vedanta Limited – 90 MW power Plant  
Viswanathpur, Kalahandi District  
Lanjigarh, Odisha 766027

Tel No: +91 81296 96341

Fax No:

Attn: Mr. Praveen Shukla

---

Registered address: Baarenmattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarenmattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +4141 709 2000, Telefax +4141 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94082

E mail: [Praveen.shukla@vedanta.co.in](mailto:Praveen.shukla@vedanta.co.in)

## If to SELLER:

Glencore International AG  
Baarermattestrasse 3,  
CH – 6340, Baar, Switzerland

Tel : +41 41 709 20 00

Fax : +41 41 709 30 00

Attn: Coal Department

Email address for service of legal notices: [pear.cca@hofjess@glencore.com](mailto:pear.cca@hofjess@glencore.com)

## 32. CONFIDENTIALITY

The contents of this contract are confidential.

Each party represents and undertakes that they will keep confidential any information concerning the other party or its business, which the other party informs them is confidential or which a reasonable person receiving that information in the same circumstances would regard as being confidential including but not limited to financial statements and/or ownership and management details and personal information provided or to be provided in connection with this contract ("Information") and not share it with or disclose it to any other party, unless otherwise agreed in writing between the parties to this contract. Notwithstanding the above, each party acknowledges that the information may be used by the other party and its affiliates worldwide in connection with the administration of the parties' relationship, including without limitation for the performance of credit risk analysis, and disclosed to each party's professional advisers and third parties involved in the provision of support for the party's technology system, prospective lenders, succeeding entities and prospective transferees or assignees or as otherwise required by applicable law or regulations.

## 33. COMPLIANCE AND SANCTIONS CLAUSE

### Compliance:

The Buyer warrants, represents and undertakes to Glencore that it will comply with all applicable laws, rules and regulations including without limitation sanctions, anti-corruption, anti-money laundering and tax laws in performing this Contract.

### Sanction:

The Buyer represents, warrants and undertakes to Glencore that:

- (a) neither it nor any of its subsidiaries (collectively, the "Company") or directors, senior executives or officers, or to the knowledge of the Company, any person on whose behalf the Company is acting in connection with this Contract, is an individual or entity ("Person") that is, or is 60% or more owned or controlled by, a Person (or Persons) that is the subject of any economic or financial sanctions or trade embargoes administered or enforced by the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the U.S. Departments of State or Commerce, the United Nations Security Council ("UNSC"), the European Union ("EU"), Switzerland or other applicable sanctions authority (collectively, "Sanctions") or based, organized or resident in a country or territory that is the subject of comprehensive (i.e., country-wide or territory-wide) Sanctions (including, as of the date of signature of this contract, Crimea, Cuba, Iran, North Korea and Syria) (a "Sanctioned Country") (collectively, a "Sanctioned Person");
- (b) no Sanctioned Person has any beneficial or other property interest in this Contract nor will have any participation in or derive any other financial or economic benefit from this Contract, and
- (c) it will not use, or make available, the [Material] or funds (as applicable) provided by Glencore in terms of this Contract to fund or facilitate any activities or business of, with or related to any Sanctioned Country or Sanctioned Person, or in any manner that would result in a violation of Sanctions.

If Glencore is of the reasonable opinion that the Buyer has breached this clause, Glencore may (without incurring any liability of any nature to Buyer whatsoever) terminate or suspend all or any part of the [Contract] with immediate effect by notice to the Buyer or take any other action it deems necessary in order for Glencore to comply with applicable sanctions. The Buyer shall be liable for any and all costs, liabilities and expenses whatsoever incurred by Glencore due to Glencore exercising its rights under this clause. Any exercise by Glencore of its right under this clause shall be without prejudice to any other rights or remedies of Glencore under the Contract.

## 34. GOVERNING LAW AND ARBITRATION

This Contract shall be governed by, interpreted, and construed in accordance with the laws of England and Wales, excluding the United Nations Convention on Contracts for the International Sale of Goods dated 11 April 1980.

---

Registered address: Baarermattestrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarermattestrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000

# GLENCORE

INTERNATIONAL AG

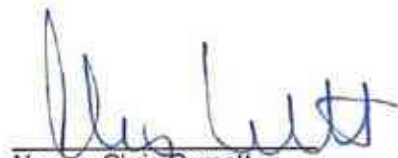
CXL 94082

Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration under the Rules of the London Court of International Arbitration ("LCIA Rules"), for the time being in force, which rules are deemed to be incorporated by reference in to this clause. The seat, or legal place, of arbitration shall be London, England. The tribunal shall consist of three arbitrators. The language to be used in the arbitration shall be English. The Parties waive irrevocably their right to any form of appeal, review or recourse to any state court or other judicial authority.

## 35. COUNTERPARTS

This Contract may be executed in two counterparts, signed and delivered (including by fax / email) by each Party, both of which, taken together, shall constitute the one and the same Contract.

**The Seller**  
Glencore International AG



Name: Chris Garnett  
Authorised Signatory

Date: 6.5.2020

**The Buyer**  
Vedanta Limited



Name:  
Authorised Signatory

Date: 06.05.2020



# GLENCORE

INTERNATIONAL AG

CXL 94082

## ANNEXURE A

### ISPS CODE COMPLIANCE CLAUSES/PROVISIONS FOR LOADPORT

#### A. Buyers' obligations

- (i) The Buyers warrant that in respect of any vessel upon which any of the goods sold under this Contract are intended to be shipped or are in fact shipped both the Vessel (the "Vessel") and the company (the "Company"), as defined by the International Code for the Security of Ships and of Port Facilities and the relevant amendments to Chapter XI of SOLAS (the "ISPS Code") shall comply with the requirements of the ISPS Code relating to the Vessel and the Company. Where any loading and/or discharging port(s) is or are within the USA and US territories or waters, the Buyers shall, further, procure that the Vessel and the Company shall comply with the requirements of the US Maritime Transportation Security Act 2002 ("MTSA").
- (ii) Upon request the Buyers shall provide the Sellers with a copy of the relevant International Ship Security Certificate (or the Interim International Ship Security Certificate).
- (iii) The Buyers shall procure that the Vessel shall, when required to do so by the appropriate authorities, take all necessary steps to complete a Declaration of Security, or other similar declaration or information required by the authorities, (together referred to as a "DOS"). Any delay arising from a failure on the part of the Vessel to complete a DOS in timely fashion shall be for the Buyers' account and shall not count as laytime or time on demurrage or as detention.
- (iv) The Buyers shall procure that they and/or any charterers and/or sub-charterers of the Vessel provide the Company Security Officer ("CSO") and the Ship Security Officer ("SSO")/Master with their full style contact details and any other information the Owners and/or the Company may require to comply with the ISPS Code and/or MTSA (if applicable).
- (v) Save where either (1) the Company and/or the Vessel has failed to comply with the requirements of the ISPS Code and/or, within the USA and US territories or waters, with MTSA, or (2) the Buyers have failed to comply with any of their obligations under this clause (A), the Buyers shall be entitled to tender Notice of Readiness under this contract even if the Vessel is not cleared due to applicable security regulations or measures imposed by the loading port/terminal/installation or any relevant authority under the ISPS Code and/or MTSA (if applicable).
- (vi) Any delay, loss, damage, costs or expense whatsoever, (other than Consequential Loss as defined herein), caused by failure on the part of the Company and/or the Vessel and/or the Buyers to comply with the requirements of the ISPS Code or of MTSA (if applicable) shall be for the Buyers' account and shall not count as laytime or time on demurrage or as detention except as otherwise provided herein.
- (vii) Any delay, loss, damage, costs or expense whatsoever (other than Consequential Loss as defined herein), resulting from measures imposed by a port facility or by any relevant authority under the ISPS Code/MTSA, where such measures result solely from the negligence of the Vessel Owners, Master or crew or the previous trading history of the Vessel, the nationality of the crew or the identity of the Vessel Owners' manager, shall be for the Buyers' account and shall not count as laytime or time on demurrage or as detention.
- (viii) Notwithstanding any prior acceptance of the Vessel by the Sellers, if the Vessel does not comply with the requirements of the ISPS Code or MTSA (if applicable) either prior to arrival, or at, the load port(s) and is consequently prohibited by the relevant authorities from loading or from completing loading operations, should loading have already commenced:
  - (a) The Sellers shall have the right not to berth the Vessel and any time lost shall not count as laytime or time on demurrage or detention, as the case may be.
  - (b) The Buyers shall be obliged to procure that the Vessel Owners promptly and urgently take all necessary steps to ensure that the Vessel complies with the requirements of the ISPS Code or MTSA (if applicable); or
  - (c) Should the Buyers be unable to remedy the situation as set out in (b) above, then the Buyers shall be obliged to substitute the Vessel with a vessel complying with the requirements of the ISPS Code or MTSA (if applicable) and to tranship or discharge ashore any cargo which may have been loaded. If bills of lading have been issued by the Vessel, then the Sellers shall surrender to the Buyers (or procuring the surrendering of) any bills of lading issued in respect of the cargo aboard the non-compliant Vessel and which have been or are still in their possession. The substitution of the Vessel and/or transhipment or discharge ashore of any cargo shall be entirely at Buyers' risk and expense, and any time so lost shall be for Buyers' account.
  - (d) In any event, any time lost shall be for the account of Buyers and Buyers to be liable for any and all losses, costs and expenses, excluding Consequential Loss (as defined herein), which the Sellers may incur as a direct result of a failure of the Vessel to comply with the requirements of the ISPS Code or MTSA (if applicable) as described in this sub-clause (viii).

---

Registered address: Baarerstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarerstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000 Telefax -41 41 709 3000

# GLENCORE

INTERNATIONAL AG

CXL 94062

- (ix) Where the loading port/terminal/installation is in the USA or any US territories or waters, the Buyers shall procure that the Vessel or its agents shall report and send all notices as required to obtain entry and exit clearances from the relevant US authorities. Any delay caused by the failure to so report, or to do so in a timely manner, shall be for the Buyers' account unless such failure is caused by or attributable to the Sellers or their representatives or agents including but not limited to the shipper of the cargo. Time which, pursuant to this sub-clause (ix), is for Buyers' account, shall not count as laytime or time on demurrage or as detention.

## B. Sellers' obligations

- (i) The Sellers warrant that the loading port/terminal/installation shall comply with the requirements of the ISPS Code and/or, if located within the USA and US territories, with the MTSA. The Sellers shall be responsible for any delay, loss, damage, costs or expense whatsoever (excluding Consequential Loss as defined herein) in respect of the Vessel and/or the cargo including any additional charge, fee or duty levied on the Vessel at the loading port and actually incurred by the Buyers resulting directly from a breach of this sub-clause (i) and all time lost shall count as laytime or time on demurrage, or as detention, as the case may be.
- (ii) Where the load port is located within the USA and/or US territories or waters, any delays suffered or time lost in obtaining the entry and exit clearances from the relevant US authorities shall be for the Sellers' account and time so lost shall count as laytime or time on demurrage, or as detention, as the case may be, unless caused by the negligence of the Vessel Owners, Master and/or the Buyers.
- (iii) Save insofar as A(vi) or A(vii) apply, the Sellers are responsible for any demurrage, detention, delays, losses, costs or expenses arising out of or related to security regulations or measures required by the loading port or port facility, or any other relevant authority in accordance with the ISPS Code or the MTSA, including, but not limited to, security guards, launch services, tug escorts, port security fees or taxes, inspections or any other security measures provided always, that the Buyers have actually incurred a liability in respect of such delays, demurrage, detention, losses, costs or expenses. Any time lost as a result of such requirements by the loading port shall count as laytime or time on demurrage or as detention, as the case may be.
- (i) The Sellers' liability to the Buyers for any costs, losses or expenses incurred by the Vessel, the charterers or sub-charterers or the Vessel Owners resulting from the failure of the loading port/terminal/installation to comply with the ISPS Code or MTSA shall be limited to the payment of demurrage, detention, costs, losses or expense in accordance with the terms of this contract only insofar as such demurrage, detention, costs, losses or expenses have actually been incurred by the Buyers. In no circumstances will the Sellers be liable for Consequential Loss (as defined herein).

## C. Miscellaneous

- (i) If either the Buyers or the Sellers make any payment in respect of a cost or expense which is for the other party's account according to this ISPS Code Compliance Clause, the other party shall indemnify the paying party, provided that, before payment is effected, the indemnifying party shall have approved the payment in question, such approval not to be unreasonably delayed or withheld.
- (ii) The term "Consequential Loss" in these clauses shall mean, in addition to, and insofar as not covered by, any legal definition of the term "consequential loss", any loss, damage, delay or expense arising as a result of breach of this clause that does not directly relate to the Vessel or to the value of the goods sold under this Contract, including without limitation and by way of example only, claims under on-sales with third parties, claims relating to delay or stoppages at shipper/suppliers' works at the loading port(s), claims for, or arising out of or in connection with delay to other vessels at the loading port(s) and claims relating to or arising out of pre-carriage to the loading port(s) including but not limited to storage, railcar demurrage and additional carriage costs.

The Seller  
Glencore International AG



Name: Chris Garnett  
Authorised Signatory

Date: 6.5.2020

The Buyer  
Vedanta Limited



Name:  
Authorised Signatory

Date: 06.05.2020



Registered address: Baarer mattstrasse 3, CH-6340 Baar, Switzerland  
Mailing address: Baarer mattstrasse 3, P.O. Box 1363, CH-6341 Baar, Switzerland  
Telephone +41 41 709 2000, Telefax +41 41 709 3000



**VEDANTA LIMITED - ALUMINIUM & POWER**  
**VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,**  
**ODISHA-766027, INDIA**  
**GSTIN: 21AACCS7101B1Z8**

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

Vendor Details	Purchase Order Details	Buyer Details
<b>Vendor Code</b> : 153265 <b>Vendor Name</b> : GANDHAR OIL REFINERY INDIA LTD <b>Email</b> : v@anoy@gandharoil.com, Tel : 8912733900 <b>Address</b> : Rk Beach Road, Pandurangapuram, VISAKHAPATNAM, ANDHRA PRADESH-510003, INDIA <b>GSTIN Number</b> : 37AAACG996JZ3	<b>Order No.</b> : 6500065254 <b>Date</b> : 19-Nov-19 <b>Order Type</b> :Supply <b>Version</b> : 0 <b>Priority</b> : Normal <b>Version Date</b> : 01-Dec-18	<b>Buyer</b> : Rajanathi Pradhan <b>Contact</b> : 06677247340 <b>Mail ID</b> :Rajanathi.Pradhan@vedanta.co.in

**Header Text:**

MASTER COAL PROCUREMENT AGREEMENT

BETWEEN

VEDANTA LIMITED

AND

GANDHAR OIL REFINERY INDIA LIMITED

**MASTER COAL PROCUREMENT AGREEMENT**

This MASTER COAL PURCHASING/ PROCUREMENT AGREEMENT (MPA) (hereinafter the "Agreement") made at on this 31.10.2019, Ref NFA No:- 7000067458.

BY AND BETWEEN

VEDANTA LIMITED, a company incorporated under the provisions of the Indian Companies Act, 1956 and having its registered office at 1st Floor, C Wing, Unit 103, Corporate Avenue Atul Projects, Chokale, Andheri (East), Mumbai, Maharashtra 400093 (CIN: L14209MH1965PLC291594) and its regional office at Vedanta Limited, PO: Lanjigarh, Dist: Kalahandi, Odisha, India-766027, Fax:-91-6677 247311, hereinafter referred to as (the "Vedanta/Company/Purchaser") which expression shall, unless repugnant to or inconsistent with the context or meaning thereof, shall include its successors and assigns) of the ONE PART;

AND  
 GANDHAR OIL REFINERY INDIA LIMITED Flat No. 501, C Scape apartment Pandurangapuram, RK Beach Road, - (hereinafter referred to as "Supplier", which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors and permitted assigns) of the OTHER PART.

The Vedanta/Company/Purchaser and the Supplier shall be individually referred to as the "Party" and collectively as the "Parties".

**RECITALS**

WHEREAS the Company is engaged, inter alia, in the business of manufacturing alumina for which uninterrupted and regular supply of power is essential and hence time is the essence of the contract.

AND WHEREAS Supplier is engaged, inter alia, in the business of supply of steam (non-coking) coal

AND WHEREAS the Supplier has approached the Company and offered to supply of Non Coking Steam Coal or any other material as specified in Annexure I or under the concerned Purchase Order (hereinafter for the sake of brevity referred to as the "Material"/"Coal") and has represented that it has the necessary expertise, infrastructure and experience to efficiently provide such Material to the Company;

THIS IS SYSTEM GENERATED DOCUMENT AND HENCE DOES NOT REQUIRE ANY SIGNATURE. PLEASE TREAT THIS AS ORIGINAL AND SUBMIT YOUR ORDER ACKNOWLEDGEMENT.



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 650065254

AND WHEREAS based on the said representation, the Company has agreed to seek the Material from the Supplier on a non-exclusive basis as per the terms and conditions detailed herein.

NOW THEREFORE, IN CONSIDERATION OF THE PREMISES AND MUTUAL COVENANTS HEREIN CONTAINED, THE PARTIES HAVE AGREED AS FOLLOWS:

**1. DEFINITIONS & INTERPRETATION**

**1.1. DEFINITIONS**

In this Agreement, except where the context otherwise requires, capitalised words and expressions set out in the background section above shall have the meanings set out in that section and the following words and expressions shall have the following meanings:

- 1.1.1 "Affiliate" shall mean with respect to any person, any other person that, directly or indirectly, controls, is controlled by or is under common control of such specified person. For the purposes of this definition, "control" means the direct or indirect beneficial ownership of more than fifty percent (50%) of the issued share capital, stock or other participating interest or the legal power to direct or cause the direction of the general management, of the company, partnership or other person in question, and "controlled" shall be construed accordingly.
- 1.1.2 "Agreement" means this Agreement entered into by and between the Parties hereto together with any and all Annexures, appendices, schedules, addendums and amendments hereto as well any Purchase Order(s) issued thereunder, signed by the authorized representative of the Parties shall be deemed to be read as an integral part of this Agreement.
- 1.1.3 "Claims" shall mean all claims, liabilities, costs, damages and expenses (including court costs and legal fees)
- 1.1.4 "Deleterious material" shall mean any element, compound present in the goods which is not part of standard Specification or a typical assay as per the purchase order or agreement and which is likely to cause or may in general probability cause harm or damage to the operations of the Purchaser and also restricts or affects performance of the goods as per the desired / industry / specified standards.
- 1.1.5 "Effective Date" shall mean \_\_\_\_\_;
- 1.1.6 "Fees" shall mean the prices and/or rates payable by the Company in respect of the Material as specified in this Agreement and/or the relevant Purchase Order.
- 1.1.7 "Governmental Authority" shall mean any governmental department, local authority, commission, board, bureau, agency, regulatory authority, instrumentality, court or other judicial or administrative body, central, state, provincial or local having jurisdiction over the matter or matters in question.
- 1.1.8 "Independent Inspection Agency (IIA)" means a qualified independent surveyor appointed by the Purchaser and acceptable to the Supplier to perform the inspection of the Material as provided under this agreement.
- 1.1.9 "Laytime" means time allowed to unload the cargo from the vessel.
- 1.1.10 "Load Port/Loading Port" means the port at which the Coal is to be loaded.
- 1.1.11 "Pratique" means permission to do business at a port by a ship that has complied with all applicable local health regulations.
- 1.1.12 "Purchase Order" shall mean (i) the written instruction by Purchaser issued to Supplier for the provision of Material under this Agreement, which shall include the specific requirements with respect to the scope of contract, applicable rates and charges and the location of the Site; and (ii) if applicable, the oral instruction under this Agreement which shall be reduced to writing as soon as practically possible including the specific requirements described above.
- 1.1.13 "Purchaser Group" shall mean and include Purchaser and its Affiliates.
- 1.1.14 "Representative" in respect of the Purchaser and the Supplier to include the persons so identified on the Purchase Order as their representative or such other person(s) notified by the Purchaser or the Supplier in writing to the other from time to time, which will include amongst others consultants engaged by the Party or any Affiliate of the Supplier having commonality of interest with the Supplier.
- 1.1.15 "Site" shall mean the location where Purchaser wishes Supplier to supply the Material.
- 1.1.16 "Specification" includes but is not limited to assays whether typical or otherwise or the scope or technical parameters of the Material attached to or referred to in this Agreement and/or any Purchase Order. Further Specification shall, in case of Material, always include being free from Deleterious material.
- 1.1.17 "Statement of Facts" means a document that is drawn up covering the time, the breakdown that occurred and deviation commencing from the time the vessel returned to the point of deviation and the voyage was resumed.
- 1.1.18 "Supplier Group" shall mean and include Supplier, its Affiliates and its and their sub-suppliers and suppliers of any tier and its and their respective Affiliates.
- 1.1.19 "Term" the term of this Agreement is defined in Clause 2 of this Agreement.
- 1.1.20 "Time Sheet" means a document which records all daily particulars relating to the loading or discharging of cargo as well as the duration of and reason for any stoppage of work and is used as a basis for the calculation of demurrage.
- 1.1.21 "Trade Usage" refers to generally accepted practice or norms in relation to expected standards, permissible deviation, internationally accepted scientific data, foreseeable consequences attributable to deviation beyond permissible deviation established over a period of time in course of commercial dealing between the parties to this Agreement or their associates
- 1.1.22 "Turntime" means, with respect of each shipment, the period of time, quoted in hours, between the tendering of the first notice of readiness, no matter whether it is accepted and the commencement of laytime, which shall in no cases exceed 12 hours.

THIS IS SYSTEM GENERATED DOCUMENT AND HENCE DOES NOT REQUIRE ANY SIGNATURE. PLEASE TREAT THIS AS ORIGINAL AND SUBMIT YOUR ORDER ACKNOWLEDGEMENT.



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

1.1.25 "Ton(s)", "Tonne(s)", and "MT" each mean metric tonne of 1,000 Kgs as defined in International System of Units.

#### 1.2 INTERPRETATION

In this Agreement:

1.2.1 Headings are for convenience only and shall not govern or affect the interpretation of the Agreement.

1.2.2 Except where the context otherwise requires, references to one gender include all genders and the singular includes the plural and vice versa.

1.2.3 Except where the context otherwise requires, references to any enactment shall include references to such enactment as re-enacted, amended or extended and any sub-ordinate legislation made under it.

1.2.4 References to persons include companies, corporations, partnerships, associations, and other organizations whether or not having a separate legal personality.

1.2.5 Except where otherwise indicated, reference to clauses, sub-clauses, recitals and annexures shall be to the clauses, sub-clauses, recitals and Annexures of this Agreement.

1.2.6 "including" means "including without limitation";

1.2.7 The rule of construction, if any, that a contract should be interpreted against the Party responsible for the drafting and preparation thereof shall not apply.

1.2.8 If the day on which any act, matter or thing is to be done under or pursuant to this Agreement is not a business day as per Trade Usage, that act, matter or thing shall be done on the preceding business day.

#### 2. SCOPE OF CONTRACT

2.1 The effective date of this Agreement shall be 08.06.2018 (hereinafter the "Effective Date") and this Agreement shall be valid from the Effective Date until delivery of and the payment for the Material (as specified in Annexure 1 of this Agreement) or any other obligations under this Agreement have been fully performed by the Parties, whichever is later ("Term").

2.2 The terms and conditions of the Agreement shall apply from the Effective Date and shall remain valid for the Term unless this Agreement is terminated earlier by the Company hereunder.

2.3 Nothing in this Agreement shall obligate the Purchaser or any of its Affiliates to order any Material from the Supplier.

#### 3. DELIVERY PERFORMANCE

3.1 Time shall be of the essence and any Materials delivered shall be in strict accordance with any time or schedule specified hereunder as per the Scope of Contract at ANNEXURE-I. Further, Materials so delivered shall be in strict accordance with the quality parameters and Specifications, specified in this Agreement and/or the Purchase Order or the relevant Trade Usage where no such parameters and Specifications are so specified.

#### 4. CARRIAGE AND DELIVERY INSTRUCTIONS RELATING TO MATERIAL

4.1 Unless otherwise specified herein, the International Chambers of Commerce official rules for the interpretation of trade terms (Incoterms) are incorporated into the Agreement by reference.

4.2 The delivery instructions shall be governed by and construed in accordance with the provisions of Incoterms 2010 published by the International Chamber of Commerce as may be amended from time to time.

#### 5. RISK AND PROPERTY

5.1 Unless otherwise stipulated in this Agreement and/or any Purchase Order issued hereunder, title to and risk of loss for the Material shall remain with Supplier and shall only pass to Purchaser following full delivery and acknowledgment by possession of the Material to the delivery address by Purchaser or Purchaser duly authorized representative specified in the Purchase Order.

Whenever Purchaser is not the ultimate consumer of the Material, all rights, benefits and remedies conferred upon Purchaser by the provisions of this Agreement, including specifically the benefit of any warranties and transfer of title, shall accrue to and shall be for the express benefit of any third party customer and on whose behalf or for whose benefit the Purchaser has purchased the Material.

#### 6. SHIPPING TERMS

The Supplier shall load the vessel at the Loading Port and the applicable shipping and landing terms shall be as per Annexure 1.

#### 7. PAYMENT

7.1 Unless otherwise stated, payment will be made as per the details specified under this Agreement as per Annexure I.

7.2 The Purchaser shall have a right (but not an obligation) to set-off / adjust any payment due from the Supplier against any amount due / payable to the Supplier from the Purchasing Group.

#### 8. SUSPENSION

8.1 Notwithstanding anything to the contrary in this Agreement, Purchaser may, at its sole discretion, suspend this Agreement / any Purchase Order, in whole or in part, upon a notice to the Supplier for any reason whatsoever. The Purchaser shall promptly notify the Supplier in writing of the same.

THIS IS SYSTEM GENERATED DOCUMENT AND HENCE DOES NOT REQUIRE ANY SIGNATURE. PLEASE TREAT THIS AS ORIGINAL AND SUBMIT YOUR ORDER ACKNOWLEDGEMENT.



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B128

0000155265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 650065254

8.2 Supplier's failure to perform obligations under this Agreement or any Purchase Order issued hereunder, to the standards required by the Agreement/Purchase Order and Supplier's material breach of any of its obligations under the Agreement, no payment shall be due by Purchaser in respect of such order/Purchase order, or in the case of suspension, until the failure or breach has been remedied to the reasonable satisfaction of Purchaser.

8.3 Subject to clause above, in the event of suspension of the Agreement or any Purchase Order issued hereunder, the Material being supplied under such Agreement/Purchase Order shall, at Purchaser's discretion, either be delivered to the delivery address or shall be securely and separately stored at Supplier's premises, at Purchaser's sole cost and expense, and marked as the property of Purchaser until either such suspension is revoked or Purchaser terminates the Agreement/Purchase Order and instructs Supplier with regard to the disposal of the Material stored at Supplier's premises. The proceeds of the disposal shall be adjusted against any compensation payable hereunder.

**9. SUPPLIER OBLIGATIONS**

9.1 The Supplier warrants that the Material shall

- a) conform to the Specifications (as provided in Annexure I) which the Supplier warrants to be accurate and complete in all material respects and not misleading;
- b) comply with any applicable quality standards and/or other standards or Specifications as requested by the Purchaser and these standards/specifications shall not be changed without the prior written consent of the Purchaser

9.2 The Supplier warrants that it shall at all times and at its own expense:

- (a) maintain all necessary licenses and consents and comply with all applicable law in performance of the Agreement;
- (b) adopt safe working practices and at the proper time supply and install such guards and safety devices as may be necessary to comply with the provisions of all health, safety and environment laws ;
- (c) shall not endanger the safety of or unlawfully interfere with the convenience of any other person, including employees and/or other contractors of the Purchaser in the performance of the Agreement;
- (e) be accompanied by all appropriate information, warnings, instructions and documentation in relation to the safe use, handling, storing, operation, consuming, transportation and disposal of any Material or parts, to the Purchaser, wherever applicable.
- (f) ensure that, in performing its obligations under the Agreement, it does not cause any disturbance or damage to the industrial operations and property at the relevant site;
- (g) comply with the Purchaser's conditions (including but not limited to health and safety conditions, safety management systems, safety cases, hygiene policies and security policies) in relation to any relevant Site;
- (h) assist the Purchaser and its representative in the investigation of any accident or incident or the resolution of any dispute, which assistance shall include, but not be limited to, providing access to documents and records and providing information reasonably requested by the Purchaser;
- (i) notify the Purchaser's representative promptly as soon as it becomes aware of any breach of laws or any health and safety or issue which arises in relation to the Material (which notification shall not release the Supplier from any liability and/or obligations in respect of such breach, hazard or issue);
- (j) notify the Purchaser's representative promptly after it becomes aware that the Purchaser is not or may not be complying with any of the Purchaser's obligations, provided that the Supplier shall not be entitled to rely on such notice as relieving the Supplier's performance under the Agreement, save to the extent that it actually restricts or precludes performance of the Supplier's obligations.

9.3 The Supplier further warrants that the Material shall conform with all laws applicable to such Material, including as regards the , quality , transportation, delivery , , health, safety and environmental standards and use of such Material which are in force at the time of supply;

9.4 The representations and warranties mentioned herein shall survive any inspection, test, performance, acceptance or payment pursuant to the Agreement and shall be extended to any replaced Material provided by the Supplier.

9.5 If the Supplier fails to rectify a breach in supply of the Material, which being capable of remedy is not remedied within fourteen (14) days of notice of such default, the Purchaser may at its discretion and without prejudice



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA

GSTIN: 21AACCT101B1Z8

000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 650065254

to other rights and remedies under this Agreement or otherwise, avail itself of any one or more of the remedies as hereunder:

- (a) reject the Material (in whole or in part) and return them to the Supplier at the risk and cost of the Supplier on the basis that the Supplier shall immediately pay to the Purchaser a full refund for the Material so returned;
- (b) give the Supplier the opportunity at the Supplier's expense either to remedy any defect in the Material or to supply replacement Material to ensure that the terms of the Agreement are fulfilled within a reasonable period specified by the Purchaser;
- (c) refuse to accept any further deliveries of the Material which the Supplier attempts to make, in each case without any liability to the Purchaser;
- (d) instruct the Supplier to suspend performance of its obligations under this Agreement with immediate effect and to take such steps as the Purchaser may direct in order to remedy such breach at the Supplier's expense;
- (e) claim such damages as may have been sustained in consequence of the Supplier's breach or breaches of this Agreement;
- (f) opt to use or consume the Material in the event of non-availability of substitute goods or to maintain operations of the Purchaser's plant or to avoid plant shut down but without prejudice to its right to claim damages attributable to consequences arising due to off-Specification Material;
- (g) procure the material from an alternate source at the Supplier's risk and cost, and the Supplier shall be liable to compensate the direct and reasonable loss incurred by Buyer in this process

9.6 Notwithstanding anything to the contrary in this Agreement, there shall be no obligation whatsoever on the Purchaser to accept any defective or sub-standard quality Material, delayed delivery and/or performance of the Agreement and it is expressly agreed by the Parties that acceptance of such defective or sub-standard quality Material, delayed delivery in its sole discretion, shall not prejudice any right / claim of the Purchaser to damages for supply of such defective or sub-standard quality Material, delayed delivery and / or for breach of the Agreement. In the foregoing, the Purchaser shall reasonably determine the amount of damages that shall be leviable upon / payable by the Supplier. Any damages so determined by the Purchaser shall be paid by the Supplier within fifteen (15) days. The levy of damages / acceptance of performance, as above, shall not prejudice any rights of the Purchaser as per other terms of this Agreement / Purchase order.

9.6 In the event of a breach by the Supplier of its obligations under this Agreement, the Purchaser shall have the right to terminate the Agreement and / or the Purchase Order issued thereunder in whole or in part or to rescind the Purchase Order, in such case without any liability to the Purchaser.

9.7 The Purchaser reserves the right to reject Material in case it is supplied prior to the scheduled delivery date until otherwise specifically waived-off in writing by an authorized Representative from the Purchaser's commercial department, prior to dispatch.

#### 10. INSPECTION, SAMPLING AND ANALYSIS

10.1 The inspection, sampling and analysis of the Material shall be carried out as per the details provided under Annexure I.

#### 11. SPECIFICATION VARIATION

Purchaser may, at any time, make changes within the general scope of the Agreement and/or Purchase Order by giving written notice to Supplier. Such changes may include changes to the technical Specification of the Material, quantities, method of shipping, inspection standards and place of delivery. Upon receipt of such variation request, if any such change affects the purchase price and/or delivery date, Purchaser and Supplier shall agree upon an adjustment to the price and/or delivery date. The change to the Specification and /or Purchase Order, together with any adjustment to price and/or delivery date, if any, shall be set forth in a revised Variation Order issued by Purchaser and acknowledged by Supplier in writing.

#### 12. ASSIGNMENT AND SUBCONTRACTING

12.1 Supplier may not assign, subcontract or subcontract its rights or obligations under any Purchase Order, in whole or in part, to any third party without the prior written consent of Purchaser, which the Purchaser may at its sole discretion accept or refuse. Supplier shall have a written contract in place for each approved sub-supplier prior to such sub-supplier supplying any Material. Supplier shall assume full responsibility for the acts or omissions of Supplier's sub-suppliers of any tier. All of Supplier's subcontracts, if any, for the supply of Material shall contain terms and conditions substantially similar to those contained in this Agreement and/or the applicable Purchase Order which protect and do not restrict Purchaser's rights as set forth in this Agreement and/or in the applicable Purchase Order.

12.2 Purchaser shall have the right to assign the Agreement / Purchase Order to its Affiliate or any third party customer. This Agreement shall (here to and be binding upon the respective successors and assigns of the Parties.

#### 13. RECOURSE OF THE PARTIES

13.1 Supplier shall look only to Purchaser for the due performance of the Purchase Order and nothing therein contained shall impose any liability upon, or entitle Supplier to commence any proceedings against any third party customer or any person not a party to the Agreement or the Purchase Order.

13.2 Purchaser shall be entitled to enforce any Purchase Order on behalf of any third party customer in connection with the Agreement / Purchase Order as well as for itself and for this purpose, only Purchaser may commence proceedings against Supplier. The obligations and liabilities of Purchasing Group issuing Purchase Orders are several and not joint.

13.3 It is clarified that under no circumstances, by virtue of this Agreement, will the employee/workers of the Supplier be deemed to have any privity of contract with the Company nor would they or any of their heirs, assigns or successors would claim any benefit / privilege, whatsoever, from the Company.



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

**14. NOTICE:**

All Notices to Buyer under this Agreement shall be addressed to:

VEDANTA LIMITED<>,<>  
PO: LANJIGARH, DIST: KALAHANDI<>,<>  
ODISHA, INDIA-766027<>,<>  
FAX +91-6677 247311  
Email:  
Anil.Rai@vedanta.co.in  
Amit.Goyal@vedanta.co.in  
Pravenu.Shaikhs@vedanta.co.in  
Rajinmuth.Pradhan@vedanta.co.in

All Notices to Seller under this Agreement shall be addressed to:

The address and / or phone/ email/ facsimile number as given above of respective Party may change. In such instances, notice of such change shall be given in writing and shall be effective when actually received by the addressee.

All notices by Buyer and Seller, in the case may be, as well as correspondence in connection with this Agreement shall be deemed to have been duly given by Buyer/Seller upon having been sent by telefax/ email, or four days after having been mailed by registered letter, to the addresses first set forth above.

**15. PREVAILING EFFECT OF THIS AGREEMENT AND RELEVANT PURCHASE ORDER(S)**

15.1 This Agreement shall comprise of the following documents:

This Agreement  
Annexure I: Scope of Contract  
Annexure II: Standard Terms and Conditions  
Annexure III: Code of Conduct  
Exhibit A: Corporate Policy Directive Possession of Contraband Items

(all hereinafter the "Agreement").

15.2 This Agreement shall be governed solely as per the terms of this Agreement, to the entire exclusion of any terms/conditions that the Supplier may state/ mention in any quotation and/or any other correspondence made by the Supplier. Consequently, the terms of this Agreement shall apply and shall be incorporated by reference / deemed incorporated in any Purchase Order issued hereunder and shall prevail at all times between the Parties over any other terms and conditions (including any terms or conditions which Supplier purports to apply to any purchase order, confirmation of order, Specification, invoice or other document) with respect to the provision of Materials, except where the Parties, by its authorized signatories, have specifically agreed in writing to vary and override the terms of this Agreement or the Standard Terms and Conditions by Special Terms.

IN WITNESS WHEREOF the Parties hereto have executed and delivered this Agreement as of the date first above written.

Vedanta entity name: Counterparty

Company: Vedanta Limited, Lanjigarh Company: GANDHAR OIL REFINERY INDIA LIMITED





**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 650065254

Signed: Signed:

Name: Aml Raj Name:

Position: Chief Commercial Officer: Position:

Date: Date:

PLEASE TICK:  
# WE HAVE READ THE STANDARD TERMS AND CONDITIONS ENCLOSED WITH THIS AGREEMENT

ANNEXURE 1  
SCOPE OF CONTRACT

1. COMMODITY

This contract is for the sale of Coal, which shall mean, Steam (non-coking) coal of South African Origin in Bulk.

2. Contract Price

The Contracted Rate is as below:



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCT101B128

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

1. Rs.4440/- PMT+GST@5%+GST CESS@Rs.400/-PMT. For 5000 GCV (ARB)  
2. Rs.4884/- PMT+GST@5%+GST CESS@Rs.400/-PMT. For 5500 GCV (ARB)

The Contracted Rate is Rs.4706.4/- PMT+GST@5%+GST CESS@Rs.400/-PMT. For 5300 GCV (ARB).

Note: Price shall be adjusted as per quality received at VLL Site.

3. Contract Quantity

The Contracted quantity is 50000 (+/-) 10% metric tonne.

4. DELIVERY

Delivery to be completed maximum by 31.12.2019.

5. PAYMENT

100% advance LC Validity 180 days. Interest on Vedanta's scope.

a) Payment to be made against advance LC of 180 days, interest being in Vedanta's scope

b) Tax invoice to be raised for 100% amount (basis 5000 GCV-5700GCV) at the time of RR and payment to be done as under:

i) 100% payment LC to be paid within 7 working days from the date of submission of original Tax invoice & RR to the bank & quality finalization as per Vedanta's lab. Vedanta will provide payment certificate to you and LC can be discounted basis scanned copy of payment certificate. The same shall be applicable on rake to rake basis.

\*\*\*Scanned copy of payment advice from Vedanta- As soon as Vedanta receives quality certificate, Vedanta will issue a payment advice after adjustment of Dead freight/Quality adjustment, the same can be presented to bank for payment purpose.

ii) Vedanta plant Lab Quality shall be final for payment purpose for both the parties.

iii) Dead freight beyond 150 MT in RR. Quantity and RR. Chargeable quantity shall be in Seller's account.

iv) Penalties shall be on Seller's account.

Invoice pattern should be as follows

Rate Variable

(Approx only) Rs. Total(Rs.)

Basic 4440 0 4440

BCD NA 0

Port NA NA

Cess 400 400

GST 5% 222

6. SPECIFICATIONS

The Coal sold under this contract shall have the following specifications

S/N Description Basis UOM Value Max Min REJECTION\*

1 Total Moisture ARB % 6.7 ABOVE 10%

2 Ash ADB % 22.25 ABOVE 30%

3 Volatile Matter ADB % 22.28 Below 30%

4 Sulphur ADB % 1% 1% NA



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

5 HGT ARB 45 - 70 NA  
6 GCV ARB Kcal /Kg 5700 5000 Below 4800 GCV ARB  
7 Size MM MM 0 - 50 NA  
8 IDT NA  
9 Iron Fe2O3 % NA

7. Price Adjustment

8. 7.1 IF GCV ARB(5000-5700) :

Adjusted CIF Price PMT = Actual Gross Calorific Value (ARB) X Base Price  
Contractual Gross Calorific Value (ARB)

1. 7.3 2 IF GCV ARB( Below 4800) :

Below 4800GCV (ARB) then material shall be fully rejected & supplier shall returned back the same.

Note :-

1. If material found rejection grade at discharge port then buyer has the rights to reject the same at discharge port only.
  2. Seller has to ensure there should not be any blending/Contaminations of cargo during the lifting period. If found then the buyer shall have the rights to reject the same at discharge port.
- All percentages used refer to percentage by weight, quality to be determined pursuant to Article 3.0.

8. USD EXCHANGE RATE

NA

9. DUTIES AND TAXES

This sale is made on Stock & Sale basis. The seller shall file the Bill of Entry in its name and shall arrange to clear the cargo. Buyer will pay all charges to clear the cargo including Custom duty, CESS, directly to Seller. Stevedoring, Port handling, clearing charges, plot rent, and any other charges, duties, levies etc. Limited to Rs 200 Per MT.

ANNEXURE II STANDARD TERMS & CONDITIONS

ANNEXURE III CODE OF CONDUCT

This Supplier Code of Conduct is applicable to all 'Suppliers' globally. 'Supplier' here refers to suppliers/ service providers/ vendors/ traders / agents/ consultants/ contractors/ joint venture partners/ third parties including their employees, agents and other representatives, who have a business relationship with and provide, sell, seek to sell, any kinds of goods or services to Vedanta Resources Plc or any of its subsidiaries, affiliates, divisions ('Vedanta').

This Code sets forth the basic requirements that we ask our Suppliers to respect and adhere to when conducting business with Vedanta. This Code embodies Vedanta's commitment to internationally recognized standards, including the Core Conventions of the International Labour Organization, United Nations' Universal Declaration of Human Rights as well as prevalent industry standards, and all other relevant and applicable statutory requirements concerning Environment Protection, Minimum Wages, Child Labour, Anti-Bribery, Anti-Corruption, Health and Safety, whichever requirements impose the highest standards of conduct.

§ LABOUR & HUMAN RIGHTS

Adhering to all Labour Laws and Human Rights Laws, Suppliers shall:

- Comply with all applicable local, state and national laws regarding human rights,
- Comply with the Company's Human Rights Policy,
- Ensure that all their employees are hired on their own free will and guarantee that all their operations are free from forced, bonded, compulsory, indentured, prison labour or any other form of compulsory labour and child labour.

THIS IS SYSTEM GENERATED DOCUMENT AND HENCE DOES NOT REQUIRE ANY SIGNATURE. PLEASE TREAT THIS AS ORIGINAL AND SUBMIT YOUR ORDER ACKNOWLEDGEMENT.

Page 9 of 14



**VEDANTA LIMITED - ALUMINIUM & POWER**  
VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA  
GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

- Ensure that all its employees are provided equal employment opportunities, an environment conducive to their growth, free from any form of discrimination and harassment.
- Ensure compliance with minimum working hours and minimum wages prescribed by applicable laws and regulations.
- Comply with all slavery and human trafficking laws. Suppliers must ensure they have taken steps to ensure their business operations are free from slavery and human trafficking practices both internally and within their supply chains and other external business relationships.
- Ensure that employees are not be charged any fees or costs for recruitment, directly or indirectly;
- Not confiscating or withholding worker identity documents or other valuable items, including work permits and travel documentation of any of its workers/ employees.

**§ HEALTH, SAFETY & ENVIRONMENTAL SUSTAINABILITY**

- The Supplier shall provide its employees with a safe and healthy working environment and comply with all applicable laws and regulations regarding working conditions.
- Supplier shall follow all Environmental, Health and Safety and other operational policies of the Company while executing any work or contract at the company site.
- Supplier shall follow all laws of the land including laws on Environment sustainability and protection while executing any work for the Company.

\*\*\*\*\*

**§ BUSINESS INTEGRITY**

- Anti-Bribery: The Supplier shall not, directly or through intermediaries, take any recourse to any unethical behaviour (implicit or explicit), or offer or promise any personal or improper advantage in order to obtain or retain a business or other advantage from a third party, whether public or private, including with any employee of Vedanta. More specifically:
- Shall not offer or accept bribe or use other means of obtaining undue or improper advantage, offer or accept any kickbacks, and shall not take any actions to violate or cause its business partners to violate any applicable anti-bribery laws and regulations including the Foreign Corrupt Practices Act of USA (FCPA), Bribery Act of United Kingdom and Prevention of Corruption Act of India.
  - Shall not take any advantage of any family/ social/ political connections to obtain favorable treatment or for the advancement of business or obtaining any favours. Merit shall be the sole attribute of association with Vedanta.
  - Shall not enter into a financial or any other relationship with a Vedanta employee that creates any actual or potential conflict of interest for Vedanta. The Supplier is expected to report to Vedanta any situation where an employee or professional under contract with Vedanta may have an interest of any kind in the Supplier's business or any kind of economic ties with the Supplier.
  - Shall not offer any gift, hospitality or entertainment for the purpose of obtaining any advantage, order or undue favor.
- Unfair Trade Practices: Supplier shall desist from any unfair or anti-competitive trade practices.

**REPORTING OF UNETHICAL PRACTICES AND GRIEVANCE ADDRESSAL MECHANISM**

The Supplier shall ensure that an effective grievance procedure has been established to ensure that any worker/ employee, acting individually or with other workers, can submit a grievance without suffering any prejudice or retaliation of any kind.

Suppliers shall also forthwith report any unethical activity or discrimination if practiced by any Vedanta employee/other Suppliers as per Vedanta whistle-blower policy (uploaded on the company website).

sgl.whistleblower@vedanta.co.in

**§ INTELLECTUAL PROPERTY**

The Supplier shall take appropriate steps to safeguard and not infringe any Vedanta confidential and proprietary information/intellectual property/ technology which come to its knowledge during the course of its business relationship/ dealings with Vedanta. In case of sub-contracting, sharing of confidential information should be made with the consent of Vedanta.

**§ THIRD PARTY REPRESENTATION**

The Suppliers shall not be authorized to represent Vedanta or to use Vedanta's brands without the written permission of Vedanta. Third parties and their employees who are authorized to represent Vedanta are expected to abide by the Vedanta's Code of Conduct & Business Ethics Policy in their interaction with, and on behalf of Vedanta including the confidentiality of information shared with them and to sign a non-disclosure agreement to support confidentiality of information.

**§ PROHIBITION ON INSIDER TRADING**

If the Supplier becomes aware of material, non-public information relating to Vedanta or its business, it may not buy or sell Vedanta securities or engage in any other action to take advantage of that information, including passing that information on to others. In addition, if the Supplier becomes aware of material, non-public information about any other company, including Vedanta customers, suppliers, vendors or other business partners, that is



**VEDANTA LIMITED - ALUMINIUM & POWER**  
**VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,**  
**ODISHA-766027, INDIA**  
**GSTIN: 21AACCS7101B1Z8**

**0000153265 - GANDHAR OIL REFINERY INDIA LTD**

**PO Number : 650065254**

Obtained by virtue of the supplier's interaction with Vedanta, then the Supplier shall not buy or sell that company's securities or engage in any other action to take advantage of that information, including passing that information on to others.

**SUPPLIER'S COMPLIANCE COMMITMENT**

Vedanta expects the Supplier to adhere to all applicable laws and regulations and in particular comply with this Code in letter and spirit. It is the Supplier's responsibility to read and understand the contents of this Code and Vedanta's Code of Conduct & Business Ethics Policy. As a condition of doing business with Vedanta, the Supplier must comply with this Code and agree to uphold such values during its business association with Vedanta. The Supplier shall maintain adequate documentation to demonstrate compliance with the principles of this Code, and allow access to Vedanta to check compliance upon request with reasonable notice. The Supplier shall notify Vedanta regarding any known or suspected improper behaviour by the Supplier relating to its dealings with Vedanta, or any known or suspected improper behaviour by Vedanta employees. Please contact the concerned Head Commercial/ Company Secretary if you have any questions about this Code.

**EXHIBIT A CORPORATE POLICY DIRECTIVE - POSSESSION CONTRABAND ITEMS**

It is the policy of Vedanta to maintain a safe work environment for its employees. To this end, the possession of any illegal drug, drug paraphernalia, alcoholic beverage, explosive, weapon or any other similar item or substance which could cause or contribute to injury to Vedanta personnel or damage to its property ("contraband") is strictly prohibited at work locations or other business premises ("work areas") of Vedanta. This policy may be implemented by such reasonable means as may from time to time be determined appropriate, including searches of the person and personal effects of any person.

Compliance with this policy is a condition of employment of Vedanta and employees who decline to be searched or who are otherwise found in violation of this policy will be subject to immediate termination. Non-employees who decline to be searched or are otherwise found in violation of this policy or Vedanta's Substance Abuse Policy will be excluded from Vedanta work areas. Below is a Notice outlining Vedanta's Substance Abuse Policy.

**DRUGS, ALCOHOL, FIREARMS, SEARCHES**

Vedanta is concerned about the effects of the use of illegal drugs and the abuse of alcohol on the health and safety of its employees. We recognize that alcoholism and the illegal use of drugs leads to increased accidents and medical claims, and can lead to the destruction of an employee's health, and adversely affect his or her personal life. Employees who abuse drugs and alcohol are a danger not only to themselves, but also to their fellow employees. In addition, the medical costs incurred by employees with drug or alcohol problems are much higher than those of other employees, and the decreased productivity of these individuals can adversely affect a company's ability to operate competitively. To help prevent substance abuse among our employees, Vedanta has a policy and practice of testing applicants, employees, and others that may regularly work in or on Vedanta premises. Applicants for employment will be required to undergo a drug-screening test as part of consideration for employment. Employees and others will be required, under certain circumstances, to cooperate with drug testing procedures and drug searches.

The unauthorized possession or use of illegal, drugs, narcotics, alcohol and firearms is not permitted on any Vedanta property or job site that is not Vedanta property, and the use of, possession of, and/or distribution of such items by any person on any Vedanta installations, property, or facilities poses a serious threat to the safety of our employees, other personnel and operations.

**SEARCHES, INSPECTIONS, AND ANALYSES**

We reserve the right, at all times, to have authorized personnel conduct reasonable searches or inspections on Vedanta property of personal effects, lockers, baggage, vehicles, and quarters of employees and other personnel for the purpose of determining if any such persons are in possession of any illegal or unauthorized items. These searches will be conducted in cases where the Vedanta receives reliable information indicating that reasonable cause exists to conduct a search.

Any Vedanta employee who refuses to submit to a search, urine analysis, blood test, or who is found in possession of any such illegal or unauthorized items without an explanation satisfactory to us will be subject to disciplinary action up to and including immediate discharge.

When appropriate, such items discovered through these Vedanta searches may be taken into custody and may be turned over to the proper law enforcement authorities.

Item No	Material	HSN Code	Material Description	Order Qty	UOM	Delivery Date	Gross Price	Gross Value
00010	90000471	27101200	COAL	59.999 9	MT	31-Jan-20	4.884	29,30,39,511.6





**VEDANTA LIMITED - ALUMINIUM & POWER**  
**VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,**  
**ODISHA-766027, INDIA**  
**GSTIN: 21AACCS7101B1Z8**

**0000153265 - GANDHAR OIL REFINERY INDIA LTD**

**PO Number : 6500065254**

Item No	Material	HSN Code	Material Description	Order Qty	UOM	Delivery Date	Gross Price	Gross Value	
90030	90000471	27101200	COAL	25,000	MT	31-Mar-20	4,884	12,21,00,000	
							Discount %	0	0
							P & F %	0	0
							CGST %	0	0
							SGST %	0	0
							IGST %	5	61,05,000
							Other Taxes		1,00,00,000
							Total With Tax		13,82,05,000
							Currency		INR

**For internal reference**

PR: M00081348/00010  
 Department: CPP OPERATIONS  
 Requisitioner: Santosh Kumar Nayak

**Material Long Text:**

COAL

Delivery Schedule	
Scheduled Qty	Delivery Date
25,000	31-Mar-20

**Basic Value :** 41,51,39,316.31  
**Discount :** 0  
**P&F charges:** 0  
**Freight:** 0  
**Taxes:** 5,47,56,950

**Amount in words :** Forty Six Crore Ninety Eight Lacs Ninety Six Thousand Four Hundred Fifty Two And Thirty One Paise

**Grand Total :** 46,98,96,452.31 **INR**

**GST:**

GST is applicable at rate mentioned against each line item or such other rate as applicable at the time of supply. The supplier shall provide original/ Duplicate for Transporter (DFT) invoice copies alongwith the materials to avail the Input Tax Credit (ITC) by the recipient. Invoice to specifically mention HSN code & tax % item wise alongwith GSTIN of supplier. Apart from this, the supplier is compulsorily required to upload the invoice/ supply details in GSTN portal correctly, as and when invoice is raised, so as to avoid ITC mismatch. In case the supplier fails to provide the tax invoice, correctly upload the invoice/ supply details in GSTN Portal, no payment will be made to the supplier till the time, these are made good.

**PO Amendment 1:**

Amendment of 25KT



**VEDANTA LIMITED - ALUMINIUM & POWER**

VEDANTA LIMITED CAPTIVE POWER PLANT - LANJIGARH - LANJIGARH, KALAHANDI,  
ODISHA-766027, INDIA

GSTIN: 21AACCS7101B1Z8

0000153265 - GANDHAR OIL REFINERY INDIA LTD

PO Number : 6500065254

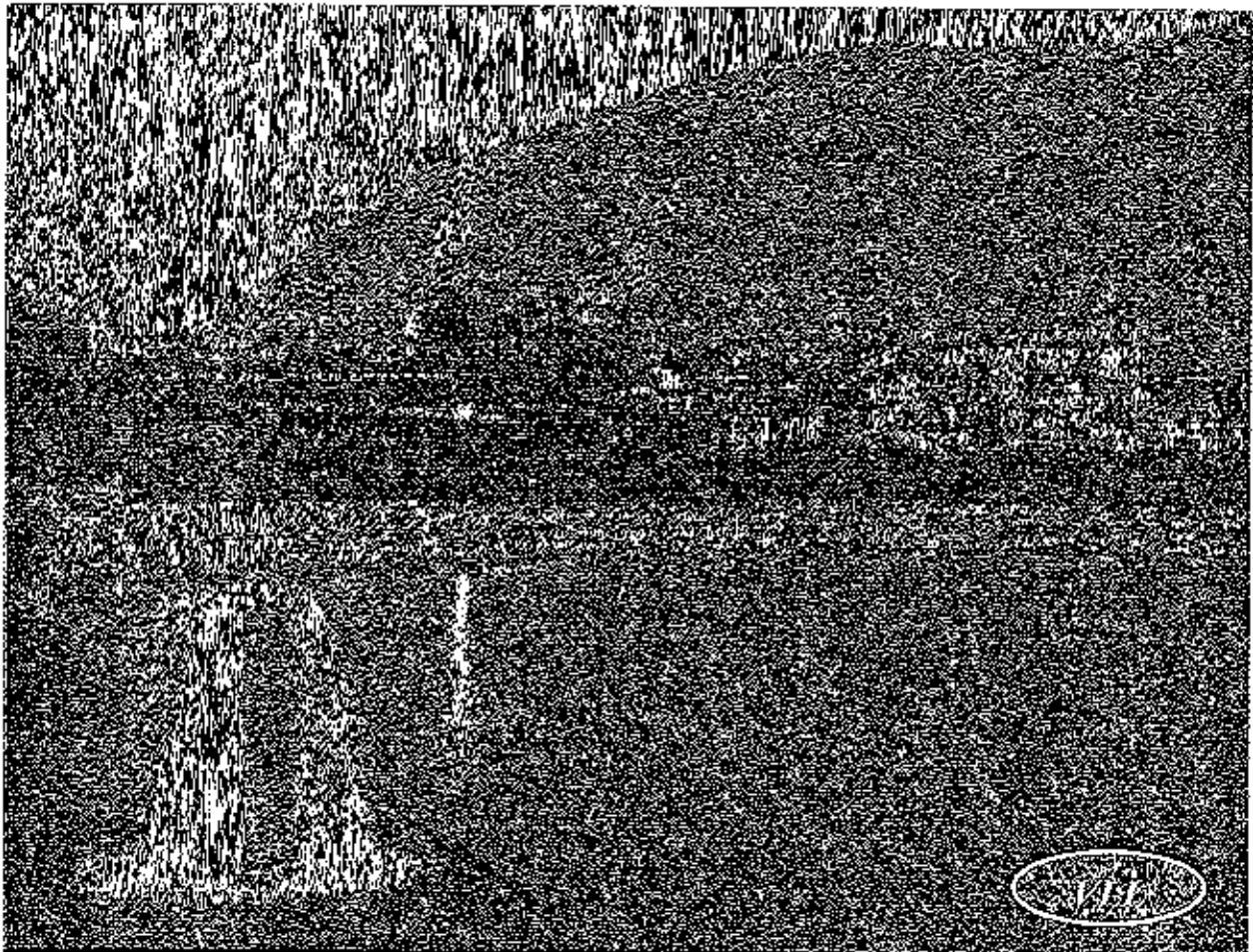
Authority Signatory



# ENVIRONMENTAL SEASONAL REPORT

SEASONAL REPORT

April 2020 to June 2020



**Address**

Via: Viswanathpur, P.O. Lanjigarh-766027

Dist. Kalahandi,ORISSA

Tel: + 91 6677 247312/13/14/15/16

Fax: +91 6677 247311

**July - 2020**

**MICRO-METEOROLOGICAL DATA AT SITE**Period: 1<sup>st</sup> April 2020 to 30<sup>th</sup> June 2020

Location: Plant Site

Month	Temperature (°C)		Relative Humidity (%)		Rainfall (mm)
	Max	Min	Max	Min	Total
April'20	39.20	19.30	97.10	19	55.30
May'20	41.20	21	95.60	19.10	16.70
June'20	36.40	22.30	99.90	49	228.2
			<b>Total rainfall</b>		<b>300.2</b>

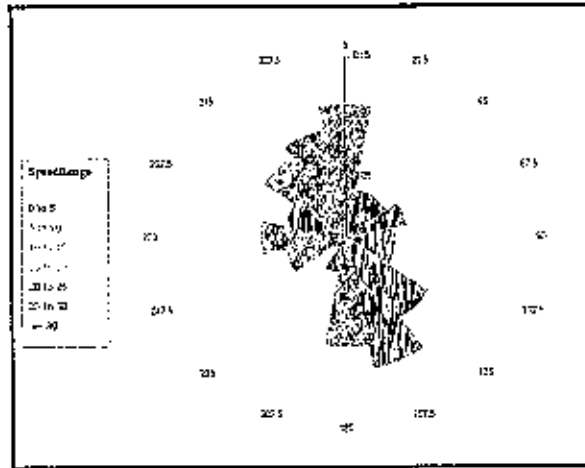
**SUMMARY OF WIND PATTERN IN STUDY AREA**

Season	First Predominant Wind Direction	Second Predominant Wind Direction	Predominant Wind Speeds (m/sec)	Calm (%)
Apr` 20 to Jun` 20	N (11%) & SSE (11%)	S (9%) & NNW (9%)	0 - 15	0.0

Wind Pattern during the Season

During the season the average winds from North (N) & SSE direction were observed for 11% each of the total time, with wind speeds and the frequency in the range of 0-15 m/sec (11%). In S & NNW direction the winds were also observed for 9% each of the total time, with wind speeds and the frequency in the range of 0-10 m/sec (9%). The other direction and percentage frequencies were observed from SE (8.0%), NW (8.0%), E (4 %), W (7 %). The calm conditions were observed to be for 0.0% of the total time.





WINDROSE DIAGRAM FOR THE SEASON -- (Apr'20 to Jun'20)



**SUMMARY OF AMBIENT AIR QUALITY RESULTS**Concentrations are expressed in  $\mu\text{g}/\text{m}^3$ 

Location	PM <sub>10</sub>			PM <sub>2.5</sub>			SO <sub>2</sub>			NO <sub>x</sub>		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Plant Site	77.0	67.0	72.2	47.4	32.1	36.7	11.2	8.3	9.6	19.3	15.1	17.3
Lanjigarh	-	-	-	-	-	-	-	-	-	-	-	-
Belamba	62	54	58.4	36.2	25.1	28.15	7.2	4.2	5.9	16.2	10.1	11.9
Niyangiri Vedanta Nagar	65	58	61.3	31.1	26.1	28.33	8.2	6.2	6.9	13.0	10.3	11.8
Mid-Day Meal	67	58	63.4	42.4	25.3	31.65	9.4	6.4	7.8	17.5	11.3	14.9
Chhatrapur	66	59	62.36	40.2	26.1	31.65	8.2	5.2	6.8	16.1	13.1	14.4
	54.0-77.0			25.1-47.4			4.2-11.2			10.1-19.3		

Note: Ambient Air Quality monitoring for Lanjigarh location couldn't be carried-out from April'20 to June'20 due to worldwide lockdown because of the widespread of COVID-19 pandemic.



*Signature*

**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE MONTH OF APRIL 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
Parameter	SO2	NOx	CO	PM	SO2	NOx	CO	PM	SO2	NOx	CO	PM
Unit	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
01-Apr-20	621.67	28.92	0.03	20	192.48	31.50	0.02	21	1808.13	416.29	4.88	16.57
02-Apr-20	6.36	0	0.01	71	173.08	20.41	0.01	26	1812.97	460.53	14.51	17.12
03-Apr-20	661.48	37.87	0.03	24	190.58	17.63	0.05	29	1806.51	463.08	9.97	17.69
04-Apr-20	714.37	34.71	0.04	22	185.04	15.58	0.01	31	1715.09	495.42	5.19	18.16
05-Apr-20	682.16	30.04	0.03	23	190.9	14.35	0	27	1688.34	443.34	11.52	18.95
06-Apr-20	479.37	40.31	0.03	23	198.76	43.91	0	27	1682.05	480.53	8.76	20.18
07-Apr-20	412.18	39.74	0.03	23	150.55	68.17	0	26	1749.48	498.50	8.00	18.73
08-Apr-20	428.65	45.38	0.04	24	92.39	66.67	0	25	1809.81	442.07	10.52	18.32
09-Apr-20	439.58	47.27	0.04	23	52.06	32.30	0	31	1804.01	409.53	7.47	18.98
10-Apr-20	412.44	53.86	0.04	28	203.17	49.60	0	40	1705.84	422.38	5.87	18.27
11-Apr-20	347.04	42.93	0.03	33	253.04	59.82	0	28	1801.82	427.83	12.94	18.05
12-Apr-20	315.75	32.08	0.03	23	263.47	56.00	0	30	1777.49	421.38	13.82	18.10
13-Apr-20	224.31	14.58	0.02	21	281.35	54.54	0	33	1586.35	323.78	123.91	16.58
14-Apr-20	193.05	20.35	0.03	23	268.01	60.21	0	26	1597.45	347.40	12.22	17.07
15-Apr-20	268.25	26.13	0.03	22	339.51	64.23	0	24	1718.30	415.53	13.25	19.20
16-Apr-20	106.24	14.83	0.02	25	346.65	64.03	0	26	1821.08	505.29	5.48	25.02
17-Apr-20	361.13	35.56	0.03	25	348.15	65.77	0.01	24	1847.91	501.47	7.97	25.97
18-Apr-20	480.97	44.15	0.03	25	366.14	66.97	0	24	1851.75	466.81	9.76	30.53
19-Apr-20	517.81	44.09	0.04	24	362.20	66.46	0	23	1852.37	503.55	12.19	33.57
20-Apr-20	516.55	43.15	0.04	25	400.11	68.19	0.02	26	1683.95	491.02	8.58	33.41
21-Apr-20	429.69	41.19	0.04	26	366.09	68.64	0	32	1619.74	439.58	9.00	26.28
22-Apr-20	291.10	54.64	0.04	27	229.98	73.21	0	18	1337.77	412.66	17.14	21.06
23-Apr-20	216.51	49.56	0.04	32	170.41	73.52	0	16	1453.15	377.45	40.50	18.56
24-Apr-20	176.03	44.82	0.04	25	140.14	73.45	0	17	1615.08	421.19	23.38	16.14
25-Apr-20	193.71	47.41	0.03	28	84.37	46.77	0	18	1754.71	412.22	11.71	15.12
26-Apr-20	122.25	48.68	0.03	31	21.51	30.59	0	18	1765.83	442.30	94.93	15.49
27-Apr-20	79.85	49.59	0.02	31	81.67	67.63	0	19	1906.04	418.30	25.72	13.57
28-Apr-20	108.97	50.56	0.03	32	71.92	62.12	0	17	1848.79	394.24	17.21	15.32
29-Apr-20	269.12	39.54	0.04	33	180.37	53.47	0	17	1738.30	362.48	49.78	16.33
30-Apr-20	375.21	36.71	0.04	31	235.39	51.26	0	19	1793.39	425.28	114.30	16.56



**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE MONTH OF MAY 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
	SO2	NOx	CO	PM	SO2	NOx	CO	PM	SO2	NOx	CO	PM
Unit	ppm	ppm	%	mg/Nm3	ppm	ppm	%	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3
01-May-20	271.85	32.16	0.04	35	232.41	56.13	0	19	1897.82	448.50	13.99	17.37
02-May-20	149.10	28.06	0.03	29	223.63	54.47	0	21	1947.94	493.28	11.61	16.73
03-May-20	249.05	33.91	0.04	30	250.67	50.71	0	19	1899.55	464.25	9.34	16.36
04-May-20	1.90	0	0.02	22	163.77	25.30	0.08	27	1795.34	506.89	8.97	17.18
05-May-20	295.92	34.41	0.04	21	112.52	42.43	0	23	1701.95	385.28	7.10	16.86
06-May-20	164.51	21.80	0.03	21	77.72	45.50	0	18	1889.68	406.14	7.39	16.93
07-May-20	287.08	25.94	0.03	24	113.02	41.91	0	23	1877.89	432.35	16.90	16.99
08-May-20	573.97	41.92	0.04	23	111.59	41.88	0	34	1612.75	470.46	8.61	17.19
09-May-20	576.87	44.72	0.04	22	144.13	38.15	0	23	1694.76	422.58	5.91	16.91
10-May-20	657.10	39.32	0.04	20	143.45	41.04	0	15	1709.54	519.99	5.16	17.19
11-May-20	583.77	40.20	0.04	21	136.38	41.16	0	18	1589.93	471.60	4.58	17.24
12-May-20	466.00	38.55	0.04	22	155.37	46.40	0	17	1678.30	442.94	9.18	16.97
13-May-20	361.47	14.89	0.04	22	161.44	45.51	0	18	1883.98	477.66	8.26	17.44
14-May-20	307.88	28.62	0.03	21	135.04	44.97	0	17	1805.31	449.96	8.34	18.24
15-May-20	638.85	49.20	0.05	21	140.67	44.26	0	19	1641.46	486.75	7.49	17.17
16-May-20	728.48	45.00	0.04	22	168.29	37.46	0.09	17	1843.42	460.22	12.65	16.96
17-May-20	746.59	42.14	0.02	22	213.66	32.00	0	20	1904.45	489.19	30.14	17.13
18-May-20	750.55	44.21	0.02	23	159.71	33.43	0	21	1796.86	522.51	12.24	17.35
19-May-20	735.93	48.20	0.02	25	188.42	34.10	0	20	1792.91	512.46	7.76	17.16
20-May-20	696.45	43.82	0.02	24	181.93	32.30	0	19	1794.52	497.58	9.80	17.25
21-May-20	729.98	36.75	0.02	25	183.57	30.85	0	20	1931.43	520.96	11.37	17.24
22-May-20	566.58	36.53	0.02	26	126.54	28.96	0	20	1934.22	491.86	11.89	17.07
23-May-20	277.32	17.58	0.02	24	30.92	29.55	0	26	1815.75	476.22	8.33	16.97
24-May-20	130.62	5.18	0.01	25	24.62	27.85	0	25	1845.50	498.68	8.81	17.04
25-May-20	100.48	5.53	0.01	27	40.12	25.51	0	23	1850.20	494.77	9.48	16.87
26-May-20	34.42	1.13	0	24	65.45	8.88	0	21	1747.28	501.80	8.11	16.90
27-May-20	138.05	18.77	0.01	23	103.93	12.52	0	20	1492.93	453.28	8.30	16.77
28-May-20	72.72	12.44	0.01	24	79.73	23.72	0	21	1421.66	457.81	10.97	16.82
29-May-20	67.56	14.97	0.01	25	41.51	31.10	0	22	1302.22	429.40	6.47	16.88
30-May-20	50.86	9.60	0.01	24	33.89	16.98	0	22	1264.47	429.99	9.90	16.82
31-May-20	6.27	0	0	26	2.75	5.57	0	23	1291.80	459.28	7.37	16.92



**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE  
MONTH OF JUNE 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
	SO2	NOx	CO	PM	SO2	NOx	CO	PM	SO2	NOx	CO	PM
Parameter	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
Unit	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
01-Jun-20	15.42	7.22	0.01	23	0	0	0	0	1183.94	440.36	5.71	16.95
02-Jun-20	28.52	8.83	0.01	30	0	0	0	0	1159.74	369.53	5.25	14.65
03-Jun-20	23.82	7.25	0.01	22	0	0	0	0	904.70	441.58	11.63	16.08
04-Jun-20	16.51	7.07	0.01	23	73.22	28.71	0.01	19	1002.66	410.73	6.44	16.65
05-Jun-20	34.18	8.74	0.01	23	81.71	39.29	0	21	1087.19	395.38	6.08	16.33
06-Jun-20	82.93	7.34	0.01	24	85.55	38.16	0	19	1170.05	343.27	12.22	15.95
07-Jun-20	88.70	8.41	0.01	25	116.14	37.23	0	20	1293.31	424.36	8.31	19.61
08-Jun-20	59.18	20.01	0	24	96.58	34.99	0	23	1148.21	459.40	5.52	17.28
09-Jun-20	156.86	21.49	0	24	130.02	35.95	0	20	1136.59	437.82	6.09	17.33
10-Jun-20	188.46	18.37	0	24	158.25	32.91	0	20	1119.17	426.03	13.81	17.68
11-Jun-20	194.05	17.00	0	25	164.76	31.43	0	22	1150.24	393.82	15.98	16.17
12-Jun-20	138.85	21.44	0	25	112.12	35.74	0	20	1154.17	426.11	26.47	14.77
13-Jun-20	169.64	17.66	0	24	140.57	31.48	0	22	1209.40	425.63	12.41	16.99
14-Jun-20	142.26	14.79	0	24	117.16	29.14	0	20	1298.49	422.53	11.03	17.07
15-Jun-20	204.99	19.27	0	30	172.35	33.95	0	19	1540.59	423.60	7.39	17.05
16-Jun-20	216.45	18.20	0	26	182.89	33.34	0	26	1672.14	419.49	10.02	16.94
17-Jun-20	427.51	47.86	0.01	27	134.26	34.62	0	19	1675.99	411.01	6.28	15.89
18-Jun-20	329.27	59.32	0.02	26	153.20	33.28	0	22	1637.92	450.71	16.86	15.78
19-Jun-20	448.55	63.20	0.02	28	139.18	31.06	0	21	1456.02	454.41	5.83	15.32
20-Jun-20	355.56	40.39	0.02	30	113.99	36.50	0	22	1472.32	466.14	39.32	14.70
21-Jun-20	339.32	21.88	0.02	27	98.25	35.50	0.14	20	1118.99	468.43	8.81	14.23
22-Jun-20	490.63	42.28	0.03	28	302.97	30.21	0	18	1336.42	439.57	23.69	13.18
23-Jun-20	61.75	1.16	0.03	27	159.33	19.00	0	19	1200.01	426.57	14.51	13.13
24-Jun-20	601.49	37.01	0.02	27	184.43	21.28	0	20	1096.66	431.28	37.35	16.60
25-Jun-20	510.62	53.90	0.03	28	158.63	26.80	0	20	985.62	418.12	20.92	19.01
26-Jun-20	514.98	57.71	0.03	29	157.72	66.28	0.17	20	1021.99	444.85	20.11	17.99
27-Jun-20	459.34	62.68	0.03	31	198.34	85.43	0.14	21	972.93	465.11	13.40	17.36
28-Jun-20	77.51	6.47	0.01	31	225.97	84.95	0	22	998.41	445.09	9.11	16.77
29-Jun-20	376.88	63.59	0.02	31	389.19	84.45	0	21	1120.43	423.78	9.53	13.92
30-Jun-20	344.95	68.67	0.02	32	328.02	76.64	0.04	20	1001.40	415.95	13.21	14.00

Note: Calciner 2 was not under operation from dt: 01-06-2020 to dt: 03-06-2020 for maintenance activities.



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P  
**Test Report No** : 463 | 47651053 KLPL/A/20/ENVN/00585 **Issue Date** : 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 13.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	9.31	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.28	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	71	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	44.45	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.37	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	16.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.56	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1053417910123  
KLPL- 341128A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004179P

Test Report No : 463 | 47651053 KLPL/4/20/ENVN/00585A

Issue Date : 05-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 02-May-2020

Commenced On : 02-May-2020

Completion On: 05-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-D6

Parameters Unit Standard Value Results Test Method

Location & Date : - CHHATRAPUR VILLAGE, 14.04.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.19	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.38	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	50	40.19	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1053417910123

KLPL- 341327A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585B **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - MID DAY MEAL, 15.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.28	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.26	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	42.38	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.69	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	7.3	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D Anukha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Sankarajayal  
Authorised Signatory 5/05/2020  
For Kalyani Laboratories Pvt. Ltd.



1053417910123  
KLPL- 34126A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585C **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - BELAMBA VILLAGE , 15.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.38	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.19	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	36.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By *D. Asutaha*  
For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak*  
Authorised Signatory 5/05/2020  
For Kalyani Laboratories Pvt. Ltd.



1053417910123  
KLPL- 34125A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585D **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameter	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE , 20.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	10.26	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	19.34	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	73	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	47.42	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.40	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	13.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	5.20	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pecha alayya*  
 27/5/2020  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/9-14, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585E **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - CHHATRAPUR VILLAGE, 21.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.40	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.11	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	53	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	39.31	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D Anubha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Perkha Rajay*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd. 5/05/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALI, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004179P

## TEST REPORT



Test Report No : 463 | 47651053 KLPL/4/20/ENVN/00585F

Issue Date : 05-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJGARH

Address : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 02-May-2020 Commenced On : 02-May-2020

Completion On: 05-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters : Unit : Standard Value : Results : Test Method :

Location & Date : - MID DAY MEAL, 22.04.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	9.39	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.19	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	67	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	40.37	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.70	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	6.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By : *D. Ananta*  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory : *Pooja Nayak*  
For Kalyani Laboratories Pvt. Ltd. 3/05/2020





# KALYANI LABORATORIES PVT. LTD.

79/944, PAJAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585G **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - BELAMBA VILLAGE , 25.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.19	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.21	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.49	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D Anuraha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Partha Rayan*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd. 5/05/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P  
**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585H **Issue Date** : 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : PLANT SITE , 27.04.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.40	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.11	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	67	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	42.02	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.32	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	12.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.23	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D Anurha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pexha Anurha*  
 Authorised Signatory 5/05/2020  
 For Kalyani Laboratories Pvt. Ltd.



1053417910123  
 KLPL- 341120A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAULI, BHUDANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585I **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - CHHATRAPUR VILLAGE, 28.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.24	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.26	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	59	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	38.14	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Arulcha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Seeta Kalyan*  
 5/05/2020  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585J **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : - MID DAY MEAL, 29.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.38	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	35.25	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.66	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anulaha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Reeba Chajay*  
5/05/2020  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004179P

**Test Report No** : 463 | 47651053 KLPL/4/20/ENVN/00585K **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : - BELAMBA VILLAGE , 30.04.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.11	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	33.48	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurupa*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Rekha Chaya*  
 Authorised Signatory 5/05/2020  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

76/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004180P  
**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On**: 05-May-2020  
**Sample Name** : **FLUE GAS | STACK MONITORING**  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure**: KLPL/SOP/AIR-06

**Issue Date** : 05-May-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-3 , 10.04.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	694.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	32.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.74	KLPL/SOP/AIR-05
Stack Temperature in Deg kelvin	--	--	419	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	286.6	IS 11255 (part-7):2005
carbon Dioxide	%	--	9.85	KLPL/SOP/AIR-06
Oxygen	%	--	4.65	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1732154	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	4.79	KLPL/SOP/AIR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Aswatha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Aswatha*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1054418010124  
KLPL- 341297A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAJAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC7D4320000004180P

**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586A **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b>	: CALCINER-I, 11.04.2020			
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	672.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	20.8	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.51	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	446	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	281.1	IS 11255 (part-2):2005
Carbon Dioxide	%	-	16.3	KLPL/SOP/AIR-06
Oxygen	%	--	3.85	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3231088	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH2O	--	27.27	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurag*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*T. D. S. S. S.*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1054418010124  
KLPL- 341296A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004180P  
**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586B **Issue Date** : 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-1 , 13.04.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	678.1	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	24.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.01	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	408	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	283.5	IS 11255 (part-7):2005
carbon Dioxide	%	--	9.4	KLPL/SOP/AIR-06
Oxygen	%	--	4.4	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1630277	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-05
Pressure	mmH <sub>2</sub> O	--	4.14	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Anuska  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1054418010124  
 KLPL- 341295A



# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BHUBANESWAR-752101. ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004180P  
**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586C  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure:** KLPL/SOP/AIR-06

**Issue Date** : 05-May-2020  
**Amendment Date** : -

**Completion On:** 05-May-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER-II, 14.04.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	697.6	IS 11255(part-2):1995(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	26.7	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.56	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	446	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	293.7	IS 11255 (part-7):2005
carbon Dioxide	%	--	13.6	KLPL/SOP/AIR-06
Oxygen	%	--	4.47	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3479483	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	29.99	KLPL/SOP/AIR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1054418010124  
 KLPL- 341294A



# KALYANI LABORATORIES PVT. LTD.

7/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004180P

**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586D **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref.To Sampling Procedure**: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-1 , 23.04.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	597.4	IS 11255(part-2):1905(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	36.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	5.98	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	404	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	298.3	IS 11255 (part-7):2005
carbon Dioxide	%	--	9.85	KLPL/SOP/AIR-06
Oxygen	%	--	4.72	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1225091	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	2.33	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anubha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S.*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1054418010124  
 KLPL- 341293A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004180P  
**Test Report No** : 464 | 47661054 KLPL/4/20/ENVN/00586E **Issue Date** : 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-May-2020 **Commenced On** : 02-May-2020 **Completion On** : 05-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER-I, 24.04.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	686.6	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	27.1	KLPL/SOP/AIR-06
Velocity	m/sec	-	23.39	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	438	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	293.2	IS 11255 (part-7):2005
carbon Dioxide	%	--	16.6	KLPL/SOP/AIR-06
Oxygen	%	--	3.94	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3553732	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	32.82	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1054418010124  
KLPL-341292A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004180P

Test Report No : 464 | 47661054 KLPL/4/20/ENVN/00586F

Issue Date : 05-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013498 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 02-May-2020 Commenced On : 02-May-2020

Completion On: 05-May-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref.To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : POWER PLANT UNIT-3 , 27.04.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	585.9	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	29.6	KLPL/SDP/AIR-06
Velocity	m/sec	-	9.39	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	415	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	278.2	IS 11255 (part-7):2005
carbon Dioxide	%	--	9.72	KLPL/SDP/AIR-06
Oxygen	%	--	4.58	KLPL/SDP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1872691	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	5.59	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anubha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anubha*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1054418010124  
KLPL- 341291A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUGANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004180P

Test Report No : 464 | 4/661054 KLPL/4/20/ENVN/00586G

Issue Date : 05-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 02-May-2020

Commenced On : 02-May-2020

Completion On: 05-May-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref.To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CALCINER-II, 28.04.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	708.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	34.4	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.69	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	°C	-	454	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	305.2	IS 11255 (part-7):2005
carbon Dioxide	%	--	13.9	KLPL/SOP/AIR-06
Oxygen	%	--	4.54	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3393074	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	29.8	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurag*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anurag*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1054418010124

KLPL-341290A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004018F

**Test Report No** : 2273 | 4563FB2KLPL/4/20/WATER/02548A **Issue Date**: 25-April-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-April-2020 **Test Commenced On** : 20-April-2020 **Test Completion On**: 25-April-2020

**Sample Description** : **WASTE WATER**

---

**Sample Condition** : SEALED

**Sample Identification** : **STP OUTLET** **Sampling Date** : 10-April-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-10.04.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	22	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	15	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 5 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition 2012(5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 22nd Edition (5520B), 2012
v	TOTAL Nitrogen	mg/l	10	1.0	IS 3025 (PART 34): 1988 RA 2003
vi	Amonnical Nitrogen (as N)	mg/l	5	<0.3	IS 3025 (PART 34): 1988 RA 2003
<b>PHYSICAL PARAMETER</b>					
i	pH Value	---	6.5 - 9.0	7.95	APHA 22nd Edition (4500-H+-B), 2012

**Remarks** : NIL

*Any unusual feature observed during determination* : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anupata*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*[Signature]*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd




# KALYANI LABORATORIES PVT. LTD.

71/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT

<b>NABL ULR NO</b>	: TC70432000004019F	
<b>Test Report No</b>	: 2273   4564FB3KLPL/4/20/WATER/02548B	<b>Issue Date:</b> 25-April-2020
<b>Amendment No</b>	: -	<b>Amendment Date</b> : -
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019	
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH	
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISH-766027.	
<b>Date of receipt</b>	: 20-April-2020	<b>Test Commenced On</b> : 20-April-2020
<b>Sample Description</b>	: <b>WASTE WATER</b>	<b>Test Completion On:</b> 25-April-2020
<b>Sample Condition</b>	: SEALED	
<b>Sample Identification *</b>	: <b>STP OUTLET</b>	<b>Sampling Date</b> : 10-April-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date</b> : NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date</b> : NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b> : TOWNSHIP DT-10.04.2020
<b>Ref.To Sampling Procedure:</b>	: QSP-07	

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	33	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	25	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition 2012(5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520B), 2012
v	TOTAL Nitrogen	mg/l	10	6.2	IS 3025 (PART 34): 1988 RA 2003
vi	Amonntcal Nitrogen (as N)	mg/l	5	1.68	IS 3025 (PART 34): 1988 RA 2003
<b>PHYSICAL PARAMETER</b>					
i	pH Value		6.5 - 9.0	7.3	APHA 22nd Edition (4500-H+-B), 2012

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anil Kumar*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory (Microbiological)  
For Kalyani Laboratories Pvt. Ltd

*[Signature]*  
Authorized Signatory (Chemical)  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004021F

**Test Report No** : 2273 | 4607FB5KLPL/4/20/WATER/02548C **Issue Date**: 25-April-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600D13488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-April-2020 **Test Commenced On** : 20-April-2020 **Test Completion On**: 25-April-2020

**Sample Description** : **STP WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 14-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-14.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	26	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	18	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.2	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.9	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*[Signature]*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004020F

**Test Report No** : 2273 | 4608FB4KLPL/4/20/WATER/02548D **Issue Date**: 25-April-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-April-2020 **Test Commenced On** : 20-April-2020 **Test Completion On**: 25-April-2020

**Sample Description** : **STP WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 14-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-14.04.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	50	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	30	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	6	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	12	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	6.5	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.2	APHA 23rd Edition (4500-H4-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL  
\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anandha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory (Microbiological)  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory (Chemical)  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004018F

**Test Report No** : 2273 | 4563FB2KLPL/4/20/WATER/Q2548E **Issue Date:** 29-April-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 24-April-2020 **Test Commenced On** : 24-April-2020 **Test Completion On** : 29-April-2020

**Sample Description** : **WASTE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 23-April-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-23.04.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Feecal Coliform	MPN/100ml	< 100	27	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	20	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4.5	APHA 23rd Edition 2012(5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 22nd Edition (5520B), 2012
v	TOTAL Nitrogen	mg/l	10	1.3	IS 3025 (PART 34): 1988 RA 2003
vi	Amomnical Nitrogen (as N)	mg/l	5	<0.3	IS 3025 (PART 34): 1988 RA 2003
<b>PHYSICAL PARAMETER</b>					
i	pH Value		6.5 - 9.0	7.95	APHA 22nd Edition (4500-H+-B), 2012

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anujaha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory (Microbiological)  
For Kalyani Laboratories Pvt. Ltd

Authorized Signatory (Chemical)  
For Kalyani Laboratories Pvt. Ltd







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101. ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004019F

**Test Report No** : 2273 | 4564FB3KLPL/4/20/WATER/02548F **Issue Date:** 29-April-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISH-766027.

**Date of receipt** : 24-April-2020 **Test Commenced On** : 24-April-2020 **Test Completion On:** 29-April-2020

**Sample Description** : WASTE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 23-April-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-23.04.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** QSP-07

Parameter	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	50	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	35	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	7	APHA 23rd Edition 2012(5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	12	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520B), 2012
v	TOTAL Nitrogen	mg/l	10	6.6	IS 3025 (PART 34): 1988 RA 2003
vi	Amonical Nitrogen (as N)	mg/l	5	2.80	IS 3025 (PART 34): 1988 RA 2003
<b>PHYSICAL PARAMETER</b>					
i	pH Value		6.5 - 9.0	7.35	APHA 22nd Edition (4500-H+-B), 2012

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Banerjee*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*[Signature]*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004021F

**Test Report No** : 2273 | 4607FB5KLPL/4/20/WATER/02548G **Issue Date:** 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 29-April-2020 **Test Commenced On** : 29-April-2020 **Test Completion On**: 05-May-2020

**Sample Description** : **STP WATER**

---

**Sample Condition** : SEALED

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 28-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-28.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i	Faecal Coliform	MPN/100ml. < 100	40	1622:1984, RA 2009
<b>CHEMICAL PARAMETER</b>				
i	Chemical Oxygen Demand	mg/l, Max 50	25	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max 10	5	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max 20	10	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max 10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max 10	1.5	APHA 23rd Edition (4500-NHorg-B, 4500-ND2-B, 4500-ND3-B), 2017
vi	Aminonium Nitrogen (as NH4-N)	mg/l, Max 5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i	pH value	6.5-9.0	8.0	APHA 23rd Edition (4500-HH-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Anandhi*  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory (Microbiological)  
For Kalyani Laboratories Pvt. Ltd

Authorized Signatory (Chemical)  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004020F  
**Test Report No** : 2273 | 4608FB4KLPL/4/20/WATER/02548H **Issue Date:** 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-April-2020 **Test Commenced On** : 29-April-2020 **Test Completion On:** 05-May-2020  
**Sample Description** : STP WATER

**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 28-April-2020  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-28.04.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Results	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	60	IS22:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	40	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	8	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	14	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	6.8	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	3.36	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value	---	6.5-9.0	7.35	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anishe*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*[Signature]*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004061P  
**Test Report No** : 2272 | 4573FDDKLPL/4/20/WATER/025485 **Issue Date:** 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On:** 05-May-2020  
**Sample Description** : **SURFACE WATER**  
**Sample Condition** : SEALED  
**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Apr-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : STREAM NEAR TENTULIPADAR DT-29.04.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Total Coliforms	MPN/100ml	5000	30	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chloride as Cl	mg/l, Max	600	6.3	APHA 23rd Edition (4500-Cl - -B), 2017
ii	Sulphate as SO4	mg/l, Max	400	< 1.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii	Nitrate as NO3	mg/l, Max	50	0.06	APHA 23rd Edition (4500-NO3 - -E), 2017
iv	Electrical Conductivity	us/cm	-	47	APHA 23rd Edition (2510 B) 2017
v	Fluoride as F	mg/l, Max	1.5	0.05	APHA 23rd Edition (4500-F - -D, -C), 2017
vi	Total Dissolved Solid	mg/l, Max	1500	42	APHA 23rd Edition (2540 C), 2017
vii	Calcium as Ca	mg/l, Max	-	5.8	APHA 23rd Edition (3500-Ca-B), 2017
viii	Magnesium as Mg	mg/l, Max	-	6.32	APHA 23rd Edition (3500-Mg-B), 2017
ix	Boron as B	mg/l, Max	-	< 0.1	APHA 23rd Edition (4500B- B), 2017
x	Dissolved Oxygen	mg/l, Max	4.0	7.2	APHA 23rd Edition (4500-O-C), 2017
xi	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	1.6	APHA 23rd Edition 2012 (5210 B), 2017
xii	Total Hardness as CaCO3	mg/l, Max	--	40	APHA 23rd Edition (2340 C), 2017
xiii	Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiv	Iron (as Fe)	mg/l, Max	50	0.05	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv	Manganese (as Mn)	mg/l, Max	--	< 0.1	IS 3025 (Part 59):2006 RA 2012
xvi	Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 36):2003 RA 2009
xvii	Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xviii	Free Ammonia (as NH3)	mg/l, Max	--	< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix	Oil & Grease	mg/l, Max	--	< 0.025	APHA-23rd Edition (5520 B) 2017
xx	Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xxi	Anionic Surface Active Agents (as MBAS)	mg/l	--	< 0.1	Annex K of IS 13428:2005

2191 | 4673FDD





# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2272 | 4573FDDKLPL/4/20/WATER/02548S



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	< 0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	< 0.01	--
xxiv Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0006	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.41	--
xxvii barium	mg/l	--	< 0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H++-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anilata  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anilata*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004062F

**Test Report No** : 2272 | 4574FDEKLPL/4/20/WATER/02548T **Issue Date:** 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On:** 05-May-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Apr-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : STREAM NEAR KENDUBADI

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	50	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	5.5	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	< 1.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.08	APHA 23rd Edition (4500-NO3 - -G), 2017
iv Electrical Conductivity	µs/cm	-	32	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	< 0.05	APHA 23rd Edition (4500-F - -D, -C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	28	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	4.3	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	4.13	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	< 0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.4	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	2.2	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	28	APHA 23rd Edition (2540 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.07	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	< 0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	< 0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	< 0.1	Annex K of IS 13428:2005



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

**Test Report No** : **2272 | 4574FDEKLPL/4/20/WATER/02548T**



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	< 0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	< 0.01	--
xxiv Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0005	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.41	--
xxvii barium	mg/l	--	< 0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA

**PHYSICAL PARAMETER**

i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.4	APHA 23rd Edition (4500-IT+B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

**RADIOACTIVITY SUBSTANCES**

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

**TOXIC SUBSTANCES**

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

**Remarks** : NIL

*Any unusual feature observed during determination* : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anubha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Rajmal*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004063F

**Test Report No** : 2272 | 4575FDFKPL/4/20/WATER/02548U **Issue Date**: 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-66D0013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On**: 05-May-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Apr-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : STREAM NEAR RENGOPALI DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
i	Total Coliforms	MPN/100ML	5000	34	IS: 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Chloride as Cl	mg/l, Max	600	6.3	APHA 23rd Edition (4500-Cl - -B), 2017
ii	Sulphate as SO4	mg/l, Max	400	< 1.0	APHA 23rd Edition (4500-SO4 - -E), 2017
iii	Nitrate as NO3	mg/l, Max	50	< 0.05	APHA 23rd Edition (4500-NO3 - -E), 2017
iv	Fluoride as F	mg/l, Max	1.5	< 0.05	APHA 23rd Edition (4500-F - -D,-C), 2017
v	Total Dissolved Solid	mg/l, Max	1500	28	APHA 23rd Edition (2540 C), 2017
vi	Calcium as Ca	mg/l, Max	-	2.88	APHA 23rd Edition (3500-Ca-B), 2017
vii	Magnesium as Mg	mg/l, Max	-	1.22	APHA 23rd Edition (3500-Mg-B), 2017
viii	Baron as B	mg/l, Max	-	< 0.1	APHA 23rd Edition (4500B - B), 2017
ix	Dissolved Oxygen	mg/l, Max	4.0	7.7	APHA 23rd Edition(4500-O-C), 2017
x	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.7	APHA 23rd Edition 2012(5210 B), 2017
xi	Total Hardness as CaCO3	mg/l, Max	-	12	APHA 23rd Edition (2340 C), 2017
xii	Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiii	Iron (as Fe)	mg/l, Max	50	0.32	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xiv	Manganese (as Mn)	mg/l, Max	-	< 0.1	IS 3025 (Part 59):2006 RA 2012
xv	Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvi	Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xvii	Free Ammonia (as NH3)	mg/l, Max	-	< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xviii	Oil & Grease	mg/l, Max	-	< 0.025	APHA-23rd Edition (5520 B) 2017
xix	Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xx	Anionic Surface Active Agents (as MBAS)	mg/l	-	< 0.1	Annex K of IS 13428:2005
xxi	Polynuclear Aromatic Hydrocarbon	mg/l, Max	-	< 0.0001	APHA 6410

2183 | 4575FDFKPL



KLPL-341155A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752 001, ODISHA

Test Report No : 2272 | 4575FDFKLPL/4/20/WATER/02548U



Parameters	Unit	Requirement	Result	Test Method
xxii Silver (as Ag)	mg/l		< 0.01	
xxiii Pfenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxiv PERCENT SODIUM (%)	%		0.0003	
xxv SODIUM ABSORPTION RATIO	--		0.37	
xxvi barium	mg/l		< 0.2	
xxvii TOTAL PESTISIDE	µg/l		< 0.0001	USEPA
xxviii Electrical Conductivity	µs/cm		34	APHA 23rd Edition (2510 B) 2017
<b>PHYSICAL PARAMETER</b>				
i Color		300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value		6.5-8.5	7.3	APHA 23rd Edition (4500-H+-B), 2017
iii Odour		Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anubha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT

NABL ULR NO : TC70432000004065F



Test Report No : 2272 | 4577FE1KLPL/4/20/WATER/02548W Issue Date: 05-May-2020

Amendment No : - Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 30-April-2020 Test Commenced On : 30-April-2020 Test Completion On: 05-May-2020

Sample Description : SURFACE WATER

Sample Condition : SEALED

Sample Identification \* : SURFACE WATER

Sampling Date : 29-April-2020

Batch No , Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 2

Place of Collection : VAMSHADHARA RIVER NEAR NARAYANPUR  
CULVERT (UPSTREAM)

Sample Collected By : By KLPL

Ref.To Sampling Procedure: KLPL/SOP/CHEM-28

Parameters Unit Requirement Result Test Method

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100ml	5000	40	IS: 1622:1981 RA 2009
---	-----------------	-----------	------	----	-----------------------

### CHEMICAL PARAMETER

i	Chloride as Cl	mg/l, Max	600	37.6	APHA 23rd Edition (4500-Cl - -B), 2017
ii	Sulphate as SO4	mg/l, Max	400	7.0	APHA 23rd Edition (4500-SO42 --E), 2017
iii	Nitrate as NO3	mg/l, Max	50	0.55	APHA 23rd Edition (4500-NO3 - -E), 2017
iv	Fluoride as F	mg/l, Max	1.5	< 0.05	APHA 23rd Edition (4500-F - -D,-C), 2017
v	Total Dissolved Solid	mg/l, Max	1500	102	APHA 23rd Edition (2540 C), 2017
vi	Calcium as Ca	mg/l, Max	-	15.84	APHA 23rd Edition (3500-Ca-B), 2017
vii	Magnesium as Mg	mg/l, Max	-	1.94	APHA 23rd Edition (3500-Mg-B), 2017
viii	Boron as B	mg/l, Max	-	< 0.1	APHA 23rd Edition (4500B- B), 2017
ix	Dissolved Oxygen	mg/l, Max	4.0	7.5	APHA 23rd Edition(4500-O-C), 2017
x	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	-	2.2	APHA 23rd Edition 2012(5210 B), 2017
xi	Total Hardness as CaCO3	mg/l, Max	-	48	APHA 23rd Edition (2340 C), 2017
xii	Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiii	Iron (as Fe)	mg/l, Max	50	4.6	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xiv	Manganese (as Mn)	mg/l, Max	-	< 0.1	IS 3025 (Part 59):2006 RA 2012
xv	Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvi	Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xvii	Free Ammonia (as NH3)	mg/l, Max	-	< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xviii	Oil & Grease	mg/l, Max	-	< 0.025	APHA-23rd Edition (5520 B) 2017
xix	Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xx	Anionic Surface Active Agents (as MBAS)	mg/l	-	< 0.1	Annex K of IS 13428:2009
xxi	Polynuclear Aromatic Hydrocarbon	mg/l, Max	-	< 0.0001	APHA 6440



2196 | 4577FE1

KLPL- 341151A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUGANESWAR-752101, ODISHA

Test Report No : 2272 | 4577FE1KLPL/4/20/WATER/O2548W



Parameters	Unit	Requirement	Result	Test Method
xxii Silver (as Ag)	mg/l	--	< 0.01	--
xxiii Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxiv PERCENT SODIUM (%)	%	--	0.0009	--
xxv SODIUM ABSORPTION RATIO	--	--	0.57	--
xxvi Barium	mg/l	--	< 0.2	--
xxvii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA
xxviii Electrical Conductivity	µs/cm	--	145	APHA 23rd Edition (2510 B) 2017
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.95	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 43):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Jayanta  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

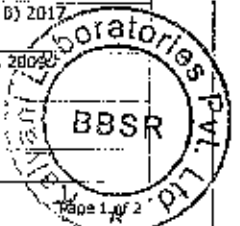


**NABL ULR NO** : TC70432000004066F  
**Test Report No** : 2272 | 4578FE2KLPL/4/20/WATER/02548X **Issue Date**: 05-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-April-2020 **Test Commenced On** : 30 April-2020 **Test Completion On**: 05-May-2020  
**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED  
**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-April-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSHADHARA RIVER NEAR CHHATRAPUR CULVERT (DOWNSTREAM) DT-29.04.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure**: KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	15000	26	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	14.6	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO <sub>4</sub>	mg/l, Max	400	6.0	APHA 23rd Edition (4500-SO <sub>4</sub> - -E), 2017
iii Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.48	APHA 23rd Edition (4500-NO <sub>3</sub> - -E), 2017
iv Electrical Conductivity	µs/cm		169	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.15	APHA 23rd Edition (4500-F - -D, -C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	132	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		18.72	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		4.13	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		< 0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	8.0	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	2.4	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	64	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	5.2	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	< 0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	--	< 0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max	--	< 0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	< 0.1	Annex K of IS 13428:2003

2196 | 4578FE2



KLPL- 341149A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2272 | 4578FE2KLPL/4/20/WATER/02548X



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		< 0.0001	APHA 8440
xxiii Silver (as Ag)	mg/l		< 0.01	
xxiv Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0012	
xxvi SODIUM ABSORPTION RATIO			0.65	
xxvii barium	mg/l		< 0.2	
xxviii TOTAL PESTICIDE	µg/l		< 0.0001	USEPA

### PHYSICAL PARAMETER

i Color		300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH value		6.5-8.5	8.0	APHA 23rd Edition (4500-H+-B), 2017
iii Odour		Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anubha  
Analysed By  
For Kalyani Laboratories Pvt Ltd

*D. Anubha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd






# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004064F 

**Test Report No** : 2272 | 4576FEDKLPL/4/20/WATER/02548V **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On** : 05-May-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-April-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSADHARA RIVER NEAR BALABHADRAPUR DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	60	IS: 1632:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO <sub>4</sub>	mg/l, Max	400	12	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.5	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
iii Fluoride as F	mg/l, Max	1.5	< 0.05	APHA 23rd Edition (4500-F--D,-C), 2017
iv Total Dissolved Solid	mg/l, Max	1500	98	APHA 23rd Edition (2540 C), 2017
v Calcium as Ca	mg/l, Max		15.64	APHA 23rd Edition (3500-Ca-B), 2017
vi Magnesium as Mg	mg/l, Max		2.92	APHA 23rd Edition (3500-Mg-D), 2017
vii Boron as B	mg/l, Max		< 0.1	APHA 23rd Edition (4500-B), 2017
viii Dissolved Oxygen	mg/l, Max	1.0	7.3	APHA 23rd Edition (4500-O-C), 2017
ix Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		2.5	APHA 23rd Edition 2012 (5210 B), 2017
x Total Hardness as CaCO <sub>3</sub>	mg/l, Max		52	APHA 23rd Edition (2340 C), 2017
xi Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xii Chloride as Cl	mg/l, Max	600	10.4	APHA 23rd Edition (4500-Cl--B), 2017
xiii Iron (as Fe)	mg/l, Max	50	0.22	APHA 23rd Edition (3500-Fe-D, 3111 B) 2017
xiv Manganese (as Mn)	mg/l, Max		< 0.1	IS 3025 (Part 59):2006 RA 2012
xv Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2009 RA 2009
xvi Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xvii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max		< 0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
xviii Oil & Grease	mg/l, Max		< 0.025	APHA 23rd Edition (5520 B) 2017
xix Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xx Anionic Surface Active Agents (as MBAS)	mg/l		< 0.1	Annex K of IS 13428:2005
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max		< 0.0001	APHA 6440

2194 | 4576FED





# KALYANI LABORATORIES PVT. LTD.

7/10/4, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2272 | 4576FE0KLPL/4/20/WATER/02548V



Parameters	Unit	Requirement	Result	Test Method
xxii Silver (as Ag)	mg/l	--	< 0.01	--
xxiii Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxiv PERCENT SODIUM (%)	%	--	0.0010	--
xxv SODIUM ABSORPTION RATIO	--	--	0.60	--
xxvi barium	mg/l	--	< 0.2	--
xxvii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA
xxviii Electrical Conductivity	µs/cm	--	134	APHA 23rd Edition (2510 B) 2017

### PHYSICAL PARAMETER

i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2194 | 4576FE0

Page 2 of 2


KLPL- 341152A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004067F 

**Test Report No** : 2272 | 4579FE3KLPL/4/20/WATER/02548Y **Issue Date** : 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On** : 05-May-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : TURI NALA NEAR RAGHUNATHPUR DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	90	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	6.3	APHA 23rd Edition (4500-Cl - B), 2017
ii Sulphate as SO4	mg/l, Max	400	10	APHA 23rd Edition (4500-SO4 - B), 2017
iii Nitrate as NO3	mg/l, Max	50	0.65	APHA 23rd Edition (4500-NO3 - B), 2017
iv Electrical Conductivity	µs/cm		152	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.15	APHA 23rd Edition (4500-F - D, C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	108	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		18.72	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		5.10	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		< 0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	6.6	APHA 23rd Edition (4500-D-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		1.5	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		68	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.7	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		< 0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		< 0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		< 0.1	Annex K of IS 13428:2005



2197 | 4579FE3

KLPL-341147A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752001, ODISHA

Test Report No : 2272 | 4579FE3KLPL/4/20/WATER/02548Y



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	< 0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	< 0.01	--
xxiv Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0010	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.53	--
xxvii barium	mg/l	--	< 0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	8.1	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anupama*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2197 | 4579FE3

Page 2 of 2


KLPL-341146A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PANAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004068F 

**Test Report No** : 2272 | 4580FE4KLPL/4/20/WATER/02548Z **Issue Date:** 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On:** 05-May-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : POND NEAR HAREKRUSHNAPUR DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** KLPL/SOP/CHEM-28

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	34	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	18.8	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	8.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.6	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		203	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.3	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	150	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		24.48	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		3.65	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		< 0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	4.2	APHA 23rd Edition(4500-D-C), 2017
xi Biochemical Oxygen Demand(For 5 days 27deg C)	mg/l, Max		2.8	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		76	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	0.5	< 0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	2.2	APHA-23rd Edition (3500-Fe-B , 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		< 0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	< 0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	< 0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		< 0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		< 0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	< 0.01	IS 3025 (Part 52)-2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		< 0.1	Annex K of IS 13428:2005

2198 | 4580FE4



KLPL- 341145A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2272 | 4580FE4KLPL/4/20/WATER/0254SZ



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	< 0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	< 0.01	--
xxiv Phenols	mg/l	0.005	< 0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0015	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.75	--
xxvii barium	mg/l	--	< 0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	< 0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	< 1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-H+ -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	< 0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	< 0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	< 0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	< 0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	< 0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

76/944, PAHAL BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004143P

**Test Report No** : KLPL/04/20/WATER/025481

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** **GROUND WATER**

**Batch No , Lot No** : NA

**Received Quantity** : 1LTR X 1

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

**Issue Date:** 05-May-2020

**Amendment Date :** -

**Sampling Date :** 29-April-2020

**MFG Date :** NA

**EXP Date :** NA

**Place of Collection :** OBSERVATION BORE WELL RED MUD POND (WEST) DT-29.04.2020

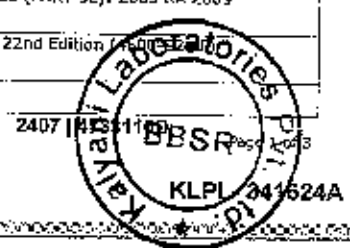
**Test Commenced On :** 30-April-2020

**Test Completion On:** 05-May-2020

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Nitrate as NO3	mg/l, Max	45	2.8	IS 3025 (PART 31):1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	66.2	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	23	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.27	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.21	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.82	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	7.29	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	194	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	196	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.053	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition



2407 | 11/05/2020

BBSR

KLPL/04/20/WATER/025481

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No

KLPL/4/20/WATER/025481

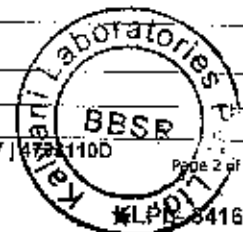


Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix δ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan α	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER



2407/473/1100

Page 2 of 3

KLPL/4/20/WATER/025481



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

KLPL/4/20/WATER/025481



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.9	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	450	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pectra Lalaya*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC70432000004144P

**Test Report No** : KLPL/04/20/WATER/025483

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012)**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER**

**Batch No, Lot No** : NA

**Received Quantity** : 1LTR X 1

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** QSP-07

**Issue Date:** 05-May-2020

**Amendment Date** : -

**Sampling Date** : 29-April-2020

**EXP Date** : NA

**Place of Collection** : OBSERVATION BORE WELL RED MUD POND  
BASANTAPADA SIDE (EAST) DT-29.04.2020

### Parameters Unit Requirement Result Test Method

#### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Nitrate as NO3	mg/l, Max	45	1.2	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	27.4	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	6.3	IS 3025 (Part 32):1986 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	<0.1	IS 3025 (Part 60):2006
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.76	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	0.97	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part 59):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	16	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	117	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	80	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.018	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-SO5-01)

2407 | 47331100



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BILUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : KLPL/4/20/WATER/025483



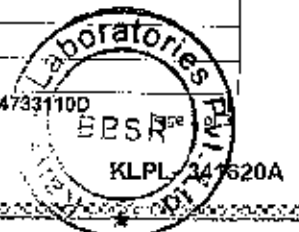
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515-1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2407 | 47331100







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPE/4/20/WATER/025483



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.9	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	130	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D Anurata*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Paabha Chary*  
Authorized Signatory 5/05/2020  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004145P

**Test Report No** : KLPL/04/20/WATER/02548K

**Issue Date** : 05-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On** : 05-May-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** GROUND WATER

**Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL RED MUD POND

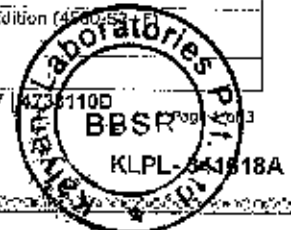
**Sample Collected By** : By KLPL

MATERIAL GATE SIDE (NORTH) DT-29.04.2020

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.7	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	37.4	IS 3025 (Part 40): 1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	12.5	IS 3025 (Part 32): 1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42): 1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.38	IS 3025 (Part 60): 2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26): 1988 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.94	IS 3025 (Part 53): 2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.21	IS 3025 (Part 46): 1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59): 2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39): 1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43): 1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56): 2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	28	IS 3025 (Part 24): 1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	169	IS 3025 (Part 23): 1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	136	IS 3025 (Part 21): 2009
xvii Zinc (as Zn)	mg/l, Max	5	0.025	IS 3025 (Part 49): 1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S5)

2407 423/110D  
BBSR  
KLPL-041818A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : KLPL/4/20/WATER/02548K



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515 E
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

PHYSICAL PARAMETER

2407 | 47391100 BSR Page 3 of 3



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : KLPL/4/20/WATER/02548K



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.8	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	220	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Petha Kalyan*  
Authorized Signatory 5/05/2020  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004146P

**Test Report No** : KLPL/04/20/WATER/02548L

**Issue Date**: 05-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On**: 05-May-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER**

**Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL RED MUD POND  
RENGOPALI SIDE (SOUTH) DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	34.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	8.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.41	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	7.29	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	117	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	116	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.022	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (1998)

2407 | 4733600 BESP





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548L



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2407 | 47331100



KLPL-341614A



# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548L



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.3	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.1	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	150	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 46):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D. Anandh*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Reena Nayak*  
5/05/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752 001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004148P

**Test Report No** : KLPL/04/20/WATER/02548N

**Issue Date** : 05-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On** : 05-May-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** GROUND WATER

**Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL PROCESS WATER LAKE(EAST) DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO3	mg/l, Max	45	1.9	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	18.7	IS 3025 (Part 40): 1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	10.4	IS 3025 (Part 32): 1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42): 1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.24	IS 3025 (Part 60): 2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26): 1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.52	IS 3025 (Part 53): 2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	3.16	IS 3025 (Part 46): 1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59): 2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39): 1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43): 1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56): 2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	30	IS 3025 (Part 24): 1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 23): 1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	60	IS 3025 (Part 21): 2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.021	IS 3025 (Part 49): 1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (150052-F)

2407 | 47331900



Page 1 of 5





# KALYANI LABORATORIES PVT. LTD.

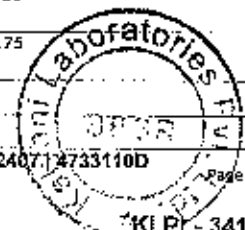
78/944, PAHAL, BHUBANESWAR-752 001, ODISHA

Kalyani Laboratories

Test Report No : KLPL/4/20/WATER/02548N



Parameters	Unit	Requirement	Result	Test Method
xx Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.2	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175
<b>PHYSICAL PARAMETER</b>				



240714733110D

Page 2 of 3

KLPL-341592A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : KLPL/4/20/WATER/02548N



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	250	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2009 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Decha Nayak*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd. 27/01/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004147P

**Test Report No** : KLPL/04/20/WATER/02548M

**Issue Date**: 05-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On**: 05-May-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER**

**Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL PROCESS WATER LAKE (NORTH) DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.4	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	8.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	6.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.1	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.75	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	1.46	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	51	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	28	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.012	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -F)

2407 | 473311





# KALYANI LABORATORIES PVT. LTD.

73/94, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548M



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBA5)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER

2407  
  
 KLPL/041595A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548M



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	60	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Arubha*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Sheela Jayaraj*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/94d, PAJAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



<b>NABL ULR NO</b>	: <b>TC704320000004150P</b>	<b>Issue Date:</b> 05-May-2020
<b>Test Report No</b>	: <b>KLPL/04/20/WATER/02548Q</b>	<b>Amendment Date :</b> -
<b>Amendment No</b>	: -	
<b>Reference</b>	: ORDER NO-660001348B DT-16.12.2019	
<b>Customer Name</b>	: VEDANTA LIMITED, LANJGARH	
<b>Address</b>	: PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.	
<b>Date of receipt</b>	: 30-April-2020	<b>Test Commenced On :</b> 30-April-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On:</b> 05-May-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE	
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b> 29-April-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b> NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date :</b> NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b> OBSERVATION BORE WELL ASH POND (NORTH)
<b>Ref. To Sampling Procedure:</b>	QSP-07	DT-29.04.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	0.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	5.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	8.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.74	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.35	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	1.46	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	7.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	37	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	20	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.01	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



Test Report No : KLPL/4/20/WATER/02548Q

Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548Q



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	--	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	56	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D. Anubrata*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Reecha Klayapaty*  
Authorized Signatory *11/05/2020*  
For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

78/944, PAIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004149P	<b>Issue Date:</b>	05-May-2020
<b>Test Report No</b>	: KLPL/04/20/WATER/02548P	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-April-2020	<b>Test Commenced On :</b>	30-April-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On:</b>	05-May-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b>	29-April-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 1	<b>Place of Collection :</b>	OBSERVATION BORE WELL ASH POND KENDUGUDA, SIDE (EAST) DT-29.04.2020
<b>Sample Collected By</b>	: By KLPL		
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.3	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	64.8	IS 3025 (Part 40):1981 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	87.7	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	<0.1	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.32	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	120	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	128	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	188	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.031	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500)



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BILUBANESWAR-752101, ODISHA



Test Report No : KLPL/4/20/WATER/02548P

Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfen sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548P



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.8	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.1	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	420	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004148P

**Test Report No** : KLPL/04/20/WATER/025480 **Issue Date**: 05-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020 **Test Completion On**: 05-May-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER** **Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : OBSERVATION BORE WELL ASHPOND KASIBADI SIDE (WEST) DT-29.04.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml, Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.4	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	31.7	IS 3025 (Part 40): 1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	6.3	IS 3025 (Part 32): 1988 RA 2000
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42): 1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.76	IS 3025 (Part 60): 2008
vii Free residual chlorine	rag/l, Min	0.2	0.2	IS 3025 (Part 26): 1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.2	IS 3025 (Part 53): 2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	5.1	IS 3025 (Part 46): 1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59): 2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39): 1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43): 1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56): 2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<0.1	IS 3025 (Part 24): 1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	136	IS 3025 (Part 23): 1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	100	IS 3025 (Part 21): 2009
xvii Zinc (as Zn)	mg/l, Max	5	0.024	IS 3025 (Part 49): 1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2008
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> )

2407 | 4735 | 1100





# KALYANI LABORATORIES PVT. LTD.

78/914, PAHAL, BHUBANESWAR-752101. ODISHA

Test Report No : KLPL/4/20/WATER/025480



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K Of IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H Of IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	150	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER

2407 | 4733110D

Page 2 of 3

KLPL- 341692A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/94, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No KLPL/4/20/WATER/025480



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.1	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	140	IS 3025 (Part 16):1984 RA 2006

**RADIOACTIVITY SUBSTANCES**

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

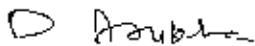
**TOXIC SUBSTANCES**

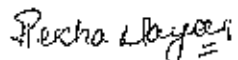
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004151P

**Test Report No** : KLPL/04/20/WATER/02548R

**Issue Date**: 05-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJGARH

**Address** : PO.- LANJGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-April-2020 **Test Commenced On** : 30-April-2020

**Test Completion On**: 05-May-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** GROUND WATER

**Sampling Date** : 29-April-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL DIRTY WATER POND

**Sample Collected By** : By KLPL

**DT-29.04.2020**

**Ref. To Sampling Procedure**: QSP-07

### Parameters Unit Requirement Result Test Method

#### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliforms	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Nitrate as NO3	mg/l, Max	45	2.2	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	60.5	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	33.4	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.87	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.6	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.94	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2007 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	185	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	196	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.036	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S)

2407 | 47331100





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : KLPL/4/20/WATER/02548R



Parameters	Unit	Requirement	Result	Test Method
xx Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-5)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix δ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

## PHYSICAL PARAMETER

2407 | 4733100 BBSR  
Page 2 of 3  
KLPL- 341641A







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No **KLPL/4/20/WATER/02548R**



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	280	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-3):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1985 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak*  
5/05/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587

**Issue Date** : 18-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 11-May-2020 **Commenced On** : 11-May-2020

**Completion On** : 16-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

**Location & Date** : PLANT SITE, 04.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	80	9.32	IS 5182(PART-2) : 2001
Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	80	16.31	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	$\mu\text{g}/\text{m}^3$	100	72.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	$\mu\text{g}/\text{m}^3$	60	33.34	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	$\text{mg}/\text{m}^3$	04	1.39	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	$\mu\text{g}/\text{m}^3$	180	10.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	$\mu\text{g}/\text{m}^3$	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	$\mu\text{g}/\text{m}^3$	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	$\mu\text{g}/\text{m}^3$	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	$\mu\text{g}/\text{m}^3$	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	$\mu\text{g}/\text{m}^3$	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	$\mu\text{g}/\text{m}^3$	20	4.35	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Anil Kumar*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anil Kumar*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 3411244  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587A

Issue Date : 18-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 11-May-2020 Commenced On : 11-May-2020

Completion On : 16-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters Unit Standard Value Results Test Method

Location & Date : - CHHATRAPUR VILLAGE, 05.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.45	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.23	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.31	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Anitaha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341123A  
Page 1 of 1

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



NABL ULR NO : TC704320000004207P

Test Report No : 474 | 4815106F KLPL/S/20/ENVN/00587B

Issue Date : 18-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013498 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.

Date of receipt : 11-May-2020 Commenced On : 11-May-2020

Completion On: 16-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters Unit Standard Value Results Test Method

Location & Date : MID DAY MEAL, 06.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.11	IS 5183(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.42	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	67	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.26	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.71	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-( 9, 11)
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-( 8, 11)
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anilata  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341122A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



**NABL ULR NO** : TC704320000004207P  
**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587C  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 11-May-2020  
**Commenced On** : 11-May-2020  
**Completion On** : 16-May-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 18-May-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 08.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.05	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.74	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anujaha  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*(Signature)*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



106F420710157  
 KLPL- 341121A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587D

**Issue Date** : 18-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 11-May-2020 **Commenced On** : 11-May-2020

**Completion On** : 16-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

**Location & Date** : BELAMBA VILLAGE, 09.05.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	7.19	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.39	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	50	27.03	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157

KLPL- 341120A

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587E

Issue Date : 25-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 18-May-2020 Commenced On : 18-May-2020

Completion On : 23-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: KLPL/SOP/AIR-06

Parameters Unit Standard Value Results Test Method

Location & Date : PLANT SITE , 11.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	10.22	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.25	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	77.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.34	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.42	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	9.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	µg/m <sup>3</sup>	20	4.48	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anurag  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341119A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004207P  
**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587F **Issue Date** : 25-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 18-May-2020 **Commenced On** : 18-May-2020 **Completion On** : 23-May-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - CHHATRAPUR VILLAGE, 12.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.04	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.38	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.46	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. Ananta*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



106F420710157  
 KLPL- 34118A  
 Page 1 of 1





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587G **Issue Date** : 25-May-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 18-May-2020 **Commenced On** : 18-May-2020 **Completion On** : 23-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 13.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.35	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.04	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	33.48	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.69	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anujaha  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*(Signature)*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



106F420710157  
 KLPL- 341117A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004207P

**Test Report No** : 474 | 4815106F KLPL/S/20/ENVN/00587H

**Issue Date** : 25-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 18-May-2020 **Commenced On** : 18-May-2020

**Completion On** : 23-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 15.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.07	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.25	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.72	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.3	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341116A



# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BILUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/005871 **Issue Date** : 25-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 18-May-2020 **Commenced On** : 18-May-2020 **Completion On** : 23-May-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 16.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.18	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.33	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 1.0	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Ananta  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

7R/944, PATIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/005873

**Issue Date** : 30-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 25-May-2020 **Commenced On** : 25-May-2020

**Completion On** : 30-May-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

**Location & Date** : PLANT SITE, 18.05.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	9.19	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.40	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	70	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	35.25	KLPL/SOP/ATR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.38	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	10.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/ATR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.23	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

**D. Anupha**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

**M. Anwar**  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341114A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587K

Issue Date : 30-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 25-May-2020

Commenced On : 25-May-2020

Completion On: 30-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : CHHATRAPUR VILLAGE, 19.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.21	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.10	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	60	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.09	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Ananta*  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PATIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587L

Issue Date : 30-May-2020

Amendment No :

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 25-May-2020 Commenced On : 25-May-2020

Completion On: 30-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Units	Standard Value	Results	Test Method
<b>Location &amp; Date : MID DAY MEAL, 20.05.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.23	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.02	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.68	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
D. Ananta  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL-341112A



# KALYANI LABORATORIES PVT. LTD.

78/044, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



NABL ULR NO : TC704320000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587M

Issue Date : 30-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 25-May-2020 Commenced On : 25-May-2020

Completion On: 30-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters Unit Standard Value Results Test Method

Location & Date : REHABILITATION COLONY, 22.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.21	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.20	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.76	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
D. Banjha  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157

KLPL- 341111A

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004207P

Test Report No : 474 | 4815106F KLPL/5/20/ENVN/00587N

Issue Date : 30-May-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 25-May-2020 Commenced On : 25-May-2020

Completion On: 30-May-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : BELAMBA VILLAGE, 23.05.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.40	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.21	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.46	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Dasgupta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL-341204A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, Bhubaneswar-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC7043200000420/P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/005870

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 01-June-2020

**Commenced On** : 01-June-2020

**Completion On** : 01-June-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 06-June-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : PLANT SITE, 25.05.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.32	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.11	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	74	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.40	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	8.7	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.26	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

## TEST REPORT



**NABL ULR NO** : TC70432000004207P

**Test Report No** : 474 | 4815106F KLPL/5/20/ENVN/00587P **Issue Date** : 06-June-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027,

**Date of receipt** : 01-June-2020 **Commenced On** : 01-June-2020 **Completion On** : 06-June-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 26.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.48	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.07	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

**NABL ULR NO** : TC704320000004207P

## TEST REPORT



**Test Report No** : 474 | 4815106F KLPL/S/20/ENVN/00587Q

**Issue Date** : 06-June-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 01-June-2020 **Commenced On** : 01-June-2020

**Completion On** : 06-June-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 27.05.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.14	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.30	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.66	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341201A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004207P

Test Report No : 474 [ 4815106F KLPL/5/20/ENVN/00587R

Issue Date : 06-June-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : YEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 01-June-2020 Commenced On : 01-June-2020

Completion On : 06-June-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters : Unit : Standard Value : Results : Test Method :

Location & Date : REHABILITATION COLONY, 29.05.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	80	6.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	80	10.26	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	$\mu\text{g}/\text{m}^3$	100	63	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	$\mu\text{g}/\text{m}^3$	60	29.29	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	$\text{mg}/\text{m}^3$	04	0.73	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	$\mu\text{g}/\text{m}^3$	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	$\mu\text{g}/\text{m}^3$	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	$\mu\text{g}/\text{m}^3$	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	$\mu\text{g}/\text{m}^3$	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	$\mu\text{g}/\text{m}^3$	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	$\mu\text{g}/\text{m}^3$	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	$\mu\text{g}/\text{m}^3$	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurupa*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anurupa*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341200A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004207P

## TEST REPORT



Test Report No : 474 | 4815106F KLPL/5/20/ENVN/005875

Issue Date : 06-June-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013498 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027,

Date of receipt : 01-June-2020 Commenced On : 01-June-2020

Completion On : 06-June-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : BELAMBA VILLAGE, 30.05.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.49	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.30	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	57	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	84	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By : *D. Anuraha*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



106F420710157  
KLPL- 341198A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004270P

**Test Report No** : KLPL/S/20/WATER/2552A

**Issue Date:** 02-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 08-May-2020 **Test Commenced On** : 08-May-2020

**Test Completion On:** 13-May-2020

**Sample Description** : **STP WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **STP OUTLET**

**Sampling Date** : 07-May-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : Plant

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Collform	MPN/100ml.	< 100	23	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	17	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.1	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.8	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NA

**Any unusual feature observed during determination** : NA

End of Test Report

*D. Arayata*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Preeti Kalyani*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/94A, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004270P  
**Test Report No** : KLPL/S/20/WATER/2552B  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 08-May-2020 **Test Commenced On** : 08-May-2020 **Test Completion On** : 13-May-2020  
**Sample Description** : **STP WATER**  
**Sample Condition** : SEALED IN 1LTR PET BOTTLE  
**Sample Identification \*** : **STP OUTLET**  
**Batch No , Lot No** : NA **MFG Date** : NA **Sampling Date** : 07-May-2020  
**Received Quantity** : 1LTR X 1 **EXP Date** : NA  
**Sample Collected By** : By KLPL **Place of Collection** : Township  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Faecal Coliform	MPN/100ml.	< 100	34	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	27	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.3	APHA 23rd Edition (4500-NHarg-B, 4500-ND2-B, 4500-ND3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	1.68	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	7.2	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752001, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004270P	<b>Issue Date:</b>	02-Jun-2020
<b>Test Report No</b>	: KLPL/5/20/WATER/2558A	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED,LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI,ODISHA-766027.		
<b>Date of receipt</b>	: 12-May-2020	<b>Test Commenced On</b>	: 12-May-2020
<b>Sample Description</b>	: STP WATER	<b>Test Completion On</b>	: 16-May-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification *</b>	: <b>STP OUTLET</b>	<b>Sampling Date</b>	: 11-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: Plant DT-10.05.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	27	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	20	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 D),2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.3	APHA 23rd Edition (4500-NHorg-B , 4500-NO2-B, 4500-NO3-B),2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.9	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004270P  
**Test Report No** : KLPL/S/20/WATER/25588  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 12-May-2020 **Test Commenced On** : 12-May-2020 **Test Completion On** : 16-May-2020  
**Sample Description** : **STP WATER**  
**Sample Condition** : SEALED IN 1LTR PET BOTTLE  
**Sample Identification \*** : **STP OUTLET**  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 1 **Place of Collection** : Township DT-10.05.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07  
**Issue Date** : 02-Jun-2020  
**Amendment Date** : -  
**Sampling Date** : 11-May-2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feecal Coliform	MPN/100ml	< 100	40	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	30	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	6	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.4	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	7.25	APHA 23rd Edition (4500-H+B), 2017

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004270P

**Test Report No** : KLPL/5/20/WATER/2559A

**Issue Date**: 02-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 22-May-2020 **Test Commenced On** : 22-May-2020

**Test Completion On**: 26-May-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : STP OUTLET

**Sampling Date** : 21-May-2020

**Batch No, Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : Plant DT-21.05.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feacal Coliform	MPN/100ml	< 100	22	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	13	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.0	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	7.85	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NA

**Any unusual feature observed during determination** : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752301, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004270P

**Test Report No** : KLPL/5/20/WATER/2559B **Issue Date**: 02-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 22-May-2020 **Test Commenced On** : 22-May-2020 **Test Completion On**: 26-May-2020

**Sample Description** : **STP WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 21-May-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : Township DT-21.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Fecal Coliform	MPN/100mL	< 100	50	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	33	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days; 27deg C)	mg/l, Max	10	6	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.5	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.80	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	7.3	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004269P  
**Test Report No** : 2325 | 475310ADKLPL/5/20/WATER/02612 **Issue Date** : 04-Jun-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On** : 04-Jun-2020  
**Sample Description** : **STP WATER**  
**Sample Condition** : SEALED IN 1LTR PET BOTTLE  
**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 29-May-2020  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 1 **Place of Collection** : Plant DT-29.05.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feacal Coliform	MPN/100ml.	< 100	34	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	25	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.4	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	8.0	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D. Jaisankar*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pechalaya*  
 Authorized Signatory 21/6/2020  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004270P

**Test Report No** : 2326 | 475410AEKLP/5/20/WATER/02613 **Issue Date:** 04 Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On**: 04-Jun-2020

**Sample Description** : **STP WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** :Township DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Fecal Coliform	MPN/100ml.	< 100	60	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	35	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	7	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	12	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.7	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	3.36	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.35	APHA 23rd Edition (4500-H+B), 2017

**Remarks** : NA

**Any unusual feature observed during determination** : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Doube*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pechanayan*  
Authorized Signatory *2/06/2020*  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT




**NABL ULR NO** : TC704320D00004208P  
**Test Report No** : 475 | 48161070 KLPL/5/20/ENVN/00588 **Issue Date** : 18-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 11-May-2020 **Commenced On** : 11-May-2020 **Completion On** : 16-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06


Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-I, 08.05.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	685.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	25.2	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.57	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	404	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	290.1	IS 11255 (part-7):2005
Carbon Dioxide	%	--	9.55	KLPL/SOP/AIR-06
Oxygen	%	--	4.5	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1749858	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	4.78	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

**NABL ULR NO** : TC70432000004208P

## TEST REPORT



**Test Report No** : 475 | 48161070 KLPL/5/20/ENVN/00588A

**Issue Date** : 18-May-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 11-May-2020

**Commenced On** : 11-May-2020

**Completion On** : 16-May-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II , 09.05.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	580.1	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	21.7	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.25	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	435	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	274.1	IS 11255 (part-7):2005
carbon Dioxide	%	-	13.2	KLPL/SOP/AIR-06
Oxygen	%	--	4.44	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3472606	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	29.9	KLPL/SOP/AIR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, Bhubaneswar-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004208P  
**Test Report No** : 475 | 48161070 KLPL/5/20/ENVN/00588B **Issue Date** : 20-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO 6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 14-May-2020 **Commenced On** : 14-May-2020 **Completion On** : 19-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-II, 11.05.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	722.6	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	38.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.35	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	410	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	318.5	IS 11255 (part-7):2005
Carbon Dioxide	%	--	10.15	KLPL/SOP/AIR-06
Oxygen	%	--	5.22	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1473862	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	3.47	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By *D. Ananta*  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004208P  
**Test Report No** : 475 | 48161070 KLPL/S/20/ENVN/00588C **Issue Date** : 20-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : **VEDANTA LIMITED, LANJIGARH**  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 14-May-2020 **Commenced On** : 14-May-2020 **Completion On**: 19-May-2020  
**Sample Name** : **FLUE GAS | STACK MONITORING**  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure**: KLPL/SOP/AIR-06

Parameters	Unit	Standard	Value	Result	Test Method
<b>Location &amp; Date</b> : <b>CALCINER -I, 12.05.2020</b>					
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	691.3		IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	27.4		KLPL/SOP/AIR-06
Velocity	m/sec	-	23.87		KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	444		KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	298.5		IS 11255 (part-7):2003
Carbon Dioxide	%	--	16.7		KLPL/SOP/AIR-06
Oxygen	%	--	3.96		KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3601743		KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04		KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	33.74		KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By *D. Anshu*  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAJ, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000000420SP  
**Test Report No** : 475 | 48161070 KLPL/5/20/ENVN/00588D **Issue Date** : 30-May-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 25-May-2020 **Commenced On** : 25-May-2020 **Completion On** : 30-May-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure:** KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-I, 22.05.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	706.3	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	30.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	6.04	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	409	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	312.5	IS 11255 (part-7):2005
Carbon Dioxide	%	--	9.6	KLPL/SOP/AIR-06
Oxygen	%	--	4.8	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1242560	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	2.35	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anukta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO

: TC70432000004208P

### TEST REPORT



Test Report No

: 475 | 48161070 KLPL/5/20/ENVN/00588E

Issue Date : 30-May-2020

Amendment No

: -

Amendment Date : -

Reference

: ORDER NO-6600013488 DT:16.12.2019

Customer Name

: VEDANTA LIMITED, LANJIGARH

Address

: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt

: 25-May-2020

Commenced On : 25-May-2020

Completion On: 30-May-2020

Sample Name

: FLUE GAS | STACK MONITORING

Sample Condition

: GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity

: 1 NO

Ref. To Sampling Procedure:

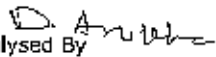
KLPL/SOP/AIR-06

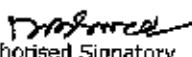
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CALCINER -I , 23.05.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	665.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	20.1	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.19	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	442	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	268.9	IS 11255 (part-7):2005
Carbon Dioxide	%	--	16.2	KLPL/SOP/AIR-06
Oxygen	%	--	3.89	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3276277	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	26.71	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By   
For Kalyani Laboratories Pvt. Ltd.

  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL UR NO : TC704320000004208P

Test Report No : 475 | 48161070 KLPL/5/20/ENVN/00588F

Issue Date : 03-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 28-May-2020 Commenced On : 28-May-2020

Completion On: 03-Jun-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : POWER PLANT UNIT-II, 25.05.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	702.3	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	33.5	KLPL/SOP/AIR-05
Velocity	m/sec	-	7.12	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	412	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	301.1	IS 11255 (part-7):2005
carbon Dioxide	%	--	10.1	KLPL/SOP/AIR-06
Oxygen	%	--	5.17	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1435066	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	3.24	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1070420810160  
KLPL- 341303A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004208P

**Test Report No** : 475 | 48161070 KLPL/5/20/ENVN/00588G **Issue Date** : 03-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-May-2020 **Commenced On** : 28-May-2020 **Completion On** : 03-Jun-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

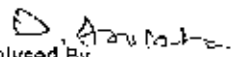
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

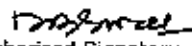
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II , 26.05.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	719.6	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	31.7	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.31	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	440	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	319.3	IS 11255 (part-7):2005
carbon Dioxide	%	--	13.9	KLPL/SOP/AIR-06
Oxygen	%	--	4.55	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3277252	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH2O	--	27.13	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAJAL, BIRUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004279P

**Test Report No** : 2335 | 474310B7KLPL / 6 / 20 / WATER / 02604 **Issue Date:** 08 Jun 2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On:** 08-Jun-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** SURFACE WATER **Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : STREAM NEAR TENTULIPADAR DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	33	IS: 1022:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	8.3	APHA 23rd Edition (4500-Cl - -E), 2017
ii Sulphate as SO4	mg/l, Max	400	<1.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.08	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm	-	66	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.37	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	50	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	5.8	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	0.97	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.3	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	1.5	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	18	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.06	APHA-23rd Edition (3500-Fe-B, 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2005
xviii Free Ammonia (as NH3)	mg/l, Max	--	<0.01	APHA-23rd Edition (4500-NH3-0) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2335 | 474310B7

Page 1 of 2

KLPL- 341693A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2335 | 474310B7KLPL/6/20/WATER/02604



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0007	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.71	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.7	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Soukha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Preeti Nayak  
21/06/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004281P

**Test Report No** : 2337 | 474410B9KLPL/6/20/WATER/02605 **Issue Date:** 08-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PD.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On:** 08-Jun-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** **SURFACE WATER** **Sampling Date :** 29-May-2020

**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA

**Received Quantity** : 1LTR X 1 **Place of Collection :** STREAM NEAR KENDUBADI DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
I	Total Coliforms	MPN/100ml	5000	40	IS: 1622:1981 RA 2009

CHEMICAL PARAMETER				
--------------------	--	--	--	--

i	Chloride as Cl	mg/l, Max	600	4.2	APHA 23rd Edition (4500-Cl - -B), 2017
ii	Sulphate as SO4	mg/l, Max	400	<1.0	APHA 23rd Edition (4500-SO4 - -E), 2017
iii	Nitrate as NO3	mg/l, Max	50	0.05	APHA 23rd Edition (4500-NO3 - -E), 2017
iv	Electrical Conductivity	µs/cm		23	APHA 23rd Edition (2510 B) 2017
v	Fluoride as F	mg/l, Max	1.5	0.31	APHA 23rd Edition (4500-F - -D,-C), 2017
vi	Total Dissolved Solid	mg/l, Max	1500	22	APHA 23rd Edition (2540 C), 2017
vii	Calcium as Ca	mg/l, Max		2.9	APHA 23rd Edition (3500-Ca-B), 2017
viii	Magnesium as Mg	mg/l, Max		0.97	APHA 23rd Edition (3500-Mg-B), 2017
ix	Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B- B), 2017
x	Dissolved Oxygen	mg/l, Max	4.0	7.5	APHA 23rd Edition(4500-O-C), 2017
xi	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max		2.0	APHA 23rd Edition 2012(5210 B), 2017
xii	Total Hardness as CaCO3	mg/l, Max		11	APHA 23rd Edition (2340 C), 2017
xiii	Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv	Iron (as Fe)	mg/l, Max	50	<0.05	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv	Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi	Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii	Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii	Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix	Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx	Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi	Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2005





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2337 | 474410B9KLPL/6/20/WATER/02605



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 8440
xxiii Silver (as Ag)	mg/l		<0.01	Annex J of IS 13428
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0006	
xxvi SODIUM ABSORPTION RATIO			0.78	
xxvii barium	mg/l		<0.2	Annex F of IS 13428
xxviii TOTAL PESTICIDE	ug/l		<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color		300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value		6.5-8.5	7.4	APHA 23rd Edition (4500-H+-B), 2017
iii Odour		Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8): 1994, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Arunika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Reeba Kalyani  
27/06/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/94C, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004282P	<b>Issue Date:</b>	08 Jun 2020
<b>Test Report No</b>	: 2338   474510BAKLPL/6/20/WATER/02606	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -	<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH	<b>Date of receipt</b>	: 30-May-2020
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.	<b>Test Commenced On</b>	: 30-May-2020
<b>Sample Description</b>	: SURFACE WATER	<b>Test Completion On</b>	: 08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE	<b>Batch No, Lot No</b>	: NA
<b>Sample Identification *</b>	: SURFACE WATER	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: STREAM NEAR RENGOPALI DT-29.05.2020
<b>Ref.To Sampling Procedure</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	40	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	4.2	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	2.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.06	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		65	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.23	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	36	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		8.6	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		2.43	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B - B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.4	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		1.9	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		32	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.35	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2007 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2006

2338 | 474510BA\*



KLPL- 341565A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BILUBANESWAR-752101, ODISHA

Test Report No : 2338 | 474510BAKLPL/6/20/WATER/02606



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6410
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0005	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.39	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 D), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 D), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

*D. Nayak*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2338 | 474510BA

Page 2 of 2

KLPL- 341684A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752001, ODISHA

Kalyani Laboratories

## TEST REPORT



<b>NABL ULR NO</b>	: <b>TC704320000004284P</b>	<b>Issue Date:</b>	08-Jun-2020
<b>Test Report No</b>	: <b>2339   474610BCKLPL/6/20/WATER/02607</b>	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On :</b>	30-May-2020
<b>Sample Description</b>	: <b>SURFACE WATER</b>	<b>Test Completion On:</b>	08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>SURFACE WATER</b>	<b>Sampling Date :</b>	29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	VAMSADHARA RIVER NEAR BALABHADRAPUR
<b>Ref. To Sampling Procedure:</b>	QSP-07		DT-29.05.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	70	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	6.3	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	15	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.8	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm	-	151	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.45	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	110	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	17.3	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	2.67	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.2	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	2.6	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	54	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.3	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex X of IS 13428:2005

2339 | 474610BC



341563A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

**Test Report No** : **2339 | 474610BCKLPL/6/20/WATER/02607**



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0014	
xxvi SODIUM ABSORPTION RATIO	--	--	0.83	
xxvii barium	mg/l	--	<0.2	
xxviii TOTAL PESTISIDE	µg/l	--	<0.0001	USEPA

PHYSICAL PARAMETER				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.5	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006

RADIOACTIVITY SUBSTANCES				
i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

TOXIC SUBSTANCES				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By D. Anurag  
For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak*  
8/16/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004285P	<b>Issue Date:</b>	08-Jun-2020
<b>Test Report No</b>	: 2340   474910BDKPL/6/20/WATER/02608	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On :</b>	30-May-2020
<b>Sample Description</b>	: SURFACE WATER	<b>Test Completion On:</b>	08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>SURFACE WATER</b>	<b>Sampling Date :</b>	29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LITR X 1	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	VAMSADHARA RIVER NEAR NARAYANPUR CULVERT (UPSTREAM) DT-29.05.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	34	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Magnesium as Mg	mg/l, Max	-	2.43	APHA 23rd Edition (3500-Mg-B), 2017
ii Total Dissolved Solid	mg/l, Max	1500	106	APHA 23rd Edition (2540 C), 2017
iii Calcium as Ca	mg/l, Max	-	15.8	APHA 23rd Edition (3500-Ca-B), 2017
iv Chloride as Cl	mg/l, Max	600	10.4	APHA 23rd Edition (4500-Cl - -B), 2017
v Sulphate as SO4	mg/l, Max	400	9.0	APHA 23rd Edition (4500-SO42 - -E), 2017
vi Nitrate as NO3	mg/l, Max	50	0.6	APHA 23rd Edition (4500-NO3 - -E), 2017
vii Electrical Conductivity	µs/cm	-	148	APHA 23rd Edition (2510 B) 2017
viii Fluoride as F	mg/l, Max	1.5	0.42	APHA 23rd Edition (4500-F - -D, -C), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.4	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	-	2.3	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	50	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	4.5	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2005

2340 | 474910BD





# KALYANI LABORATORIES PVT. LTD.

78/44, PAHAL, BHUBANESWAR-752101. ODISHA

Test Report No : 2340 | 474910BDKLP/6/20/WATER/02608



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 8440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0008	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.49	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.7	APHA 23rd Edition (4500-H <sup>+</sup> -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By *D. Das*  
For Kalyani Laboratories Pvt. Ltd.

*Pekha Nayak*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd. 8/08/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004286P

**Test Report No** : 2341 | 475010BEKLPL/6/20/WATER/02609 **Issue Date**: 08-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On**: 08-Jun-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** **SURFACE WATER** **Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

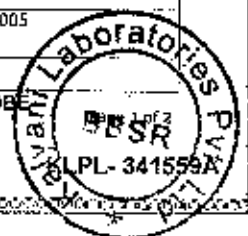
**Received Quantity** : 1LTR X 1 **Place of Collection** : VAMSADHARA RIVER NEAR CHHATRAPUR CULVERT (DOWNSTREAM) DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	27	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	12.5	APHA 23rd Edition (4500-Cl -B), 2017
ii Sulphate as SO4	mg/l, Max	400	8.0	APHA 23rd Edition (4500-SO4 -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.5	APHA 23rd Edition (4500-NO3 -E), 2017
iv Electrical Conductivity	µs/cm	-	181	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.26	APHA 23rd Edition (4500-F -D, C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	150	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	15.8	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	6.08	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B-B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	7.8	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	2.5	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	65	APHA 23rd Edition (2310 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	5.4	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2009 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2005

2341 | 475010BE







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2341 | 475010BEKPL/6/20/WATER/02609



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 8440
xxiii Silver (as Ag)	mg/l		<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0013	
xxvi SODIUM ABSORPTION RATIO			0.70	
xxvii barium	mg/l		<0.2	
xxviii TOTAL PESTICIDE	µg/l		<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H++B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Daulake*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Preeto Chatterjee*  
27/06/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004288P	<b>Issue Date:</b>	08-Jun-2020
<b>Test Report No</b>	: 2343   475210COKLPL/6/20/WATER/02611	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On :</b>	30-May-2020
<b>Sample Description</b>	: <b>SURFACE WATER</b>	<b>Test Completion On:</b>	08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>SURFACE WATER</b>	<b>Sampling Date :</b>	29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	POND NEAR HAREKHRUSHNAPUR DT-29.05.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100ml	5000	40	IS: 1622:1981 RA 2009
---	-----------------	-----------	------	----	-----------------------

### CHEMICAL PARAMETER

i	Chloride as Cl	mg/l, Max	500	12.5	APHA 23rd Edition (4500-Cl - -B), 2017
ii	Sulphate as SO4	mg/l, Max	400	7.0	APHA 23rd Edition (4500-SO4 - -E), 2017
iii	Nitrate as NO3	mg/l, Max	50	0.5	APHA 23rd Edition (4500-NO3 - -E), 2017
iv	Electrical Conductivity	us/cm	-	188	APHA 23rd Edition (2510 B) 2017
v	Fluoride as F	mg/l, Max	1.5	0.65	APHA 23rd Edition (4500-F - -D,-C), 2017
vi	Total Dissolved Solid	mg/l, Max	1500	140	APHA 23rd Edition (2540 C), 2017
vii	Calcium as Ca	mg/l, Max	-	15.8	APHA 23rd Edition (3500-Ca-B), 2017
viii	Magnesium as Mg	mg/l, Max	-	6.80	APHA 23rd Edition (3500-Mg-B), 2017
ix	Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x	Dissolved Oxygen	mg/l, Max	4.0	4.5	APHA 23rd Edition(4500-O-C), 2017
xi	Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	2.6	APHA 23rd Edition 2012(5210 B), 2017
xii	Total Hardness as CaCO3	mg/l, Max	--	68	APHA 23rd Edition (2340 C), 2017
xiii	Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv	Iron (as Fe)	mg/l, Max	50	2.0	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv	Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi	Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii	Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii	Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix	Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx	Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi	Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2343 | 475210C0





# KALYANI LABORATORIES PVT. LTD.

78/946, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2343 | 475210COKLPL/6/20/WATER/02611



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l		<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0012	
xxvi SODIUM ABSORPTION RATIO			0.63	
xxvii barium	mg/l		<0.2	
xxviii TOTAL PESTICIDE	µg/l		<0.0001	USEPA

### PHYSICAL PARAMETER

i Color		300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value		6.5-8.5	7.4	APHA 23rd Edition (4500-H+-B), 2017
iii Odour		Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78/944, PAILAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004287P

**Test Report No** : 2342 | 475110BFLPL/6/20/WATER/02610

**Amendment No** : - **Issue Date**: 08-Jun-2020

**Reference** : ORDER NO-6600013498 DT-16.12.2019 **Amendment Date** : -

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On**: 08-Jun-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **SURFACE WATER**

**Batch No , Lot No** : NA **MFG Date** : NA **Sampling Date** : 29-May-2020

**Received Quantity** : 1LTR X 1 **EXP Date** : NA

**Sample Collected By** : By KLPL **Place of Collection** : TURI NALA NEAR RAGHUNATHPUR DT-29.05.2020

**Ref.To Sampling Procedure** : QSP-07



Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	80	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	8.3	APHA 23rd Edition (4500-Cl -B), 2017
ii Sulphate as SO4	mg/l, Max	400	11	APHA 23rd Edition (4500-SO4 -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.7	APHA 23rd Edition (4500-NO3 -E), 2017
IV Electrical Conductivity	µS/cm	-	157	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.25	APHA 23rd Edition (4500-F --D, C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	112	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	15.8	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	5.10	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	6.8	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	-	1.4	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	61	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.8	APHA-23rd Edition (3500-Fe-B , 3131 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2005

2342 | 475110BF





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BRUBANESWAR-752101, ODISHA

Test Report No : 2342 | 475110BFKLPL/6/20/WATER/02610



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 6140
xxiii Silver (as Ag)	mg/l		<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0008	
xxvi SODIUM ABSORPTION RATIO	--		0.45	
xxvii Barium	mg/l		<0.2	
xxviii TOTAL PESTICIDE	µg/l		<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H <sup>+</sup> -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY-SUBSTANCES</b>				
i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.01	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pooja Majhi*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004371P

**Test Report No** : 2413 | 47371113K1PL/5/20/WATER/02598 **Issue Date**: 08-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On**: 08-Jun-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : GROUNDWATER **Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** :OBSERVATION BORE WELL RED MUD POND (WEST)

**Sample Collected By** : By KLPL **DT-29.05.2020**

**Ref.To Sampling Procedure**: QSP-07

### Parameters Unit Requirement Result Test Method

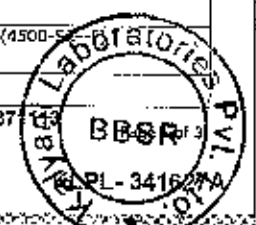
#### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Nitrate as NO3	mg/l, Max	45	2.9	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	67.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	29.2	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.39	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1988 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.75	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	0.12	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	197	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	194	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.051	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S)

2413 | 47371113





# KALYANI LABORATORIES PVT. LTD.

75/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

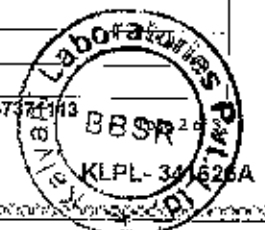
2413 | 47371113KLPL/5/20/WATER/02598



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii p-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix S-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2413 | 47371113





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2413 | 47371113KLPL/5/20/WATER/02598



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.2	IS 3025 (Part-11):1983, RA 2012
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Parts 6):1984 RA 2006
v Turbidity	NTU, Max	1	0.9	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	460	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/9-14, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



**NABL ULR NO** : TC704320000004372P

**Test Report No** : 2414 | 47381114KLPL/5/20/WATER/02599 **Issue Date**: 08-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On**: 08-Jun-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \* :** **GROUND WATER**

**Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL RED MUD POND

**Sample Collected By** : By KLPL

RENGOPALI SIDE (SOUTH) DT-29.05.2020

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO <sub>3</sub>	mg/l, Max	45	1.4	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	30.2	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	12.5	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.51	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	10.45	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part 39):1991 RA 2003
xii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	28	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	163	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	119	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.024	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -F)

2414 | 47381114

Page 3 of 3

KLPL-34162AA



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2414 | 47381114KLPL/5/20/WATER/02599



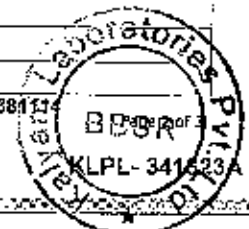
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part 55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2414 | 47381114



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No**

**2414 | 47381114KLPL/5/20/WATER/02599**



Parameters	Units	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.3	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.2	IS 3025 (Part 10):1984 RA 2005
vi Total dissolved solids	mg/l, Max	500	160	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2005
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Pooja Nayak  
 8/06/2020  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA



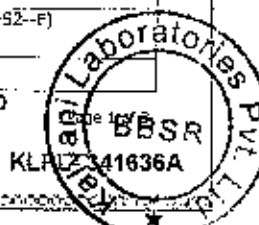
## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004368P	<b>Issue Date:</b>	08-Jun-2020
<b>Test Report No</b>	: 2410   47341110KLP/5/20/WATER/02595	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On :</b>	30-May-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On:</b>	08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b>	29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 1	<b>Place of Collection :</b>	OBSERVATION BORE WELL RED MUD POND MATERIAL GATE SIDE (NORTH) DT-29.05.2020
<b>Sample Collected By</b>	: By KLP		
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.8	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	67.2	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	10.4	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.14	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.85	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	14.82	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	30	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	156	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	144	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.027	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2410 | 47341110



# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No** : **2410 | 47341110KPL/5/20/WATER/02595**



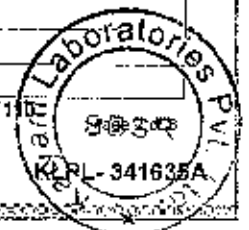
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

**PESTISIDE**

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2410 | 4734111





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2410 | 47341110KLPL/5/20/WATER/02595



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	240	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Anish*  
For Kalyani Laboratories Pvt. Ltd.

*Prabhatkumar*  
Authorized Signatory *06/06/2020*  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004974P

**Test Report No** : 2416 | 47401116KLPL/5/20/WATER/02601 **Issue Date:** 08-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020 **Test Completion On:** 08-Jun-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER** **Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : OBSERVATION BORE WELL WATERED MUD POND

**Sample Collected By** : By KLPL **BASANTAPADA SIDE(EAST) DT-29.05.2020**

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2 IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
i	Nitrate as NO3	mg/l, Max	45	1.3 IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3 IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	27.4 IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	10.4 IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02 IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.33 IS 3025 (Part 60):2003
vii	Free residual chlorine	mg/l, Min	0.2	0.2 IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.8 IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	8.02 IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05 IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5 Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001 IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005 IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	9 IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	120 IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	300	101 IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.02 IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02 IS 3025 (PART 52): 2003 RA 2009
lix	Sulphide	mg/l	2.0	<0.05 APIA 22nd Edition (4500-S2-F)

2416 | 47401116





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

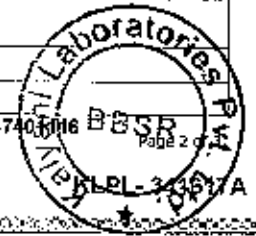
Test Report No : 2416 | 47401116KLPL/5/20/WATER/02601



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2416 | 47401116







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2416 | 47401116KLPL/5/20/WATER/02601



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.3	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	142	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anuraha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pankaj Kumar*  
Authorized Signatory *8/06/2020*  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004370P	<b>Issue Date</b>	: 08-Jun-2020
<b>Test Report No</b>	: 2412   47361112KLPL/5/20/WATER/02597	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On</b>	: 30-May-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On</b>	: 08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification *</b>	: <b>GROUND WATER</b>	<b>Sampling Date</b>	: 29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: OBSERVATION BORE WEL PROCESS WATER LAKE(EAST) DT-29.05.2020
<b>Ref. To Sampling Procedure</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
i	Nitrate as NO3	mg/l, Max	45	2.2 IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3 IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	24.5 IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	16.7 IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02 IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.53 IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2 IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.64 IS 3025 (Part 53):2003 RA 2004
ix	Magnesium (as Mg)	mg/l, Max	30	10.45 IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05 IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5 Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001 IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005 IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	24 IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	190 IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	104 IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.024 IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02 IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05 IS 3025 (PART 52): 2003 RA 2009



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2412 | 47361112KLPL/5/20/WATER/02597



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2412 | 47361112





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2412 | 4736112KLPL/5/20/WATER/02597



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.8	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	282	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 46):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anuraj  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Recha Sanyal  
Authorized Signatory 8/10/2020  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004376P

**Test Report No** : 2418 | 47421118KLPL/5/20/WATER/02603

**Issue Date**: 08-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020

**Test Completion On**: 08-Jun-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : **GROUND WATER**

**Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL PROCESS WATER LAKE (NORTH) DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

### Parameters Unit Requirement Result Test Method

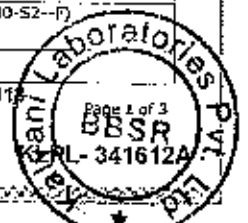
#### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Nitrate as NO3	mg/l, Max	45	0.45	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	10.1	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	18.8	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.25	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.68	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	1.70	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clausa 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	53	IS 3025 (Part 29):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	32	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.013	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2--F)

2418 | 47421118



Page 1 of 3  
BSR  
RL- 341612A



# KALYANI LABORATORIES PVT. LTD.

7N/944, PAHAL, BRUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2418 | 4742118KLPL/5/20/WATER/02603



Parameters	Unit	Requirement	Result	Test Method
xx Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part 55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.01	ASTM 5175

**PHYSICAL PARAMETER**

2418 | 4742118



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No** : **2418 | 47421118KLPL/5/20/WATER/02603**



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	144	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

**Remarks** : NA

**Any unusual feature observed during determination** : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Bhowmik*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak*  
5/10/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/044, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004365P	<b>Issue Date</b>	: 08-Jun-2020
<b>Test Report No</b>	: 2407   4733110DKLPL/5/20/WATER/02594	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600D13498 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On</b>	: 30-May-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On</b>	: 08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification *</b>	: <b>GROUND WATER</b>	<b>Sampling Date</b>	: 29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: OBSERVATION BORE WELL ASH POND (NORTH) DT-29.05.2020
<b>Ref. To Sampling Procedure:</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliforms	MPN/100ml	Shall not be detected in any 100 ml sample	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
--------------------	--	--	--	--

i	Nitrate as NO3	mg/l, Max	45	0.52 IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3 IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	5.8 IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	10.4 IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02 IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.61 IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2 IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.26 IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	5.35 IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05 IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5 Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001 IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005 IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	<1.0 IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	38 IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	36 IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.009 IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02 IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05 APHA 22nd Edition (4500-S2--F)

2407 | 4733110







# KALYANI LABORATORIES PVT. LTD.

78/944, PAIAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2407 | 4733110DKLPL/5/20/WATER/02594



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTISIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan α	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Abrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

## PHYSICAL PARAMETER

2407 4733110DKLPL/5/20/WATER/02594 Page 3 of 3





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2407 | 4733110DKLPL/5/20/WATER/02594



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.6	IS 3025 (Part-11):1983 RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	50	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Dasgupta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Reecha Nayak*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd. 8/16/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT

**NABL ULR NO** : TC70432000004375P



**Test Report No** : 2417 | 47411117KLPL/5/20/WATER/02602

**Issue Date** : 08-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-May-2020 **Test Commenced On** : 30-May-2020

**Test Completion On** : 08-Jun-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : GROUND WATER

**Sampling Date** : 29-May-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : OBSERVATION BORE WELL ASHPOND KASIBADI  
SIDE (WEST) DT-29.05.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

### Parameters Unit Requirement Result Test Method

#### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Nitrate as NO3	mg/l, Max	45	1.35	IS 3025 (Part 34):1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	34.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	16.7	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.25	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.28	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	14.82	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	115	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	140	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.023	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)

2417 | 47411117





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2417 | 47411117KLPL/5/20/WATER/02602



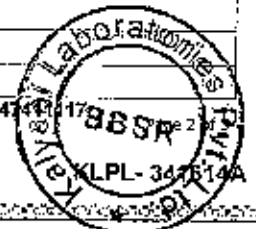
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6140)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoprotruron	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 506
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

### PHYSICAL PARAMETER

2417 | 47411117KLPL-347514A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2417 | 47411117KLPL/5/20/WATER/02602



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.1	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	156	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead, (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anurupa  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Peeha Nayak  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd. 8/06/2020



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004369P	<b>Issue Date</b>	: 08-Jun-2020
<b>Test Report No</b>	: 2411   47351111KLPL/5/20/WATER/02596	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On</b>	: 30-May-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On</b>	: 08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification *</b>	: <b>GROUND WATER</b>	<b>Sampling Date</b>	: 29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MPG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 1	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: OBSERVATION BORE WELL ASPOND KENDUGUDA SIDE (EAST) DT-29.05.2020
<b>Ref. To Sampling Procedure</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	67.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	102.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.85	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	5.35	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	130	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	139	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	191	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.035	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)

2411 | 47351111



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



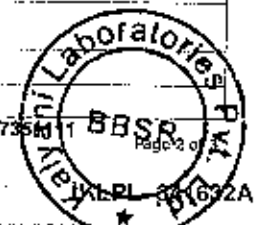
**Test Report No** : 2411 | 47351111KLPL/5/20/WATER/02596



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-5)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTISIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated Biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2411 | 47351111



KLPL-01692A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2411 | 47351111KLPL/5/20/WATER/02596



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.6	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	440	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

78/944, PALLAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004373P	<b>Issue Date:</b>	08-Jun-2020
<b>Test Report No</b>	: 2415   47391115KLPL/5/20/WATER/02600	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-May-2020	<b>Test Commenced On :</b>	30-May-2020
<b>Sample Description</b>	: DRINKING WATER (IS 10500:2012 )	<b>Test Completion On:</b>	08-Jun-2020
<b>Sample Condition</b>	: SEALED IN 1LTR PET BOTTLE		
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b>	29-May-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 1	<b>Place of Collection :</b>	OBSERVATION BORE WELL DIRTY WATER POND DT-29.05.2020
<b>Sample Collected By</b>	: By KLPL		
<b>Ref. To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
I	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
II	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
III	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Nitrate as NO3	mg/l, Max	45	2.4	IS 3025 (PART 34): 1988 RA 2003
II	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
III	Calcium (as Ca)	mg/l, Max	75	50.4	IS 3025 (Part 40):1991 RA 2009
IV	Chloride (as Cl)	mg/l, Max	250	41.7	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
VI	Fluoride (as F)	mg/l, Max	1	0.44	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.72	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	14.82	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	190	IS 3025 (Part 23):1985 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.037	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-E)

2415 | 47391115





# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2415 | 47391115KLPL/5/20/WATER/02600



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 2nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoprothion	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2415 | 47391115



Page 2 of 3

# KALYANI LABORATORIES PVT. LTD.

78/544, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No** : **2415 | 4739115KLPL/5/20/WATER/02600**



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.9	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	292	IS 3025 (Part 16):1984 RA 2006

**RADIOACTIVITY SUBSTANCES**

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

**TOXIC SUBSTANCES**

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

**Remarks** : NA

**Any unusual feature observed during determination** : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anuraha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pooja Chyau*  
 Authorized Signatory 8/06/2020  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/9-1, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**NABL ULR NO** : TC70432000004290P **TEST REPORT**



**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/D0591 **Issue Date** : 13-Jun-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 08-Jun-2020 **Commenced On** : 08-Jun-2020 **Completion On** : 13-Jun-2020  
**Sample Name** : **AMBIENT AIR QUALITY MONITORING**  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

**Parameters** **Unit** **Standard Value** **Results** **Test Method**

**Location & Date** : **PLANT SITE, 01.06.2020**

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	10.26	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.13	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	73.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.34	KLPL/SDP/ATR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.40	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	9.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SDP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SDP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SDP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.61	KLPL/SDP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

**D. Ananta**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

**D. Ananta**  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 341173A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

## TEST REPORT



**NABL ULR NO** : TC70432000004290P

**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591A

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 08-Jun-2020      **Commenced On** : 08-Jun-2020      **Completion On** : 13-Jun-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NOS

**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 13-Jun-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 02.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.41	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.29	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

D. Banerjee  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Banerjee*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302

KLPL- 341172A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/9-4, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004290P

Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/00591B

Amendment No : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 08-Jun-2020 Commenced On : 08-Jun-2020

Sample Name : AMBIENT AIR QUALITY MONITORING Completion On: 13-Jun-2020

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref. To Sampling Procedure: QSP-07

Parameters Unit Standard Value Results Test Method

Location & Date : MID DAY MEAL, 03.06.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	80	9.11	IS 5182(PART-2) : 2001
Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	80	15.45	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	$\mu\text{g}/\text{m}^3$	100	65.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	$\mu\text{g}/\text{m}^3$	60	30.31	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	$\text{mg}/\text{m}^3$	04	0.70	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O <sub>3</sub> ) (01 Hrs.)	$\mu\text{g}/\text{m}^3$	160	3.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	$\mu\text{g}/\text{m}^3$	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH <sub>3</sub> )	$\mu\text{g}/\text{m}^3$	400	< 10	KLPL/SOP/AIR-05
Benzene (C <sub>6</sub> H <sub>6</sub> )	$\mu\text{g}/\text{m}^3$	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	$\mu\text{g}/\text{m}^3$	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	$\mu\text{g}/\text{m}^3$	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	$\mu\text{g}/\text{m}^3$	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anurag  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302

KLPL- 341131A

# KALYANI LABORATORIES PVT. LTD.

78/914, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591C  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 08-Jun-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure** : QSP-07

**Issue Date** : 13-Jun-2020  
**Amendment Date** : -  
**Completion On** : 13-Jun-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 05.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.21	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.09	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	50.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.09	KLPL/SOP/ATR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.72	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/ATR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/ATR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/ATR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/ATR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By *D. Anupha*  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
 KLPL- 341130A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

75/944, PAHALI, BHUBANESWAR-752101, ODISHA

**NABL ULR NO** : TC704320000004290P

## TEST REPORT



**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591D

**Issue Date** : 13-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO,- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 08-Jun-2020 **Commenced On** : 08-Jun-2020

**Completion On** : 13-Jun-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NOS

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 06.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.35	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.13	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.11	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

D. Anuragha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 34129A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591E  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 15-Jun-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 20-Jun-2020

**Amendment Date** : -

**Completion On** : 20-Jun-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 08.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	11.15	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	19.17	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	71.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	50	32.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.37	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	10.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.77	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Anurkha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anurkha*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
 KLPL- 34125A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004290P

## TEST REPORT



Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/00591F

Issue Date : 20-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 15-Jun-2020 Commenced On : 15-Jun-2020

Completion On: 20-Jun-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CHHATRAPUR VILLAGE, 09.06.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.31	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	66.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.18	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.50	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S.*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL-34127A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004290P

Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/00591G

Issue Date : 20-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 15-Jun-2020

Commenced On : 15-Jun-2020

Completion On: 20-Jun-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : MID DAY MEAL, 10.06.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.46	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.45	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.19	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.67	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Soukhe

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 341126A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004290P

**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591H

**Issue Date** : 20-Jun-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** :

ORDER NO-6600013488 DT-16.12.2019

**Customer Name** :

VEDANTA LIMITED, LANJIGARH

**Address** :

PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** :

15-Jun-2020

**Commenced On** : 15-Jun-2020

**Completion On** : 20-Jun-2020

**Sample Name** :

AMBIENT AIR QUALITY MONITORING

**Sample Condition** :

GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** :

1 NOS

**Ref. To Sampling Procedure** :

QSP-07

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

**Location & Date** : REHABILITATION COLONY, 12.06.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	7.23	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.02	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	59.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.03	KLPL/SDP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.71	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SDP/ATR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/ATR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL-341125A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004290P

## TEST REPORT



Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/005911

Issue Date : 20-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT 16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027,

Date of receipt : 15-Jun-2020 Commenced On : 15-Jun-2020

Completion On: 20-Jun-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : BELAMBA VILLAGE, 13.06.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.09	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCA Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 341124A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004290P

**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591J **Issue Date** : 27-Jun-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 22-Jun-2020 **Commenced On** : 22-Jun-2020 **Completion On** : 27-Jun-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NOS

**Ref. To Sampling Procedure** : QSP-07

Parameter	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 15.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	9.15	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.33	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	74.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	33.19	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.41	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	8.7	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.68	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anand*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
 KLPL- 341123A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591K  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 22-Jun-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure:** QSP-07

Issue Date : 27-Jun-2020

Amendment Date : -

Completion On: 27-Jun-2020

Parameters Unit Standard Value Results Test Method

Location & Date	Unit	Standard Value	Results	Test Method
CHHATRAPUR VILLAGE, 16.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.29	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.18	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.17	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Soukha  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PALIAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591L  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 22-Jun-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

Issue Date : 27-Jun-2020

Amendment Date : -

Commenced On : 22-Jun-2020

Completion On: 27-Jun-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : MID DAY MEAL, 17.06.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.35	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.05	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	60.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.65	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Dasgupta  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 341321A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004290P

## TEST REPORT



Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/00591M

Issue Date : 27-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013408 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 22-Jun-2020 Commenced On : 22-Jun-2020

Completion On: 27-Jun-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : REHABILITATION COLONY, 19.06.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.35	IS 5182(PART-2) : 2002
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.30	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.70	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SDP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Asyika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



**NABL ULR NO** : TC704320000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591N  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 22-Jun-2020 **Commenced On** : 22-Jun-2020 **Completion On** : 27-Jun-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 27-Jun-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 20.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.13	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	54.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.11	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.41	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Anujaha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anujaha*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/044, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004290P

Test Report No : 478 | 491310C2 KLPL/6/20/ENVN/005910

Issue Date : 03-July-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-660D013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 29-Jun-2020

Commenced On : 29-Jun-2020

Completion On: 03-July-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

Location & Date : PLANT SITE, 22.06.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	10.06	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.22	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	72.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	32.42	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.38	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	9.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.18	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

**NABL ULR NO** : TC70432000004290P

### TEST REPORT



**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591P

**Issue Date** : 03-July-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 29-Jun-2020 **Commenced On** : 29-Jun-2020

**Completion On** : 03-July-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NOS

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b>	<b>MID DAY MEAL, 24.06.2020</b>			
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.46	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.39	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.18	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.68	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Anurajha*  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302

KLPL- 341314A

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591Q  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-Jun-2020  
**Commenced On** : 29-Jun-2020  
**Completion On** : 03-July-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

Issue Date : 03-July-2020

Amendment Date : -

Parameters	Unit	Standard Value	Results	Test Method
------------	------	----------------	---------	-------------

**Location & Date** : REHABILITATION COLONY, 26.06.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	7.07	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.25	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61.0	IS 5182(PART-29) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.73	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL-341313A



# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004290P  
**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591R **Issue Date** : 03-July-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-Jun-2020 **Commenced On** : 29-Jun-2020 **Completion On** : 03-July-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 27.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.45	IS 5182(PART-2) : 2003
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.12	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	57.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/ATR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	190	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/ATR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/ATR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	05	< 1	KLPL/SOP/ATR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/ATR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C2429010302  
KLPL- 341312A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004290P

**Test Report No** : 478 | 491310C2 KLPL/6/20/ENVN/00591S **Issue Date** : 03-July-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 01-July-2020 **Commenced On** : 01-July-2020 **Completion On** : 03-July-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NOS

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 29.06.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.25	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.35	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.5	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	µg/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks NIL

Any unusual feature observed during determination NIL

End of Test Report

*D. Banerjee*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Banerjee*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



10C2429010302

KLPL- 341311A

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT

NABL ULR NO : TC704320000004292P



Test Report No : 480 | 491410C4 KLPL/6/20/ENVN/00592

Issue Date : 12-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 08-Jun-2020 Commenced On : 08-Jun-2020

Completion On: 12-Jun-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref. To Sampling Procedure: QSP-07

Parameters Unit Standard Value Results Test Method

Location & Date : POWER PLANT UNIT-II, 05.06.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	687.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	23.16	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.94	KLPL/SOP/AIR-06
Oxygen	%	-	5.1	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	412	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	285.6	IS 11285 (part-7):2005
Carbon Dioxide	%	--	9.8	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1595041	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	4.03	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Boudha

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C4429210304  
KLPL-341134A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004292P

**Test Report No** : 480 | 491410C4 KLPL/6/20/ENVN/00592A

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 08-Jun-2020      **Commenced On** : 08-Jun-2020      **Completion On** : 12-Jun-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 12-Jun-2020

**Amendment Date** : -

Parameters	Unit	Standard/Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II , 06.06.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	685.4	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	22.03	KLPL/SOP/AIR-06
Velocity	m/sec	-	20.87	KLPL/SOP/AIR-06
Oxygen	%	-	4.46	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	447	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	280.9	IS 11255 (part-7):2005
Carbon Dioxide	%	--	13.3	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3127938	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	25.62	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C4429210304  
KLPL-34133A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004292P

**Test Report No** : 480 | 491410C4 KLPL/6/20/ENVN/00592C

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 11-Jun-2020      **Commenced On** : 11-Jun-2020      **Completion On**: 15-Jun-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure**: QSP-07

**Issue Date** : 15-Jun-2020

**Amendment Date** : -

Parameters	Unit	Standard/Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II , 09.06.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	699.6	IS 11255(part-2):1985(7A 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	26.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.59	KLPL/SOP/AIR-06
Oxygen	%	-	4.51	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	448	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	294.7	IS 11255 (part-7):2009
carbon Dioxide	%	--	13.7	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	32178.29	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	27.35	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anubrata*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anubrata*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BILUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004292P

## TEST REPORT



Test Report No : 480 | 491410C4 KLPL/6/20/ENVN/00592B

Issue Date : 15-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 11-Jun-2020 Commenced On : 11-Jun-2020

Completion On: 15-Jun-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref. To Sampling Procedure: QSP-07

Parameters: Unit Standard Value Results Test Method

Location & Date : POWER PLANT UNIT-I, 08.06.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	694.3	IS 11259(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	26.18	KLPL/SDP/AIR-06
Velocity	m/sec	-	13.09	KLPL/SDP/AIR-06
Oxygen	%	-	4.6	KLPL/SDP/AIR-06
Stack Temperature in Deg kelvin	--	-	407	KLPL/SDP/AIR-05
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	298.5	IS 11258 (part-7):2005
carbon Dioxide	%	--	9.6	KLPL/SDP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	2644226	KLPL/SDP/AIR-05
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SDP/AIR-06
Pressure	mmH <sub>2</sub> O	--	11.07	KLPL/SDP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C4429210304  
KLPL- 341132A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC7D4320000004292P

**Test Report No** : 480 | 491410C4 KLPL/6/20/ENVN/00592D

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 22-Jun-2020

**Commenced On** : 22-Jun-2020

**Completion On** : 26-Jun-2020

**Issue Date** : 26-Jun-2020

**Amendment Date** : -

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-II, 19.06.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	704.3	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	28.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	9.46	KLPL/SOP/AIR-06
Oxygen	%	-	5.3	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	413	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	303.6	IS 11255 (part-7):2005
Carbon Dioxide	%	--	10.0	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1895788	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	5.7	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Singh*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Singh*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



NABL ULR NO : TC704320000004292P

Test Report No : 480 | 491410C4 KLPL/6/20/ENVN/00592E

Issue Date : 26-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 22-Jun-2020

Commenced On : 22-Jun-2020

Completion On : 26-Jun-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters Unit Standard Value Results Test Method

Location & Date : CALCINER -I , 20.06.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	718.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	31.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	19.18	KLPL/SOP/AIR-06
Oxygen	%	-	3.99	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	--	446	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	318.3	IS 11255 (part-7):2005
carbon Dioxide	%	--	16.9	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	2919634	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	21.68	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



10C4429210304  
KLPL- 341176A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



NABL ULR NO : TC70432000004292P

Test Report No : 480 | 491410C4 KLPL/6/20/ENVN/00592F

Issue Date : 30-Jun-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 26-Jun-2020 Commenced On : 26-Jun-2020

Completion On: 30-Jun-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters : Unit : Standard Value : Results : Test Method :

Location & Date : POWER PLANT UNIT-I , 22.06.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	722.1	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	32.10	KLPL/SOP/AIR-06
Velocity	m/sec	-	6.98	KLPL/SOP/AIR-06
Oxygen	%	-	4.9	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	409	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	321.3	IS 11255 (part-7):2005
Carbon Dioxide	%	--	9.9	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1417168	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	3.13	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

END of Test Report

Analysed By : *D. Anandha*  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory : *D. Anandha*  
For Kalyani Laboratories Pvt. Ltd.



10C4429210304

KLPL- 341175A

# KALYANI LABORATORIES PVT. LTD.

78/914, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**NABL ULR NO** : **TC704320000004292P** **TEST REPORT**

**Test Report No** : **480 | 491410C4 KLPL/6/20/ENVN/00592G**

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : **VEDANTA LIMITED, LANJIGARH**

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 26-Jun-2020 **Commenced On** : 26-Jun-2020

**Sample Name** : **FLUE GAS | STACK MONITORING** **Completion On**: 30-Jun-2020

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure**: QSP-07



**Issue Date** : 30-Jun-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CALCINER -II, 24.06.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	692.4	IS 11259(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	24.5	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.23	KLPL/SOP/AIR-06
Oxygen	%	-	4.48	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	441	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	288.4	IS 11255 (part-7):2005
Carbon Dioxide	%	--	13.5	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	--	3354512	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	29.45	KLPL/SOP/AIR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurupa*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



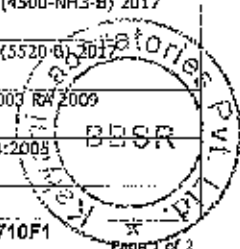
<b>NABL ULR NO</b>	: TC70432000004337F	<b>Issue Date:</b>	09-Jul-2020
<b>Test Report No</b>	: 2389   488710F1KLPL/6/20/WATER/02722	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED,LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI,ODISHA-766027.		
<b>Date of receipt</b>	: 30-Jun-2020	<b>Test Commenced On :</b>	30-Jun-2020
<b>Sample Description</b>	: SURFACE WATER	<b>Test Completion On:</b>	09-Jul-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification *</b>	: SURFACE WATER	<b>Sampling Date :</b>	29-Jun-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
		<b>EXP Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 2	<b>Place of Collection :</b>	STREAM NEAR KENDUBADI DT-29.06.2020
<b>Sample Collected By</b>	: By KLPL		
<b>Ref.To Sampling Procedure:</b>			

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	NPN/100ml.	5000	50	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	12.5	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	<1.0	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.06	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		24	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.3	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	24	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		5.8	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		0.97	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	1.0	8.6	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days, 27deg C)	mg/l, Max	--	1.8	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	18	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	<0.05	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520-B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2009

2389 | 488710F1

Page 1 of 2

KLPL- 341447A







# KALYANI LABORATORIES PVT. LTD.

78/944, PAJAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2389 | 488710F1KLPL/6/20/WATER/02722



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0005	
xxvi SODIUM ABSORPTION RATIO	--	--	0.50	
xxvii Barium	mg/l	--	<0.2	
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.4	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2)-2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1988 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.01	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004336F

**Test Report No** : 2388 | 488610F0KLPL/6/20/WATER/02721 **Issue Date**: 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On**: 09-Jul-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Jun-2020

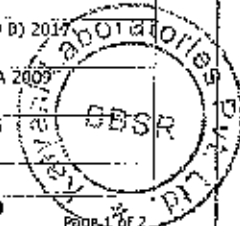
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : STREAM NEAR TENTULIPADAR DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total, Coliforms	MPN/100ml.	5000	34	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	12.5	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	<1.0	APHA 23rd Edition (4500-SO4 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.1	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm	-	63	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.39	APHA 23rd Edition (4500-F - -D, -C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	60	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	14.4	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	1.70	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	9.3	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.6	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	-	43	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.08	APHA-23rd Edition (3500-Fe-D, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2005



2388 | 488610F0

Page 1 of 2

KLPL- 341462A



# KALYANI LABORATORIES PVT. LTD.

78/9-14, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2388 | 488610F0KLPL/6/20/WATER/02721



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0008	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.53	--
xxvii Barium	mg/l	--	<0.2	--
xxviii TOTAL PESTISIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	8.0	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part B): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurag*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004338F

**Test Report No** : 2390 | 488810F2KLPL/6/20/WATER/02723 **Issue Date**: 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On**: 09-Jul-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Jun-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : STREAM NEAR RENGOPALI DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	33	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	14.6	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	4.0	APHA 23rd Edition (4500-SO4 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.1	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		86	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.3	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	60	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		17.3	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		2.67	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	6.7	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max		2.0	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		54	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.4	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2005

2390 | 488810F2

Page 1 of 2

KLPL- 341500A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2390 | 488810F2KLPL/6/20/WATER/02723



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l		<0.01	
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%		0.0007	
xxvi SODIUM ABSORPTION RATIO	--		0.41	
xxvii barium	mg/t		<0.2	
xxviii TOTAL PESTICIDE	µg/l		<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.5	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/ml	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.01	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D Aranya

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

D. Aranya  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT

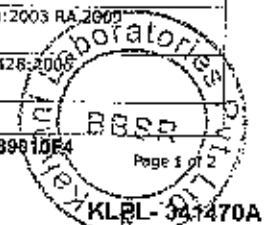


**NABL ULR NO** : TC70432000004340F  
**Test Report No** : 2392 | 489010F4KLPL/6/20/WATER/02725  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020  
**Sample Description** : SURFACE WATER  
**Sample Condition** : SEALED  
**Sample Identification \*** : SURFACE WATER  
**Batch No, Lot No** : NA  
**Received Quantity** : ILTR X 2  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:**

**Issue Date:** 09-Jul-2020  
**Amendment Date** : -  
**Test Commenced On** : 30-Jun-2020  
**Test Completion On:** 09-Jul-2020  
**Sampling Date** : 29-Jun-2020  
**EXP Date** : NA  
**Place of Collection** : VAMSADHARA RIVER NEAR NARAYANPUR CULVERT (UPSTREAM) DT-29.06.2020  
**MFG Date** : NA

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	40	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	16.7	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	10	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.8	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		212	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.5	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	130	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		18.7	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		8.75	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	8.9	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		2.5	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		83	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	4.6	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 55):2005 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2005

2392 | 489010F4





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2392 | 489010F4KLPL/6/20/WATER/02725



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0009	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.43	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.5	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART 2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.01	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anandha*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anandha*

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004339F

**Test Report No** : 2391 | 488910F3KLPL/6/20/WATER/02724

**Issue Date**: 09-Jul-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020

**Test Completion On**: 09-Jul-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \* :** **SURFACE WATER**

**Sampling Date** : 29-Jun-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 2

**Place of Collection** : VAMSADHARA RIVER NEAR BALABHADRAPUR

**Sample Collected By** : By KLPL

DT-29.06.2020

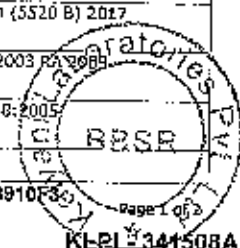
**Ref. To Sampling Procedure**:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	80	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	18.8	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	17	APHA 23rd Edition (4500-SO42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	1.0	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm		175	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.48	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	122	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		21.6	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		4.97	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B-B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	8.6	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		2.7	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		72	APHA 23rd Edition (2310 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.35	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (1500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2005

2391 | 488910F3

Page 1 of 2

KLPL-341508A







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2391 | 488910F3KLPL/6/20/WATER/02724



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0012	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.61	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTISIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.4	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anurupa*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anurupa*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004341F

**Test Report No** : 2393 | 489110F5KLPL/6/20/WATER/02726 **Issue Date:** 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On:** 09-Jul-2020

**Sample Description** : **SURFACE WATER**

---

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Jun-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

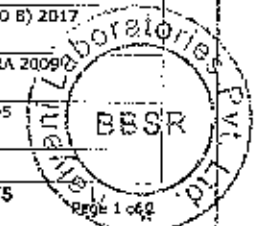
**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSADHARA RIVER NEAR CHHATRAPUR CULVERT (DOWNSTREAM) DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	30	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	14.6	APHA 23rd Edition (4500-Cl --B), 2017
ii Sulphate as SO4	mg/l, Max	400	7	APHA 23rd Edition (4500-SO4 --E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.55	APHA 23rd Edition (4500-NO3 --E), 2017
iv Electrical Conductivity	µs/cm		179	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.2	APHA 23rd Edition (4500-F --D,C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	156	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		14.4	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		10.45	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	8.7	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max		2.6	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		79	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	5.6	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2005

2393 | 489110F5



KLPL- 341468A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2393 | 489110F5KLPL/6/20/WATER/02726



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0011	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.54	--
xxvii Barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Ananta

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2393 | 489110F5

Page 2 of 2

KLPL- 341467A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004342F

**Test Report No** : 2394 | 489210F6KLPL/6/20/WATER/02727 **Issue Date**: 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On**: 09-Jul-2020

**Sample Description** : **SURFACE WATER**

**Sample Condition** : SEALED

**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Jun-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : TURI NALA NEAR REGHUNATHPUR DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	90	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	14.6	APHA 23rd Edition (4500-Cl - B), 2017
ii Sulphate as SO4	mg/l, Max	400	10	APHA 23rd Edition (4500-SO4 - B), 2017
iii Nitrate as NO3	mg/l, Max	50	0.65	APHA 23rd Edition (4500-NO3 - E), 2017
iv Electrical Conductivity	µs/cm		147	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.22	APHA 23rd Edition (4500-F - D, C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	108	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max		18.7	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max		4.37	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B - B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	6.5	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	1.2	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max		65	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.7	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2003



2394 | 489210F6

Page 1 of 2

KLPL- 341466A



# KALYANI LABORATORIES PVT. LTD.

78/944, PANAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2394 | 489210F6KLPL/6/20/WATER/02727



Parameter	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0006	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.32	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTISIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.7	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-2):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1986 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



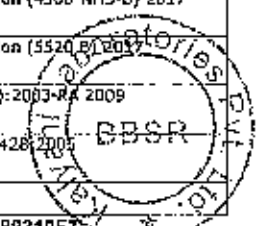
**NABL ULR NO** : TC70432000004343F  
**Test Report No** : 2395 | 489310F7KLPL/6/20/WATER/02728 **Issue Date**: 09-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On**: 09-Jul-2020  
**Sample Description** : **SURFACE WATER**  
**Sample Condition** : SEALED  
**Sample Identification \*** : **SURFACE WATER** **Sampling Date** : 29-Jun-2020  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : POND NEAR HAREKRUSHNAPUR DT-29.06.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	50	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	16.7	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	13	APHA 23rd Edition (4500-SO4 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.9	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm	-	168	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	0.32	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	118	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	21.6	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	5.35	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	4.8	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	1.5	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	76	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	1.0	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	---	<0.1	Annex K of IS 13428:2003

2395 | 489310F7

Page 1 of 2

KLPL- 341464A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2395 | 489310F7KLPL/6/20/WATER/02728



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	--
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0009	--
xxvi SODIUM ABSORPTION RATIO	--	--	0.45	--
xxvii barium	mg/l	--	<0.2	--
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.3	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-2):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Asukha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Asukha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004181F  
**Test Report No** : KLPL/6/20/WATER/02622A  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 06-Jun-2020 Test Commenced On : 06-Jun-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07

**Issue Date:** 01-Jul-2020  
**Amendment Date :** -  
**Sampling Date :** 05-Jun-2020  
**MFG Date :** NA  
**EXP Date :** NA  
**Place of Collection :** PLANT DT-05.06.2020

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	22	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	18	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.15	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.9	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D Anil Kumar*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Prof. M. S. ...*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

78/0-44, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004182F  
**Test Report No** : 2377 | 48751000000KLPL/6/20/WATER/02622B **Issue Date**: 01-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 06-Jun-2020 **Test Commenced On** : 06-Jun-2020 **Test Completion On** : 11-Jun-2020  
**Sample Description** : STP WATER

**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 05-Jun-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-05.06.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i	Faecal Coliform	MPN/100ml. < 100	33	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i	Chemical Oxygen Demand	mg/l, Max 50	29	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max 10	5	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max 20	8	APHA 23rd Edition (2540 B), 2012
iv	Oil & Grease	mg/l, Max 10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max 10	6.4	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max 5	1.68	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i	pH value	6.5-9.0	7.25	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Arunika*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. Jyoti*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004200F	<b>Issue Date:</b>	01-Jul-2020
<b>Test Report No</b>	: KLPL/6/20/WATER/02631A	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 09-Jun-2020	<b>Test Commenced On</b>	: 09-Jun-2020
<b>Sample Description</b>	: <b>STP WATER</b>	<b>Test Completion On</b>	: 13-Jun-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification *</b>	: <b>STP OUTLET</b>	<b>Sampling Date</b>	: 08-Jun-2020
<b>Batch No, Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 2	<b>Place of Collection</b>	: PLANT DT-08.06.2020
<b>Sample Collected By</b>	: By KLPL		
<b>Ref.To Sampling Procedure:</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
I	Faecal Coliform	MPN/100ml	< 100	26	IS 622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	22	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.4	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.8	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Banerjee*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Banerjee*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004201F  
**Test Report No** : KLPL/6/20/WATER/02631B  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 09-Jun-2020 **Test Commenced On** : 09-Jun-2020 **Test Completion On** : 13-Jun-2020  
**Sample Description** : **STP WATER**  
**Issue Date** : 01-Jul-2020  
**Amendment Date** : -  
**Sample Condition** : SEALED  
**Sample Identification \*** : **STP OUTLET**  
**Batch No, Lot No** : NA **MFG Date** : NA **Sampling Date** : 08-Jun-2020  
**Received Quantity** : 1LTR X 2 **EXP Date** : NA  
**Sample Collected By** : By KLPL **Place of Collection** : TOWNSHIP DT-08.06.2020  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feecal Coliform	MPN/100ml.	< 100	34	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	35	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	6	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.5	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.3	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/9-H, PAHALI, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004229F  
**Test Report No** : KLPL/6/20/WATER/02675  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 20-Jun-2020 Test Commenced On : 20-Jun-2020  
**Sample Description** : STP WATER

**Issue Date** : 01-Jul-2020  
**Amendment Date** : -  
**Test Completion On** : 25-Jun-2020

**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET  
**Batch No, Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure** : QSP-07  
**Sampling Date** : 19-Jun-2020  
**MFG Date** : NA  
**EXP Date** : NA  
**Place of Collection** : PLANT DT-19.06.2020

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml.	< 100	22	IS 2221:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	14	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.16	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	8.0	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anulaha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S.*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004230F  
**Test Report No** : KLPL/6/20/WATER/02675B  
**Amendment No** :  
**Reference** : ORDER NO-6600013489 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 20-Jun-2020 Test Commenced On : 20-Jun-2020  
**Sample Description** : STP WATER

**Issue Date** : 01-Jul-2020  
**Amendment Date** : -

**Test Completion On** : 25-Jun-2020

**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure** : QSP-07

**MFG Date** : NA  
**Place of Collection** : TOWNSHIP DT-19.06.2020  
**Sampling Date** : 19-Jun-2020  
**EXP Date** : NA

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Coliform	MPN/100ml	< 100	40	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	31	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	6.45	APHA 23rd Edition (4500-NHarg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.2	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Brouha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Debanee*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004325F  
**Test Report No** : 2377 | 48751000000KLPL/6/20/WATER/02710  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 26-Jun-2020 **Test Commenced On** : 26-Jun-2020 **Test Completion On** : 01-Jul-2020  
**Sample Description** : **STP WATER**  
**Sample Condition** : SEALED  
**Sample Identification \*** : **STP OUTLET**  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-25.06.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure** : QSP-07  
**Issue Date** : 01-Jul-2020  
**Amendment Date** : -  
**Sampling Date** : 25-Jun-2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feacal Collform	MPN/100ml.	< 100	50	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	40	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	8	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	12	APHA 23rd Edition (2540 D), 2017
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.9	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	3.36	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value		6.5-9.0	7.15	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Biswas*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Prof. Dr. ...*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAJI, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004324F	<b>Issue Date:</b>	01-Jul-2020
<b>Test Report No</b>	: 2376   4874100000KLPL/6/20/WATER/02709	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 26-Jun-2020	<b>Test Commenced On :</b>	26-Jun-2020
<b>Sample Description</b>	: <b>STP WATER</b>	<b>Test Completion On:</b>	01-Jul-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification * :</b>	<b>STP OUTLET</b>	<b>Sampling Date :</b>	25-Jun-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	PLANT DT-25.06.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
i	Faecal Collform	MPN/100ml	< 100	33	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Chemical Oxygen Demand	mg/l, Max	50	25	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2017
iv	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max	10	1.5	APHA 23rd Edition (4500-NH <sub>4</sub> -B, 4500-NO <sub>2</sub> -B, 4500-NO <sub>3</sub> -B), 2017
vi	Ammonium Nitrogen (as NH <sub>4</sub> -N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH <sub>3</sub> -C), 2017
<b>PHYSICAL PARAMETER</b>					
i	pH value		6.5-9.0	7.95	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Anubha*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004346P

**Test Report No** : 2398 | 489410FAKLPL/6/20/WATER/02729

**Issue Date:** 13-Jul-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI,

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020

**Test Completion On:** 09-Jul-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER

**Sampling Date** : 30-Jun-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 2

**Place of Collection** : PLANT SITE DT-30.06.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988,RA 2009
iii Nitrate as NO3	mg/l, Max	45	0.75	IS 3025 (PART 34): 1988 RA 2003
iv Calcium (as Ca)	mg/l, Max	75	23	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	12.5	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	<0.05	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.8	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	4.37	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	12.3	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3),	mg/l, Max	200	118	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3),	mg/l, Max	200	76	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<2	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-PO)

2398 | 489410FA



KLPL-341676A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2398 | 489410FAKLPL/6/20/WATER/02729



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6410)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTICIDE</b>				
i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.205	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.9	IS 3025 (Part 11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	150	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	---

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By *D. Anusha*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004347P

**Test Report No** : 2399 | 489510FBKPL/6/20/WATER/02730

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER

**Batch No , Lot No** : NA

**Received Quantity** : 11TR X 2

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

**Issue Date:** 13-Jul-2020

**Amendment Date** : -

**Sampling Date** : 29-Jun-2020

**MFG Date** : NA

**EXP Date** : NA

**Place of Collection** : BORE WELL AT LANJIGARH DT-29.06.2020

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	4.5	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	64.8	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	43.8	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.21	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.16	IS 3025 (Part 53):2009 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	10.5	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	192	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA-2009
xx	phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (4500-P-03)

2399 | 489510FB

KALYANI LABORATORIES PVT. LTD.  
BBSR  
Page 1 of 2  
KLPL-341874A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2399 | 489510FBKLPL/6/20/WATER/02730



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTICIDE</b>				
i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.601	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.5	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	250	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	---

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Boudha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Rajendra*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

7B/944, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



**NABL ULR NO** : TC7043200D0004348P  
**Test Report No** : 2400 | 489610FCKLPL/6/20/WATER/02731  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07  
**Issue Date:** 13 Jul-2020  
**Amendment Date** : -  
**Sampling Date** : 29-Jun-2020  
**MFG Date** : NA  
**EXP Date** : NA  
**Place of Collection** : BORE WELL AT RANGOPALI DT-29.06.2020  
**Test Completion On:** 09-Jul-2020

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.4	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	18.7	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	16.7	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	<0.1	IS 3025 (Part 60):2006
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	4.37	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	79	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	65	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2009 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428: 2005 RA 2009
xx	phosphate as (PO <sub>4</sub> )	mg/l		<0.1	APHA 22nd Edition (4500-P-D)

2400 | 489610FCK



KLPL-341672A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : **2400 | 489610FCKLPL/6/20/WATER/02731**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTICIDE</b>				
i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.189	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value		6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
v Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	98	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anand*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



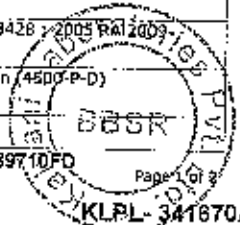
<b>NABL ULR NO</b>	: TC704320000004349P	<b>Issue Date:</b>	13 Jul 2020
<b>Test Report No</b>	: 2401   489710FDKPL/6/20/WATER/02732	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-Jun-2020	<b>Test Commenced On :</b>	30-Jun-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On:</b>	09-Jul-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b>	29-Jun-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	BORE WELL AT CHMATRAPUR DT-29.06.2020
<b>Ref.To Sampling Procedure:</b>	Q5P-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2

CHEMICAL PARAMETER				
i	Lead (Pb)	mg/l, max	0.01	<0.005
ii	Arsenic (As)	mg/l, max	0.01	<0.001
iii	Nitrate as NO3	mg/l, Max	45	3.0
iv	Calcium (as Ca)	mg/l, Max	75	64.8
v	Chloride (as Cl)	mg/l, Max	250	27.1
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02
vii	Fluoride (as F)	mg/l, Max	1	0.71
viii	Free residual chlorine	mg/l, Min	0.2	0.2
ix	Iron (as Fe)	mg/l, Max	1	<0.05
x	Magnesium (as Mg)	mg/l, Max	30	7.78
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005
xiii	Sulphate (as SO4)	mg/l, Max	200	7
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	194
xv	Total hardness (as CaCO3),	mg/l, Max	200	194
xvi	Total Chromium	mg/l, Max	0.05	<0.02
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1
xix	Boron (as B)	mg/l, Max	0.5	<0.1
xx	phosphate as (PO4)	mg/l		<0.1

2401 | 489710FD





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2401 | 489710FDKLPL/6/20/WATER/02732



Parameter	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTISIDE</b>				
I Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.480	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	290	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	---

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Asutcha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



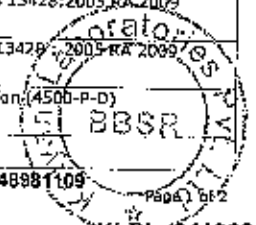
**NABL ULR NO** : TC704320000004361P  
**Test Report No** : 2403 | 48981109KLPL/6/20/WATER/02733  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )  
**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07  
**Issue Date:** 14-Jul-2020  
**Amendment Date** : -  
**Sampling Date :** 29-Jun-2020  
**MFG Date :** NA  
**EXP Date :** NA  
**Place of Collection :** BORE WELL AT CHANALIMA DT-29.06.2020.

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	0.3	IS 3025 (PART 34): 1988 RA 2003
iv	Calcium (as Ca)	mg/l, Max	75	11.5	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	18.8	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.42	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.65	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	5.10	IS 3025 (Part 48):1994 RA 2003
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	62	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	50	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005, RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428: 2005-RA 2009
xx	phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition, (4500-P-D)

2403 | 48981109  
 KLPL- 341668A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

*Kalyani Laboratories*

**Test Report No** : **2403 | 48981109KLPL/6/20/WATER/02733**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTICIDE</b>				
i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.120	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value		6.5-8.5	6.6	IS 3025 (Part-11):1983, RA 2012
v Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	102	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		23	

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anubrata*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BRUDANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004363P

**Test Report No** : 2405 | 4900110BKLPL/6/20/WATER/02735 **Issue Date** : 14-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On** : 09-Jul-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 29-Jun-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT BANDHAGUDA DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
iii	Nitrate as NO3	mg/l, Max	45	2.6	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	23	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	20.9	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.55	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	13.12	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3)	mg/l, Max	200	113	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3)	mg/l, Max	200	112	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (4580-P-D)

2405 | 4900110B





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2405 | 4900110BKPL/6/20/WATER/02735



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4B)

### PESTICIDE

i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
---------------------------	-----------	--------	---------	-------

### PHYSICAL PARAMETER

i Conductivity	ms/cm	---	0.219	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazdn, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	162	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D Anand  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004362P	<b>Issue Date:</b>	14-Jul-2020
<b>Test Report No</b>	: 2404   4899110AKLPL/6/20/WATER/02734	<b>Amendment Date :</b>	-
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-Jun-2020	<b>Test Commenced On :</b>	30-Jun-2020
<b>Sample Description</b>	: <b>DRINKING WATER (IS 10500:2012 )</b>	<b>Test Completion On:</b>	09-Jul-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification * :</b>	<b>GROUND WATER</b>	<b>Sampling Date :</b>	29-Jun-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date :</b>	NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date :</b>	NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection :</b>	BORE WELL AT BATERLIMA DT-29.06.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirements	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii Nitrate as NO3	mg/l, Max	45	4.0	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	40.3	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	23	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	0.79	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.25	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.62	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	8.75	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	12	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3)	mg/l, Max	200	137	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3)	mg/l, Max	200	137	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (4500-P-0)





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2404 | 4899110AKLPL/6/20/WATER/02734



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
<b>PESTICIDE</b>				
i Total Pesticide residue	mg/l, Max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.355	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.2	IS 3025 (Part 11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	224	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	23	---

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By *D. Anubha*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004331F

**Test Report No** : 2383 | 488110EBKLPL/6/20/WATER/02716 **Issue Date**: 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On**: 09-Jul-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 29-Jun-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : OBSERVATION BORE WEL PROCESS WATER LAKE(EAST) DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO3	mg/l, Max	45	2.0	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	17.3	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	14.6	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.53	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.22	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.6	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	12.39	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	173	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	94	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.022	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2383 | 488110EB

Page 1 of 3

KLPL- 341499A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2383 [ 488110EBKLPL/6/20/WATER/02716

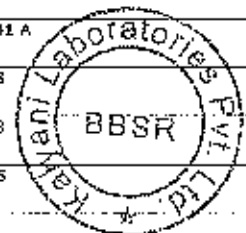


Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6410)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER



2383 | 488110EB

Page 2 of 3

KLPL- 341498A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2383 | 488110EBKLPL/6/20/WATER/02716



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	--	6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	270	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anil Kumar*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Debaraj Nayak*  
9/7/2020  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004326F

**Test Report No** : 2378 | 487610000000KLPL/6/20/WATER/02711 Issue Date: 09 Jul-2020

**Amendment No** : - Amendment Date : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020 Test Completion On: 09-Jul-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** Sampling Date : 29-Jun-2020

**Batch No , Lot No** : NA MFG Date : NA EXP Date : NA

**Received Quantity** : 1LTR X 2 Place of Collection : OBSERVATION BORE WELL RED MUD POND (WEST)

**Sample Collected By** : By KLPL DT-29.06.2020

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i Nitrate as NO3	mg/l, Max	45	3.0	IS 3025 (PART 34):1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	69.1	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	29.2	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.26	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.22	IS 3025 (Part 76):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.85	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	8	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	197	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	198	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.055	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2378 | 487610000000



KLPL-341444A



# KALYANI LABORATORIES PVT. LTD.

78,944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2378 | 48761000000KLPL/6/20/WATER/02711

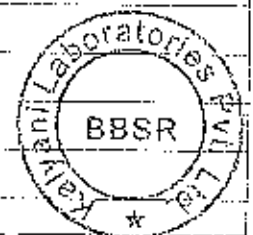


Parameters	Unit	Requirement	Result	Test Method
xx Aluminem (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTISIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER



2378 | 48761000000

Page 2 of 3

KLPL- 341443A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUJANESWAR-752 001, ODISHA

Test Report No : 2378 | 48761000000KLPL/6/20/WATER/02711



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.5	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	470	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananya*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004327P

**Test Report No** : 2379 | KLPL/6/20/WATER/03712

**Issue Date** : 09-Jul-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020

**Test Completion On** : 09-Jul-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED

**Sample Identification \* :** GROUND WATER

**Sampling Date** : 29-Jun-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 2

**Place of Collection** : OBSERVATION BORE WELL WATERED MUD POND  
BASANTAPADA SIDE(EAST) DT-29.06.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO3	mg/l, Max	45	1.4	IS 3025 (PART 34): 1988 RA 2009
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii	Calcium (as Ca)	mg/l, Max	75	24.5	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	25	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.21	IS 3025 (Part 60):2009
vii	Free residual chlorine	mg/l, Min	0.2	0.21	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	11.42	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	6.3	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	127	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	108	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.021	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2379 | 4877100000000

KLPL-341441A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BIJUBANESWAR-752101, ODISHA

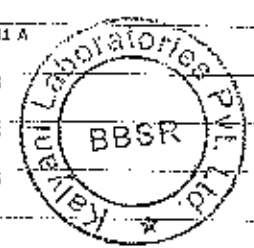
Test Report No

2379 | KLPL/6/20/WATER/02712



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2009 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monotrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Alrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

PHYSICAL PARAMETER





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752001, ODISHA

Test Report No

2379 [KLPL/6/20/WATER/02712



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	150	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1966 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004328F

**Test Report No** : 2380 |KLPL/6/30/WATER/02713 **Issue Date:** 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On:** 09-Jul-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** **Sampling Date :** 29-Jun-2020

**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA

**Received Quantity** : 1LTR X 2 **Place of Collection :** OBSERVATION BORE WELL RED MUD POND

**Sample Collected By** : By KLPL **MATERIAL GATE SIDE (NORTH) DT-29.06.2020**

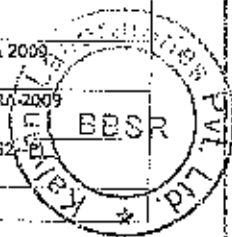
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2 IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
--------------------	--	--	--	--

i	Nitrate as NO3	mg/l, Max	15	1.9	IS 3025 (PART 34): 1988 RA 2009
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii	Calcium (as Ca)	mg/l, Max	75	17.3	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	12.5	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.11	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.9	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	18.47	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	32	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	154	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	119	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.026	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-01)



2330 | 48781000000000

KLPL- 341438A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2380 | KLPL/6/20/WATER/02713



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazlae	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER



2380 | 4878100000000

Page 2 of 3

KLPL- 341506A





# KALYANI LABORATORIES PVT. LTD.

78/9-44, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2380 | KLPL/6/20/WATER/02713



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	230	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2380 | 48781000000000

Page 3 of 3

KLPL- 341505A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC70432000004330F	<b>Issue Date</b>	: 09-Jul-2020
<b>Test Report No</b>	: 2382   488010EAKLPL/6/20/WATER/02715	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.		
<b>Date of receipt</b>	: 30-Jun-2020	<b>Test Commenced On</b>	: 30-Jun-2020
<b>Sample Description</b>	: DRINKING WATER (IS 10500:2012 )	<b>Test Completion On</b>	: 09-Jul-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification *</b>	: GROUND WATER	<b>Sampling Date</b>	: 29-Jun-2020
<b>Batch No , Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: OBSERVATION BORE WELL PROCESS WATER LAKE (NORTH) DT-29.06.2020
<b>Ref.To Sampling Procedure:</b>	: QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO3	mg/l, Max	45	0.5	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	8.6	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	10.4	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.19	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.21	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.8	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	5.10	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	55	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	43	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.014	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
ix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2382 | 488010EA

Page 2 of 2

KLPL- 341504A





# KALYANI LABORATORIES PVT. LTD.

73/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2382 | 488010EAKLPL/6/20/WATER/02715



Parameters	Unit	Requirement	Result	Test Method
xx Aluminaum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.0005	Annex J of IS 13428 : 2005 RA 2009

## PESTISIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2382 | 488010EAKLPL/6/20/WATER/02715

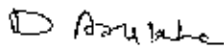


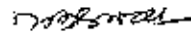
Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	< 1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	70	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004332F

**Test Report No** : 2384 | 488210ECKLPL/6/20/WATER/02717

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED

**Sample Identification \*** : **GROUND WATER**

**Batch No , Lot No** : NA

**Received Quantity** : 1LTR X 2

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

**Issue Date:** 13-Jul-2020

**Amendment Date :** -

**Test Commenced On :** 30-Jun-2020

**Test Completion On:** 13-Jul-2020

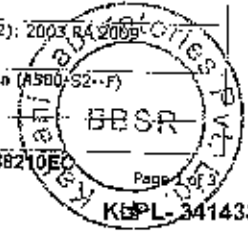
**Sampling Date :** 29-Jun-2020

**MFG Date :** NA

**EXP Date :** NA

**Place of Collection :** OBSERVATION BORE WELL ASHPOND KASIBADI SIDE (WEST) DT-29.06.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	33.1	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	14.6	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.32	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.23	IS 3025 (Part 26):1988 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.25	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	14.82	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 13):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	156	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	144	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.025	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (8500-S2-F)



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No

2384 | 488210ECKLPL/6/20/WATER/02717



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

**PESTICIDE**

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	70	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2384 | 488210ECK

★ Page 2 of 3

KLPL- 341432A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2384 | 488210ECKLPL/6/20/WATER/02717



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.5	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	170	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-3):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004334F  
**Test Report No** : 2386 | 488410EEKL PL/6/20/WATER/02719  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07  
**Issue Date:** 09-Jul-2020  
**Amendment Date** : -  
**Sampling Date :** 29-Jun-2020  
**MFG Date :** NA  
**EXP Date :** NA  
**Place of Collection :** OBSERVATION BORE WELL ASPOND (NORTH)  
 DT-29.06.2020

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

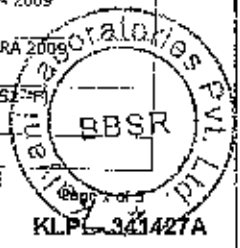
### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.6	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	7.2	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	33.4	IS 3025 (Part 32):1986 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.25	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.3	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	4.37	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 34):1986 RA 2009
xv	Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	48	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	36	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.011	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -F)

2386 | 488410EE







# KALYANI LABORATORIES PVT. LTD.

78,944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2386 | 488410EEKLPL/6/20/WATER/02719



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 5):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6140)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix δ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Eubachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER



2386 | 488410EEKLPL



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2386 | 488410EEKLPL/6/20/WATER/02719



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	15	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	6.7	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	60	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004333F  
**Test Report No** : 2385 | 48B310FDKPL/6/20/WATER/02718  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )  
**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER  
**Batch No , Lot No** : NA  
**Received Quantity** : 1LTR X 2  
**Sample Collected By** : By KLPL  
**Ref To Sampling Procedure:** QSP-07  
**Issue Date:** 09-Jul-2020  
**Amendment Date :** -  
**Sampling Date :** 29-Jun-2020  
**MFG Date :** NA  
**EXP Date :** NA  
**Place of Collection :** OBSERVATION BORE WELL ASPOND KENDUGUDA SIDE (EAST) DT-29.06.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.4	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	67.7	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	54.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.80	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.21	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	4.37	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	110	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	166	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.033	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.5	<0.05	APHA 2nd Edition (4500-S)

2385 | 48B310ED





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2385 | 488310EDKLPL/6/20/WATER/02718



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

PHYSICAL PARAMETER



2385 | 488310ED

Page 2 of 3

KLPL- 341429A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

Test Report No : 2385 | 486310EDKLPL/6/20/WATER/02718



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	15	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.7	IS 3025 (Part 11):1983 RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.2	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	430	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anisha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/94-I, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

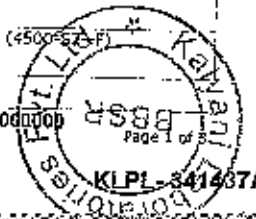
## TEST REPORT



**NABL ULR NO** : TC704320000004329F  
**Test Report No** : 2381 | KLPL/0/20/WATER/02714  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Jun-2020 Test Commenced On : 30-Jun-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )  
**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER  
**Batch No , Lot No** : NA  
**Received Quantity** : ILTR X 2  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07  
**Issue Date:** 09-Jul-2020  
**Amendment Date** : -  
**Sampling Date** : 29-Jun-2020  
**MFG Date** : NA  
**EXP Date** : NA  
**Place of Collection** : OBSERVATION BORE WELL RED MUD POND RENGOPALI SIDE (SOUTH) DT-29.06.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.6	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	24.5	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	12.5	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.57	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	5.35	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.005	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 59):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	33	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	91	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	83	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.02	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2381 | 48791000000000





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL BHUBANESWAR-752101. ODISHA

Kalyani Laboratories

Test Report No

2381 | KLPL/6/20/WATER/02714



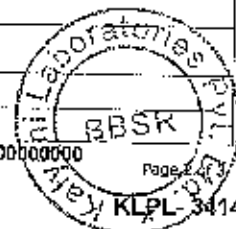
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (PART 55): 2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428: 2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6160)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan α	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproteron	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER

2381 | 48791000000000



Page 2 of 2

KLPL-341436A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2381 | KLPL/6/20/WATER/02714



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.2	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	110	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

78/9-44, PATIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004335F

**Test Report No** : 2387 | 488510EFKLPL/6/20/WATER/02720 **Issue Date:** 09-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Jun-2020 **Test Commenced On** : 30-Jun-2020 **Test Completion On:** 09-Jul-2020

**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** **Sampling Date :** 29-Jun-2020

**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA

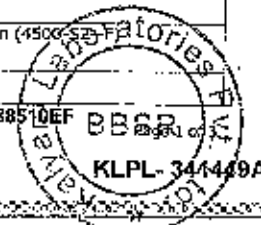
**Received Quantity** : 1LTR X 2 **Place of Collection :** OBSERVATION BORE WELL DIRTY WATER POND

**Sample Collected By** : By KLPL **DT-29.06.2020**

**Ref. To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.6	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	61.9	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	33.4	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.98	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.65	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	7.05	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 47):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	184	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.038	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2) Laboratories

2387 | 488510EF



KLPL-34149A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2387 | 488510EFLPL/6/20/WATER/02720



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 1025 (PART 5): 2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER



2387 | 488510EFLPL

Page 2 of 3

KLPL- 341446A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2387 | 488510EFKLPL/6/20/WATER/02720



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value		6.5-8.5	7.5	IS 3025 (Part 11):1983, RA 2012
IV Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
V Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	300	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anandha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/9-24, PAULALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004930P  
**576 | 56461342 KLPL/09/20/ENVN/00720**  
**Issue Date** : 12-Oct-2020  
**Amendment No** : -  
**Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Commenced On** : 30-Sep-2020 **Completion On** : 01-Oct-2020  
**Sample Name** : NOISE  
**Sample Condition** : -  
**Quantity** : 10 NOS  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Result	Test Method
------------	------	----------------	--------	-------------

**Location & Date** : **BALABHADRAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	48.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	36.9	IS 9989:1981 (RA 2014)

**Location & Date** : **BASANTAPADA , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	47.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	33.9	IS 9989:1981 (RA 2014)

**Location & Date** : **CHHATRAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	48.9	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	36.1	IS 9989:1981 (RA 2014)

**Location & Date** : **HAREKRISHANAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	45.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	35.8	IS 9989:1981 (RA 2014)

**Location & Date** : **KASIBADI , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	47.8	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	34.8	IS 9989:1981 (RA 2014)

**Location & Date** : **LANJIGARH , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	54.6	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	44.8	IS 9989:1981 (RA 2014)

**Location & Date** : **MASKAPADAR , 29.09.2020**

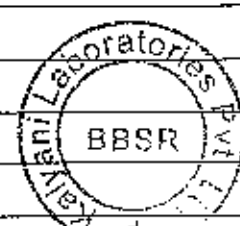
Noise Level Indl. Area (Day)	dB	55	54.5	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	42.6	IS 9989:1981 (RA 2014)

**Location & Date** : **NIYAMAGIRI VEDANTA NAGAR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	51.2	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	40.5	IS 9989:1981 (RA 2014)

**Location & Date** : **PLANT SITE , 29.09.2020**

Noise Level Indl. Area (Day)	dB	75	72.5	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------



**1342493011502**  
**KLPL-342493A**  
 Page 1 of 2



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004930P

576 | 56461342 KLPL/09/20/ENVN/00720

Issue Date : 12-Oct-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 30-Sep-2020

Commenced On : 30-Sep-2020

Completion On: 01-Oct-2020

Sample Name : NOISE

Sample Condition : -

Quantity : 10 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Noise Level Indl. Area (Night)	dB	70	66.0	IS 9989:1981 (RA 2014)
<b>Location &amp; Date : RENGOPALI , 29.09.2020</b>				
Noise Level Indl. Area (Day)	dB	55	47.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	33.4	IS 9989:1981 (RA 2014)

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

D Anil Kumar  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1342493011502  
KLPL-342492 A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004969P	<b>Issue Date:</b>	14-Oct-2020
<b>Test Report No</b>	: 2822   54821369KLPL/09/20/WATER/03130	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDE, ODISHA-766027.		
<b>Date of receipt</b>	: 30-Sep-2020	<b>Test Commenced On</b>	: 30-Sep-2020
<b>Sample Description</b>	: DRINKING WATER (IS 10500:2012)	<b>Test Completion On</b>	: 08-Oct-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification *</b>	: GROUND WATER	<b>Sampling Date</b>	: 29-Sep-2020
<b>Batch No, Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: BOREWELL AT BANDHAGUDA DT-29.09.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

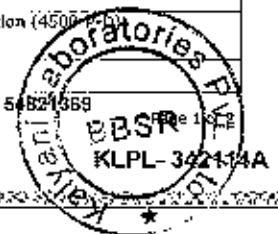
### Parameters Unit Requirement Result Test Method

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988,RA 2009
iii	Nitrate as NO3	mg/l, Max	45	3.0	IS 3025 (PART 34): 1988 RA 2003
iv	Calcium (as Ca)	mg/l, Max	75	30.4	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	13.2	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.6	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2003
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	12	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3)	mg/l, Max	200	109	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3)	mg/l, Max	200	104	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l,Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-PO4)

2822 | 54821369





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2822 | 54821369KLPL/09/20/WATER/03130



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 46)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

### PHYSICAL PARAMETER

i Conductivity	ms/cm		0.256	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts B):1984 RA 2006
vi Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	170	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		24	

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004967P

**Test Report No** : 2821 | 54811367KLPL/09/20/WATER/03129 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** :BORE WELL AT BATERLIMA DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
iii Nitrate as NO3	mg/l, Max	45	4.5	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	56	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	22.7	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	0.83	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.3	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.68	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	4.86	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	14	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3)	mg/l, Max	200	138	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3)	mg/l, Max	200	160	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (1500-04-01)

2821 | 54811367  
**BBSR**  
 KLPL- 24216A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2821 | 54811367KLPL/09/20/WATER/03129



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

### PHYSICAL PARAMETER

i Conductivity	ms/cm	---	0.376	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	236	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/9/4, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004966P  
**Test Report No** : 2820 | 54801366KLPL/09/20/WATER/03128 **Issue Date:** 14-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On:** 08-Oct-2020  
**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED  
**Sample Identification \* :** **GROUND WATER** **Sampling Date :** 29-Sep-2020  
**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity** : 1LTR X 2 **Place of Collection :** BORE WELL AT CHANALIMA DT-29.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07

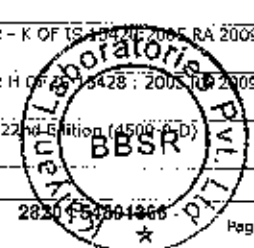
Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	0.5	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	11.2	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	18.9	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	5.83	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	39	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	52	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 3025:2009 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 3025: 2009 RA 2009
xx	phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-PO4 D)



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No** : **2820 | 54801366KLPL/09/20/WATER/03128**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4b)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

i Conductivity	ms/cm		0.146	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.5	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 2):1984 RA 2006
vi Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	112	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		24	

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*



Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004965P

**Test Report No** : 2819 | 54791365KLPL/09/20/WATER/03127 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** GROUND WATER **Sampling Date** : 29-Sep-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT CHHATRAPUR DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

**Parameters** : **Unit** : **Requirement** : **Result** : **Test Method**

### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii Nitrate as NO3	mg/l, Max	45	4.0	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	62.4	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	9.4	IS 3025 (Part 32):1986 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	0.75	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	13	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3),	mg/l, Max	200	192	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3),	mg/l, Max	200	184	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (1998)

2819 | 54791365



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA



Kalyani Laboratories

**Test Report No** : 2819 | 54791365KLPL/09/20/WATER/03127



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4B)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm	---	0.509	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.2	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	302	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	

**Remarks** : NIL

*Any unusual feature observed during determination* : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

**D. Arunkumar**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd



*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004964P  
**Test Report No** : 2818 | 54781364KLPL/09/20/WATER/03126 **Issue Date** : 14-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On** : 08-Oct-2020  
**Sample Description** : **DRINKING WATER (IS 10500:2012 )**  
**Sample Condition** : SEALED  
**Sample Identification \* :** **GROUND WATER** **Sampling Date** : 29-Sep-2020  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT RENGOPALI DT-29.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

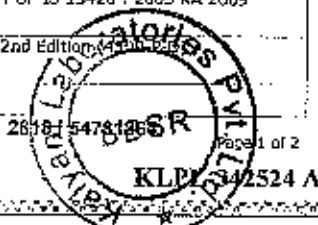
**Parameters** : **Unit** : **Requirement** : **Result** : **Test Method**

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	0.32	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	14.4	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	3.8	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	<0.1	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	3.09	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	68	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	52	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition:4500-PO-05



# KALYANI LABORATORIES PVT. LTD.

79/944, PARALA, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : **2818 | 54781364KLPL/09/20/WATER/03126**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part-18)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

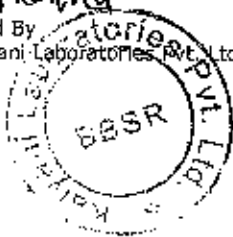
i Conductivity	ms/cm	---	0.143	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hezen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
vi Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	80	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	--	24	

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

**D. Arukha**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



**[Signature]**  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004963P

**Test Report No** : 2817 | 54771363KLPL/09/20/WATER/03125 **Issue Date** : 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On** : 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT LANJIGARH DT-29.09.2020

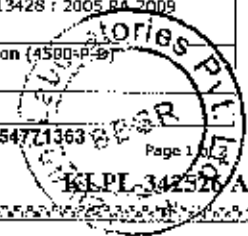
**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirements	Results	Test Method
------------	------	--------------	---------	-------------

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
i	Lead (Pb)	mg/l, max	0.01	<0.005 IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001 IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	5.0 IS 3025 (PART 34): 1988 RA 2003
iv	Calcium (as Ca)	mg/l, Max	75	52.8 IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	35.9 IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02 IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.25 IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2 IS 3025 (Part 26):1988 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.3 IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	14.58 IS 3025 (Part 46):1994 RA 2003
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05 IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005 IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	15 IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	195 IS 3025 (Part 29): 1988 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	192 IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02 IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminum (as Al)	mg/l, Max	0.03	<0.02 IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1 Annex - K OF IS 13428:2005 RA 2009
xlx	Boron (as B)	mg/l, Max	0.5	<0.1 Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l		<0.1 ALPHA 22nd Edition (4580-P-0)





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : 2817 | 54771363KLPL/09/20/WATER/03125



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6410)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4B)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

i Conductivity	ms/cm	---	0.707	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
vi Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	270	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report



Analysed For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004962P

**Test Report No** : 2816 | 54761362KLPL/09/20/WATER/03124 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Data** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification** : **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT SITE DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

### Parameters Unit Requirement Result Test Method

#### BACTERIOLOGICAL QUALITY

Parameter	Unit	Requirement	Result	Test Method
I Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
II Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameter	Unit	Requirement	Result	Test Method
I Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
II Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
III Nitrate as NO3	mg/l, Max	45	0.7	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	25.6	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	13.2	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	<0.05	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.85	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	4.86	IS 3025 (Part 46):1994 RA 2009
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3),	mg/l, Max	300	101	IS 3025 (Part 23): 1986 RA 2009
xv Total hardness (as CaCO3),	mg/l, Max	200	84	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - X OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex I of IS 13428:2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (8000-P-D)

2816 | 54761362





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

Test Report No : 2816 | 54761362KLPL/09/20/WATER/03124



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

### PHYSICAL PARAMETER

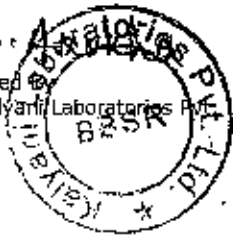
i Conductivity	ms/cm	---	0.216	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	**	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2005
vi Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	140	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed For Kalyani Laboratories Pvt. Ltd.

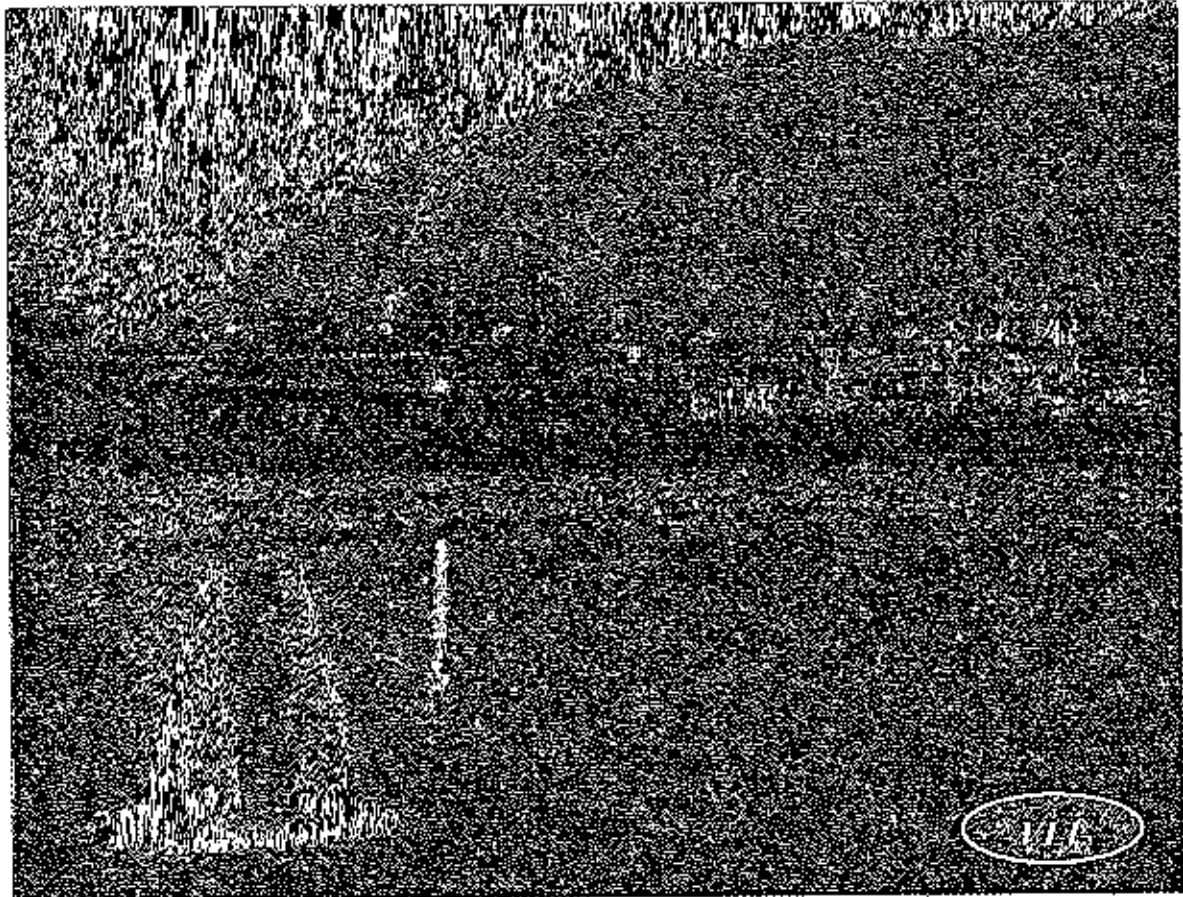


*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd

# ENVIRONMENTAL SEASONAL REPORT

SEASONAL REPORT

July 2020 to September 2020



## Address

Via: Viswanathpur, P.O. Lanjigarh-766027

Dist. Kalahandi,ORISSA

Tel: + 91 6677 247312/13/14/15/16

Fax: +91 6677 247311

**October - 2020**

**MICRO-METEOROLOGICAL DATA AT SITE**Period: 1<sup>st</sup> July 2020 to 30<sup>th</sup> September 2020

Location: Plant Site

Month	Temperature (°C)		Relative Humidity (%)		Rainfall (mm)
	Max	Min	Max	Min	Total
July'20	34.10	22.10	95.10	64.80	167.10
Aug'20	33.90	22.20	94.70	62.90	148.20
Sept'20	33.90	21.80	95.10	64.10	161.60
<b>Total rainfall</b>					<b>476.9</b>

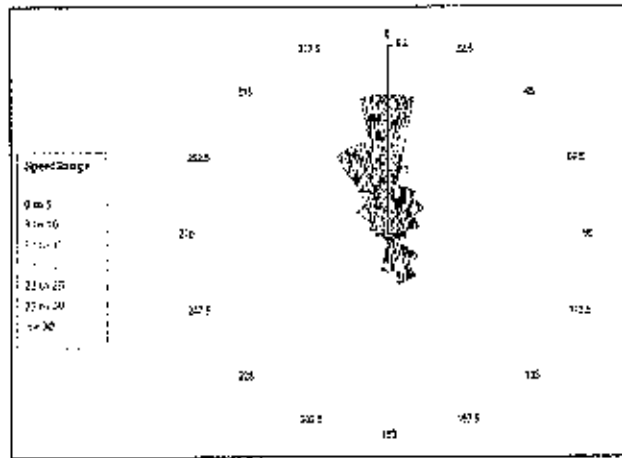
**SUMMARY OF WIND PATTERN IN STUDY AREA**

Season	First Predominant Wind Direction	Second Predominant Wind Direction	Predominant Wind Speeds (m/sec)	Calm (%)
July' 20 to Sept' 20	N (22%)	NNE (8%) & SSE (8%)	0 - 15	0.0

Wind Pattern during the Season

During the season the average winds from North (N) direction were observed for 22% of the total time, with wind speeds and the frequency in the range of 0-15 m/sec. In NNE & SSE direction the winds were also observed for 8% each of the total time, with wind speeds and the frequency in the range of 0-5 m/sec. The other direction and percentage frequencies were observed from NE (7.0%), NW (6%), SE (6%), S (6.0%), E (3 %), W (2 %). The calm conditions were observed to be for 0.0% of the total time.





WINDROSE DIAGRAM FOR THE SEASON - (Jul'20 to Sept'20)



**SUMMARY OF AMBIENT AIR QUALITY RESULTS**Concentrations are expressed in  $\mu\text{g}/\text{m}^3$ 

Location	PM <sub>10</sub>			PM <sub>2.5</sub>			SO <sub>2</sub>			NO <sub>x</sub>		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Plant Site	77.0	63.0	73.5	35.1	29.4	32.7	11.2	7.2	7.8	21.4	14.2	16.5
Lanjigarh	73.0	58.0	65.8	31.3	26.2	29.6	7.4	5.1	6.5	19.2	12.2	13.8
Belamba	65.0	51.0	53.8	28.1	21.3	24.0	5.5	4.2	4.7	14.4	9.2	9.8
Niyamgiri Vedanta Nagar	68.0	54.0	63.0	30.3	23.2	27.2	7.3	5.0	6.8	18.3	12.1	13.2
Mid-Day Meal	71.0	56.0	59.3	32.4	25.3	26.2	8.1	5.1	5.3	18.4	11.1	11.8
Chhatrapur	65.0	54.0	57.8	29.7	25.0	26.0	7.3	4.3	4.4	16.3	10.2	10.8
	51.0-77.0			21.3-35.1			4.1-11.2			9.2-21.4		



**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE MONTH OF JULY 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
	SO2	NOx	CO	PM	SO2	NOx	CO	PM	SO2	NOx	CO	PM
	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
01-Jul-20	309.32	46.61	0.02	23	244.33	64.52	0	15	1102.68	419.65	23.13	15.52
02-Jul-20	474.26	51.61	0.02	25	371.65	69.05	0	22	821.25	351.00	21.33	23.00
03-Jul-20	676.63	46.82	0.02	28	638.18	62.74	0	20	933.76	420.53	13.58	14.41
04-Jul-20	715.18	44.40	0.02	27	683.91	63.05	0	20	1052.75	442.06	6.19	18.47
05-Jul-20	751.85	45.96	0.02	27	618.42	64.00	0	20	1160.92	428.18	6.19	19.50
06-Jul-20	544.51	64.57	0.03	28	549.15	73.24	0.13	21	1320.71	440.89	7.91	19.83
07-Jul-20	544.95	71.18	0.03	31	479.14	72.76	0.02	23	997.70	399.57	10.83	21.25
08-Jul-20	508.23	66.12	0.03	28	485.71	73.57	0	19	1129.99	434.86	7.61	18.73
09-Jul-20	470.10	65.87	0.03	28	408.14	70.89	0	19	1087.74	449.39	6.08	18.22
10-Jul-20	448.84	63.06	0.03	30	385.86	74.75	0	21	1264.32	403.29	5.23	19.66
11-Jul-20	493.39	68.69	0.03	31	487.45	76.03	0	22	1275.86	435.21	6.49	19.07
12-Jul-20	554.84	66.78	0.03	30	531.94	76.64	0	22	1293.93	383.06	35.02	19.39
13-Jul-20	558.88	67.34	0.03	30	306.49	81.16	0	22	1230.09	378.78	8.43	17.95
14-Jul-20	553.45	67.25	0.03	30	334.67	87.74	0.46	22	1297.38	377.94	98.98	19.38
15-Jul-20	519.05	65.45	0.03	32	355.18	85.78	0	28	1273.00	398.67	54.04	18.96
16-Jul-20	631.29	64.11	0.03	31	168.82	85.69	0	27	1539.60	464.92	34.62	18.71
17-Jul-20	631.29	64.11	0.03	31	168.82	85.69	0	27	1632.67	494.75	10.81	17.76
18-Jul-20	409.39	54.67	0.02	31	182.08	84.81	0	24	1334.30	515.93	11.54	18.08
19-Jul-20	27.38	0	0.01	32	291.04	81.35	0	25	1410.66	504.48	61.81	22.10
20-Jul-20	445.19	49.35	0.02	30	331.35	74.27	0	22	1404.50	492.28	96.18	18.13
21-Jul-20	611.44	59.43	0.03	33	595.96	76.79	0	25	1402.13	485.75	49.25	15.85
22-Jul-20	582.47	61.50	0.03	35	447.94	78.45	0	26	1392.66	479.58	53.78	17.25
23-Jul-20	585.09	57.91	0.03	34	465.33	74.60	0	26	1135.92	426.52	93.80	18.03
24-Jul-20	469.61	54.21	0.03	30	484.84	65.89	0	28	1248.00	444.00	7.40	18.42
25-Jul-20	391.64	49.30	0.03	28	448	65.15	0	28	1248.00	444.00	7.40	17.42
26-Jul-20	445.19	49.98	0.03	29	409.97	60.18	0	22	1248.00	444.00	7.40	17.46
27-Jul-20	524.68	52.92	0.03	28	446.14	57.62	0	21	1248.00	444.00	7.40	17.40
28-Jul-20	485.97	42.09	0.03	29	493.05	54.02	0	21	1248.00	444.00	7.40	17.82
29-Jul-20	467.89	50.59	0.02	29	472.54	49.44	0	22	1248.00	444.00	7.40	17.51
30-Jul-20	605.14	51.42	0.03	27	410.53	46.67	0	20	1248.00	444.00	7.40	17.36
31-Jul-20	414.91	45.07	0.03	26	362.44	41.76	0	17	1248.00	444.00	7.40	13.20





**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE  
MONTH OF AUGUST 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
	SO2	NOx	CO	PM	SO2	NOx	CO	PM	SO2	NOx	CO	PM
	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
01-Aug-20	64.16	15.79	0.02	25	356.51	40.38	0	16	1099.68	419.65	8.32	11.05
02-Aug-20	65.69	0	0	26	294.39	39.68	0	16	1089.23	351.00	5.56	11.7
03-Aug-20	349.51	16.20	0.02	26	326.76	40.11	0	16	1097.66	420.53	7.56	12.89
04-Aug-20	392.46	11.29	0.02	26	285.61	40.63	0	15	1049.75	442.06	9.55	14.71
05-Aug-20	457.66	21.03	0.02	30	327.05	39.11	0	16	1157.92	428.18	11.25	14.23
06-Aug-20	467.37	25.34	0.02	28	323.58	39.37	0	17	1317.71	440.89	13.24	13.36
07-Aug-20	407.12	22.91	0.02	28	287.31	38.12	0	17	1145.36	399.57	9.55	13.65
08-Aug-20	400.64	20.23	0.02	28	303.75	40.46	0	17	1126.99	434.86	6.10	13.41
09-Aug-20	346.19	41.84	0.02	30	333.72	38.71	0	17	1084.74	449.39	7.56	13.99
10-Aug-20	421.24	51.91	0.03	30	348.71	40.70	0	17	1261.32	401.29	9.26	13.70
11-Aug-20	537.60	49.48	0.03	29	370.87	40.70	0	18	1272.86	433.21	11.45	13.65
12-Aug-20	480.27	52.70	0.03	36	317.20	38.76	0.06	29	1290.93	381.06	13.69	13.77
13-Aug-20	543.66	49.21	0.03	33	419.85	48.74	0	21	1227.09	376.78	7.56	13.56
14-Aug-20	425.66	35.22	0.03	36	475.92	47.68	0	23	1294.38	375.94	9.57	15.83
15-Aug-20	335.69	34.17	0.02	32	553.67	44.84	0	21	1270.00	396.67	11.28	16.36
16-Aug-20	346.04	33.85	0.04	32	570.76	44.38	0	21	1536.60	462.92	13.21	16.29
17-Aug-20	465.03	35.26	0.03	32	543.44	46.69	0	23	1629.67	492.75	9.59	16.69
18-Aug-20	498.58	27.20	0.02	35	432.51	39.86	0.14	35	1331.30	513.93	7.57	16.59
19-Aug-20	160.25	32.22	0.01	31	563.29	51.46	0	19	1407.66	502.48	9.12	14.31
20-Aug-20	430.03	42.20	0.02	31	465.78	41.36	0	19	1401.50	490.28	11.52	16.62
21-Aug-20	544.25	25.84	0.03	28	407.68	40.94	0.19	17	1399.13	483.75	13.86	16.34
22-Aug-20	326.39	6.43	0.01	29	358.15	34.16	0	20	1389.66	477.58	9.89	15.58
23-Aug-20	241.14	3.88	0.01	29	286.90	31.45	0	21	1205.52	424.52	8.56	15.01
24-Aug-20	255.42	12.48	0.01	29	264.64	28.94	0	21	1358.63	450.32	7.57	15.35
25-Aug-20	287.84	6.03	0.02	31	263.36	27.90	0	24	1168.95	489.56	10.28	15.95
26-Aug-20	203.61	9.78	0.02	33	114.15	32.67	0	21	1369.75	509.65	11.21	15.65
27-Aug-20	337.28	16.47	0.01	31	271.93	29.13	0	19	1623.52	489.72	13.59	15.49
28-Aug-20	368.57	12.68	0.01	30	322.15	26.87	0	19	1265.30	511.35	9.57	14.56
29-Aug-20	454.74	14.84	0.02	30	233.09	23.47	0	18	1486.45	509.70	11.12	16.08
30-Aug-20	262.14	34.32	0.01	28	120.10	25.00	0	19	1567.38	465.73	10.33	11.61
31-Aug-20	263.97	29.61	0.02	30	119.43	21.66	0	22	1230.62	476.86	9.56	11.35



**ONLINE STACK MONITORING TEST RESULT OF CALCINER AND CF BOILER FOR THE  
MONTH OF SEPTEMBER 2020**

Date of sampling	Calciner 1				Calciner 2				CFB Stack			
Parameter	SO <sub>2</sub>	NO <sub>x</sub>	CO	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO	PM
Unit	ppm	ppm	%	mg/Nm <sup>3</sup>	ppm	ppm	%	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
01-Sep-20	289.62	38.81	0.02	34	103.14	18.12	0.01	31	1087.74	419.65	8.56	11.58
02-Sep-20	291.59	47.27	0.02	34	105.90	26.11	0	24	1264.32	351.00	7.57	11.83
03-Sep-20	284.01	41.47	0	32	109.73	23.28	0	23	1275.86	420.53	10.28	12.60
04-Sep-20	332.59	36.20	0.01	32	121.14	22.28	0	21	1293.93	489.56	11.21	13.72
05-Sep-20	383.39	20.83	0.01	31	93.71	13.82	0	23	1230.09	509.65	13.59	13.16
06-Sep-20	383.08	25.46	0	30	134.74	12.14	0	31	1297.38	489.72	9.57	11.53
07-Sep-20	519.60	31.94	0.01	32	130.68	11.29	0	34	1273.00	511.35	10.58	11.79
08-Sep-20	565.20	33.33	0.01	30	124.07	8.95	0	30	1183.94	509.70	8.31	12.42
09-Sep-20	629.67	35.45	0.01	30	126.95	8.55	0	30	1159.74	489.72	5.52	11.58
10-Sep-20	491.29	35.02	0.01	31	140.38	8.72	0	22	1005.68	511.35	6.09	11.83
11-Sep-20	476.88	35.87	0	26	121.11	7.80	0.01	29	1002.66	509.70	10.02	13.39
12-Sep-20	563.66	30.34	0	23	133.97	10.01	0.01	26	1087.19	506.80	9.89	13.91
13-Sep-20	284.63	24.44	0	23	164.10	8.64	0.01	22	1170.05	510.86	9.56	17.43
14-Sep-20	171.49	28.89	0	23	129.26	8.6	0.01	22	1293.31	499.56	12.41	19.75
15-Sep-20	179.11	23.31	0	23	118.55	7.61	0.01	22	1148.21	489.70	11.03	16.22
16-Sep-20	412.63	26.80	0	23	97.65	6.58	0.01	21	1410.66	566.86	7.39	15.92
17-Sep-20	536.67	30.13	0.01	23	108.92	8.99	0.01	21	1404.50	512.55	10.02	18.68
18-Sep-20	405.91	29.42	0.01	23	321.97	40.61	0.01	22	1402.13	425.63	9.11	21.48
19-Sep-20	416.36	27.81	0.01	23	523.76	67.73	0.01	21	1392.66	422.53	9.53	21.86
20-Sep-20	576.72	35.21	0.01	23	594.68	69.08	0.01	22	1135.92	423.60	8.31	20.05
21-Sep-20	654.50	33.10	0.01	23	469.81	66.51	0.01	20	1248.00	419.49	5.52	19.65
22-Sep-20	513.71	28.93	0.01	23	422.08	66.32	0.01	20	1637.92	411.01	6.09	15.63
23-Sep-20	298.20	25.21	0.01	23	367.78	67.97	0.01	20	1456.02	450.71	8.56	16.59
24-Sep-20	285.72	18.43	0	23	393.95	65.9	0.01	20	1472.32	454.41	7.57	16.40
25-Sep-20	583.95	11.74	0	23	374.42	57.09	0.01	19	1118.99	466.14	10.28	15.81
26-Sep-20	738.37	11.91	0	23	395.02	53.01	0.01	19	1336.42	343.27	11.21	15.34
27-Sep-20	0	0	0	0	399.02	51.98	0.01	19	1200.01	424.36	13.59	15.46
28-Sep-20	0	0	0	0	306.44	52.63	0.01	18	1206.89	459.40	9.57	15.73
29-Sep-20	0	0	0	0	281.34	56.13	0.01	18	1353.09	437.82	11.12	15.99
30-Sep-20	0	0	0	0	451.61	57.91	0.01	20	1126.56	426.03	10.33	16.16





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P  
**Test Report No** : 518 | S1031173 KLPL/7/20/ENVN/00656  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 06-Jul-2020  
**Issue Date** : 31-Jul-2020  
**Amendment Date** : -  
**Commenced On** : 06-Jul-2020  
**Completion On** : 11-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO.  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 03.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.21	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.24	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.29	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.74	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anujaha  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341742A



# KALYANI LABORATORIES PVT. LTD.

78/94, PAHAL, BHUBANESWAR, 751001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004467P  
**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656A  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 06-Jul-2020  
**Commenced On** : 06-Jul-2020  
**Issue Date** : 31-Jul-2020  
**Amendment Date** : -  
**Completion On** : 11-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 04.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.26	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.29	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182(PART-22) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341741A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656B **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On** : 18-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO.

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 06.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	9.23	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	19.26	IS 5182 (PART 6) :2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	72	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	32.42	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.39	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	10.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.42	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341740A  
Page 1/1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656C **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On** : 18-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 07.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.26	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.28	IS 5182 (PART-6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By: *D. Anurag Kumar*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341739A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

### TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656D Issue Date : 31-Jul-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 13-Jul-2020 Commenced On : 13-Jul-2020 Completion On: 18-Jul-2020

Sample Name : AMBIENT AIR QUALITY MONITORING  
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
 Quantity : 1 NO  
 Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : MID DAY MEAL, 08.07.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.45	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.20	IS 5182 (PART 6 ) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	68	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.72	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anuleka*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL- 341738A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004467P

**Test Report No** : S18 | 51031173 KLPL/7/20/ENVN/00656E **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On** : 18-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANJIGARH VILLAGE, 09.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.28	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.16	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	71	IS 5182(PART-22) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anujaha  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-3A1737A





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004467P  
**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656F **Issue Date** : 31-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On**: 18-Jul-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 10.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.14	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.49	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	66.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.31	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.75	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-34178A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

## TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656G

Issue Date : 31-Jul-2020

Amendment No : -

Amendment Date : -

Reference :

ORDER NO-6600013488 DT-16.12.2019

Customer Name :

VEDANTA LIMITED, LANJIGARH

Address :

PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt :

13-Jul-2020 Commenced On : 13-Jul-2020

Completion On: 18-Jul-2020

Sample Name :

AMBIENT AIR QUALITY MONITORING

Sample Condition :

GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity :

1 NO

Ref. To Sampling Procedure:

QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : BELAMBA VILLAGE, 11.07.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.49	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.58	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.05	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-19
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-19

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-344718A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-751001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P  
**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656H **Issue Date** : 31-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 20-Jul-2020 **Commenced On** : 20-Jul-2020 **Completion On**: 25-Jul-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO.  
**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 13.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	10.37	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	21.42	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	75	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.34	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.41	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	9.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	5.38	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anulaha  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341Z18A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/006561 **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-Jul-2020 **Commenced On** : 20-Jul-2020 **Completion On** : 25-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 14.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.32	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.21	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.29	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anil Kumar*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*M. S. Mishra*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-341717A



# KALYANI LABORATORIES PVT. LTD.

78044, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656J **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-Jul-2020 **Commenced On** : 20-Jul-2020 **Completion On** : 25-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 15.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.10	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.54	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	69	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.31	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.73	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-3A1718A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

## TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656K

Issue Date : 31-Jul-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 20-Jul-2020

Commenced On : 20-Jul-2020

Completion On: 25-Jul-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : - LANJIGARH VILLAGE , 16.07.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.37	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.39	IS 5182 (PART 6) :2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	72	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.26	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Berza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurika*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL-341715A



# KALYANI LABORATORIES PVT. LTD.

2001, PALAI, BHUBANESWAR, 751016, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P  
**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656L  
**Amendment No** : -  
**Reference** : ORDER NO-6600013408 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA- 766027.  
**Date of receipt** : 20-Jul-2020 Commenced On : 20-Jul-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07



Issue Date : 31-Jul-2020

Amendment Date : -

Completion Date : 25-Jul-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 17.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.23	IS 5182(PART-1) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.05	IS 5182 (PART-1) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	67	IS 5182(PART-1) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.76	CPCB Guidelines of Ambient Air Pollution Volume I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollution Volume I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollution Volume I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollution Volume I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL-341211A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHALI, BHUDANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656M **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-Jul-2020 **Commenced On** : 20-Jul-2020 **Completion On**: 25-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 18.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.22	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.24	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.46	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (NI)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
D. Anuscha  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341743A





# KALYANI LABORATORIES PVT. LTD.

73/14, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

## TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656N

Issue Date : 31-Jul-2020

Amendment No : -

Amendment Date : -

Reference :

ORDER NO-6600013488 DT-16.12.2019

Customer Name :

VEDANTA LIMITED, LANJIGARH

Address :

PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027,

Date of receipt :

27-Jul-2020

Commenced On :

27-Jul-2020

Completion On: 31-Jul-2020

Sample Name :

AMBIENT AIR QUALITY MONITORING

Sample Condition :

GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity :

1 NO

Ref.To Sampling Procedure:

QSP-07

Parameters

Unit

Standard Value

Results

Test Method

Location & Date

PLANT SITE , 20.07.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	9.54	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	20.26	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	77	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	35.09	KLPL/SQP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.43	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	10.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SQP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SQP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SQP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	5.22	KLPL/SQP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341712A

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-75101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/006560

**Amendment No** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020

**Commenced On** : 27-Jul-2020

**Completion On** : 31-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 31-Jul-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 21.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.28	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.34	IS 5182 (PART 6) :2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65	IS 5182(PART-22) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.66	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.50	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341711A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656P **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Commenced On** : 27-Jul-2020 **Completion On** : 31-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1NO

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 22.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.35	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.29	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	71	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	32.42	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.75	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

D. Arunachal  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341809A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 51B | 51031173 KLPL/7/20/ENVN/00656Q **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Commenced On** : 27-Jul-2020 **Completion On** : 31-Jul-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANJIGARH VILLAGE , 23.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.66	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.44	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	73	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.18	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.51	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anuscha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL-341808A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

### TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656R Issue Date : 31-Jul-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 27-Jul-2020 Commenced On : 27-Jul-2020 Completion On: 31-Jul-2020

Sample Name : AMBIENT AIR QUALITY MONITORING  
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
 Quantity : 1 NO  
 Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : REHABILITATION COLONY, 24.07.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.68	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.26	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	68	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.17	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.77	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurupa*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL- 341807A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656S **Issue Date** : 06-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 03-Aug-2020 **Commenced On** : 03-Aug-2020 **Completion On** : 06-Aug-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE , 27.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	11.20	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	21.25	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	76	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	34.19	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.42	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	10.2	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.58	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anil Kumar*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anil Kumar*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL- 341808A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P

**Test Report No** : 518 | S1031173 KLPL/7/20/ENVN/00656T **Issue Date** : 06-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 03-Aug-2020 **Commenced On** : 03-Aug-2020 **Completion On** : 06-Aug-2020

**Sample Name** : AMBIENT AIR QUALITY MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 28.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.34	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.25	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.03	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By *D. Anilika*  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341805A  
Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

30-41, PALAI, HUBBALLI SWAR, INDIRA CIRCLE

## TEST REPORT



**NABL ULR NO** : TC704320000004467P  
**Test Report No** : 518 | 81031173 KLPL/7/20/ENVN/00656U  
**Amendment No** : -  
**Reference** : ORDER NO: 0000013400 DT: 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KAI AHARU, ODISHA- 766022,  
**Date of receipt** : 03-Aug-2020 Commenced On : 03-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure:** QSP-07

**Issue Date** : 06-Aug-2020  
**Amendment Date** : -

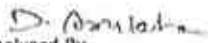
**Completion On:** 06-Aug-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 20.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.10	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	18.42	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	70	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.74	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

..... End of Test Report .....

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



**1173446710563**  
**KLPL- 341804A**  
 Page 1 of 1





# KALYANI LABORATORIES PVT. LTD.

78994, PAHAL, BHUDANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004467P  
**Test Report No** : 518 | 51031173 KLPL/7/20/ENVN/00656V **Issue Date** : 06-Aug-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 03-Aug-2020 **Commenced On** : 03-Aug-2020 **Completion On** : 06-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANJIGARH VILLAGE , 30.07.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.25	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	19.15	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	73	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.18	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.52	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL  
End of Test Report

*D. Anurupa*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anurupa*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1173446710563  
KLPL- 341803A



# KALYANI LABORATORIES PVT. LTD.

78744, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004467P

## TEST REPORT



Test Report No : 518 | 51031173 KLPL/7/20/ENVN/00656W Issue Date : 06-Aug-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 03-Aug-2020 Commenced On : 03-Aug-2020 Completion On: 06-Aug-2020

Sample Name : AMBIENT AIR QUALITY MONITORING  
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
 Quantity : 1 NO  
 Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : BELAMBA VILLAGE, 31.07.2020</b>				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.43	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.39	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anandha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anandha*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1173446710563  
 KLPL- 341802A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/94, PAHAL, BIRUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004468P

**Test Report No** : B19 | 51041174 KLPL/7/20/ENVN/00657 **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On** : 17-Jul-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-III, 10.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	705.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	35.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.11	KLPL/SOP/AIR-06
Oxygen	%	-	4.69	KLPL/SOP/AIR-05
Stack Temperature in Deg kelvin	--	--	416	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	296.8	IS 11255 (part-7):2005
carbon Dioxide	%	--	9.89	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1400473	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	3.2	KLPL/SOP/AIR-06

**Remarks** : nil

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Anil Kumar*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anil Kumar*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1174446810564  
 KLPL-341891A



# KALYANI LABORATORIES PVT. LTD.

787941, PABAL, BHUBANE, SWAP, 752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004468P  
**Test Report No** : 519 | 51041174 KLPL/7/20/ENVH/00657A **Issue Date** : 31-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 13-Jul-2020 **Commenced On** : 13-Jul-2020 **Completion On** : 17-Jul-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED 5T  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II, 11.07.2020				
Sulphur Dioxide	mg/lm <sup>3</sup>	-	672.2	IS 11255 (part-2):1995(PA 2014)
Particulate Matter	mg/lm <sup>3</sup>	-	18.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.75	KLPL/SOP/AIR-06
Oxygen	%	-	4.42	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	437	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/lm <sup>3</sup>	--	268.5	IS 11255 (part-7):2005
carbon Dioxide	%	--	13.0	KLPL/SOP/AIR-06
Quantity of Gas Flow	lm <sup>3</sup> / hr	-	3511062	KLPL/SOP/AIR-06
Mercury	mg/lm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	31.13	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurika*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1174446810564  
 KLPL- 341800A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004468P

**Test Report No** : 519 | 51041174 KLPL/7/20/ENVN/00657B **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 15-Jul-2020 **Commenced On** : 15-Jul-2020 **Completion On** : 20-Jul-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-1, 13.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	718.7	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	31.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	6.28	KLPL/SOP/AIR-06
Oxygen	%	-	4.88	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	407	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	317.5	IS 11255 (part-7): 2005
carbon Dioxide	%	--	9.87	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1272825	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	2.55	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S.*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1174446810564  
 KLPL-341798A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004468P  
**Test Report No** : 519 | 51041174 KLPL/7/20/ENVN/00657C  
**Amendment No** : -  
**Reference** : ORDER NO-6500013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 15-Jul-2020  
**Commenced On** : 15-Jul-2020  
**Completion On** : 20-Jul-2020  
**Issue Date** : 31-Jul-2020  
**Amendment Date** : -  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II , 14.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	688.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	22.6	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.04	KLPL/SOP/AIR-06
Oxygen	%	-	4.47	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	438	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	283.1	IS 11255 (part-7):2005
carbon Dioxide	%	--	13.35	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3404995	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	29.15	KLPL/SOP/AIR-05

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1174446810564  
KLPL-341798A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA.

## TEST REPORT



**NABL ULR NO** : TC704320000004468P  
**Test Report No** : 519 | 51041174 KLPL/7/20/ENVN/00657D **Issue Date** : 31-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Jul-2020 **Commenced On** : 28-Jul-2020 **Completion On** : 31-Jul-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II, 25.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	704.2	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	27.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	23.13	KLPL/SOP/AIR-06
Oxygen	%	-	4.53	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	442	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	298.3	IS 11255 (part-2):2005
carbon Dioxide	%	--	13.75	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3552778	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	31.8	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

D. Anurupa  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1174446810564  
 KLPL- 341787A



# KALYANI LABORATORIES PVT. LTD.

78044, PAHAL, BHUBANESWAR-752001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004468P

**Test Report No** : 519 | 51041174 KLPL/7/20/ENVN/00657E **Issue Date** : 31-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Jul-2020 **Commenced On** : 28-Jul-2020 **Completion On** : 31-Jul-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-II, 27.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	720.5	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	38.3	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.08	KLPL/SOP/AIR-06
Oxygen	%	-	5.21	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	414	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	315.9	IS 11255 (part-7):2005
carbon Dioxide	%	--	10.13	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1615324	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	4.15	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1174446810564  
KLPL- 341796A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUDANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004468P

**Test Report No** : 519 | 51041174 KLPL/7/20/ENVN/00657F **Issue Date** : 06-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 31-Jul-2020 **Commenced On** : 31-Jul-2020 **Completion On** : 04-Aug-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NO

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -I , 29.07.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	708.5	IS 11255(part-2)-1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	29.2	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.68	KLPL/SOP/AIR-06
Oxygen	%	-	3.96	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	445	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	306.7	IS 11255 (part-7)-2005
carbon Dioxide	%	--	16.7	KLPL/SOP/AIR-06
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3274859	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	27.77	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta ha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1174446810564  
 KLPL- 341795A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004474F

**Test Report No** : 2471 | 4960117AKLPL/7/20/WATER/02758 **Issue Date:** 16-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 11-Jul-2020 **Test Commenced On** : 11-Jul-2020 **Test Completion On:** 16-Jul-2020

**Sample Description** : STP WATER

---

**Sample Condition** : SEALED

**Sample Identification \* :** STP OUTLET **Sampling Date :** 10-Jul-2020

**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA

**Received Quantity** : 1LTR X 2 **Place of Collection :** PLANT DT-10.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Fecal Coliform	MPN/100ml.	< 100	21	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	13	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	2	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.1	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.85	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anjysha  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



2471 | 4960117A

Page 1 of 1

KLPL- 341794A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004475F

Test Report No : 2472 | 4961117BKLPL/7/20/WATER/02759 Issue Date: 16-Jul-2020

Amendment No : - Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 11-Jul-2020 Test Commenced On : 11-Jul-2020 Test Completion On: 15-Jul-2020

Sample Description : STP WATER

Sample Condition : SEALED

Sample Identification \* : STP OUTLET Sampling Date : 10-Jul-2020

Batch No , Lot No : NA MFG Date : NA EXP Date : NA

Received Quantity : 1LTR X 2 Place of Collection : TOWNSHIP DT-10.07.2020

Sample Collected By : By KLPL

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Feecal Coliform	MPN/100ml.	< 100	30	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	26	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
V TOTAL Nitrogen	mg/l, Max	10	6.2	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
VI Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	1.68	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.2	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

D. Anjaliha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2472 | 4961117B

Page 1 of 1  
KLPL- 341793A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004476F  
**Test Report No** : 2473 | 5040117CKLPL/7/20/WATER/02B17 **Issue Date**: 28-Jul-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Jul-2020 **Test Commenced On** : 24-Jul-2020 **Test Completion On**: 28-Jul-2020  
**Sample Description** : STP WATER

**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 23-Jul-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT ,DATE 23.07.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Feecal Coliform	MPN/100ml.	< 100	26	IS22:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	17	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	10	2.5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D),2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.2	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B),2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.95	APHA 23rd Edition (4500-H4-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anilika  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anilika*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



2473 | 5040117C

Page 1 of 1

KLPL- 341792A



# KALYANI LABORATORIES PVT. LTD.

78/94, PALLI, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004477F

**Test Report No** : 2474 | 5041117DKLPL/7/20/WATER/02918 **Issue Date:** 28-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 24-Jul-2020 **Test Commenced On** : 24-Jul-2020 **Test Completion On** : 28-Jul-2020

**Sample Description** : STP WATER

---

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 23-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP ,DATE-23.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Feecal Coliform	MPN/100ml.	< 100	40	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	31	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
V TOTAL Nitrogen	mg/l, Max	10	6.5	APHA 23rd Edition (4500-NHorg-B, 4500-ND2-B, 4500-NO3-B), 2017
VI Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.15	APHA 23rd Edition (4500-H+-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anurajha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004478F

**Test Report No** : 2475 | 4998117EKPL/7/20/WATER/02792 **Issue Date:** 21-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 17-Jul-2020 **Test Commenced On** : 17-Jul-2020 **Test Completion On** : 21-Jul-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 16-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : PLANT ,DATE-16.07.2020

**Sample Collected By** : By K.L.P.L

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i	Faecal Coliform	MPN/100ml. < 100	22	IS622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i	Chemical Oxygen Demand	mg/l, Max 50	19	APHA 23rd Edition (5220 B), 2017
ii	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max 10	3	APHA 23rd Edition (5210 B), 2017
iii	Total Suspended Solids	mg/l, Max 20	6	APHA 23rd Edition (2540 D), 2012
iv	Oil & Grease	mg/l, Max 10	<0.4	APHA 23rd Edition (5520 B), 2017
v	TOTAL Nitrogen	mg/l, Max 10	1.15	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi	Ammonium Nitrogen (as NH4-N)	mg/l, Max 5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i	pH value	6.5-9.0	7.9	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anil kumar  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anil kumar*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2475 | 4998117E

Page 1 of 1

KLPL- 341790A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004479F

**Test Report No** : 2476 | 4999117FKLPL/7/20/WATER/02793 **Issue Date:** 21-Jul-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 17-Jul-2020 **Test Commenced On** : 17-Jul-2020 **Test Completion On:** 21-Jul-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 16-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : TOWNSHIP , DATE-16.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Feecal Coliform	MPN/100ml.	< 100	33	1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	29	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	10	4.5	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
V TOTAL Nitrogen	mg/l, Max	10	6.3	APHA 23rd Edition (4500-NH <sub>4</sub> -B, 4500-NO <sub>2</sub> -B, 4500-NO <sub>3</sub> -B), 2017
VI Ammonium Nitrogen (as NH <sub>4</sub> -N)	mg/l, Max	5	1.66	APHA 23rd Edition (4500-NH <sub>3</sub> -C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.25	APHA 23rd Edition (4500-H+ -B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL  
..... End of Test Report .....

*D. Anilata*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/914, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004480F

**Test Report No** : 2477 | 50981180KLPL/7/20/WATER/02849 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 29-Jul-2020 **Test Commenced On** : 29-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 28-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : PLANT ,DATE-28.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Feecal Coliform	MPN/100ml.	< 100	27	IS 1622:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	22	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	10	3.5	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 C), 2012
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
V TOTAL Nitrogen	mg/l, Max	10	1.3	APHA 23rd Edition (4500-NHorg-B , 4500-NO2-B, 4500-NO3-B), 2017
VI Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.8	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*I. J. J. J.*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



2477 | 50981180

Page 1 of 1

KLPL- 341734A





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000044B1F

**Test Report No** : 2478 | 50991181KLPL/7/20/WATER/02850 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 29-Jul-2020 **Test Commenced On** : 29-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 28-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : TOWNSHIP ,DATE-28.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Fecal Coliform	MPN/100ml.	< 100	34	IS22:1961, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	34	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	10	5.5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D),2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.45	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B),2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.9	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination ; NIL

..... End of Test Report .....

D. Ananta  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S.*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004516P

**Test Report No** : 2507 | 506911A4KLPL/7/20/WATER/02826 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 25-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

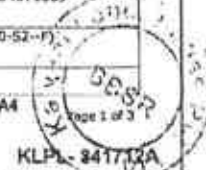
**Received Quantity** : 1 LTR X 1 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND (WEST) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	3.4	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	67.7	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	21.1	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.2	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.6	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.4	<0.024	Clause 6 of IS 3025 (Part 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	23	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	192	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	194	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.059	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2507 | 506911A4





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78/44, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2507 | 506911A4KLPL/7/20/WATER/02826



Parameters	Unit	Requirement	Result	Test Method
ix Aluminium (as Al)	mg/L, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex I of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii b-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix g-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2507 | 506911A4

Page 2 of 3



KLPL- 341713A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2507 | 506911A4KLPL/7/20/WATER/02826



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.3	IS 3025 (Part-11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
V Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	462	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analyzed By  
D Anuscha  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
Rachha Klayar  
31/04/2020  
For Kalyani Laboratories Pvt. Ltd.



2507 | 506911A4

Page 3 of 3

KLPL- 341714A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-75101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004517P

**Test Report No** : 2508 | 507011A5KLPL/7/20/WATER/02827 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND MATERIAL GATE SIDE (NORTH) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.0	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	38.9	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	11.5	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.08	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 20):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.83	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	9.72	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 8 of IS 3025 (Part 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	38	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	149	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	137	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.028	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2508 | 507011A5





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2508 | 507011A5KLPL/7/20/WATER/02827



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-35)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butacilolol	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER



2508 | 507011A5

Page 2 of 3

KLPL- 341716A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2508 | 507011A5KLPL/7/20/WATER/02827



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1993 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.9	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	244	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.02	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

D. Anurupa  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Recha Klayar  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd  
21/04/2020





# KALYANI LABORATORIES PVT. LTD.

78,944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC70432000004518P

Test Report No : 2509 | 507111A6KLPL/7/20/WATER/02828

Issue Date: 03-Aug-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PD.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020

Test Completion On: 03-Aug-2020

Sample Description : DRINKING WATER (IS 10500:2012 )

Sample Condition : SEALED

Sample Identification \* : GROUND WATER

Sampling Date : 25-Jul-2020

Batch No , Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 1

Place of Collection : OBSERVATION BORE WELL RED MUD POND RENGOPALI SIDE (SOUTH) DT-25.07.2020

Sample Collected By : By KLPL

Ref.To Sampling Procedure:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.7	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	28.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	7.7	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.35	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.45	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.8	<0.8	Clause 6 of IS 3025 (Part 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	45	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	89	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	115	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.022	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2509 | 507111A6

KLPL- 341718A







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2509 | 507111A6KLPL/7/20/WATER/02828



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDO	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDO	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER



2509 | 507111A6

Page 2 of 3

KLPL- 341718A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2509 | 507111A6KLPL/7/20/WATER/02828



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	152	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 46):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

D. Anurika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Renu Nayak  
Authorized Signatory 31/05/2020  
For Kalyani Laboratories Pvt. Ltd

2509 | 507111A6

Page 3 of 3

KLPL- 341720A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**HABL ULR NO** : TC70432000004519P

**Test Report No** : 2510 | 507211A7KLPL/7/20/WATER/02829 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** GROUND WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : OBSERVATION BORE WELL PROCESS WATER LAKE (NORTH) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.4	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	10.1	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	7.7	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.15	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.05	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1982 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1,0	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	43	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	50	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.013	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -F)

2510 | 607211A7





# KALYANI LABORATORIES PVT. LTD.

78744, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2510 | 507211A7KLPL/7/20/WATER/02829



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2510 | 507211A7

Page 2 of 3

KLPL- 341722A





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2510 | 507211A7KLPL/7/20/WATER/02829



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.1	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	62	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anuska  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Recha Nayak  
Authorized Signatory 31/05/2020  
For Kalyani Laboratories Pvt. Ltd

2510 | 607211A7

Page 3 of 3

KLPL- 341723A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004520P

**Test Report No** : 2511 | 507411ABKLPL/7/20/WATER/02830 **Issue Date** : 04-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On** : 03-Aug-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : OBSERVATION BORE WEL PROCESS WATER LAKE(EAST) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

BACTERIOLOGICAL QUALITY					
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

CHEMICAL PARAMETER					
i	Nitrate as NO3	mg/l, Max	45	2.4	IS 3025 (PART 34): 1988 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	23	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	13.4	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.4	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.66	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	0.75	IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.05	Clause 6 of IS 3025 (Part-39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	5	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3),	mg/l, Max	200	185	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3),	mg/l, Max	200	94	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.024	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-F)

2511 | 507411A8





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2511 | 507411A8KLPL/7/20/WATER/02830



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APIIA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix δ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

### PHYSICAL PARAMETER



2511 | 507411AB

Page 2 of 3

KLPL- 341725A





# KALYANI LABORATORIES PVT. LTD.

76/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2511 | 507411ABKLPL/7/20/WATER/02830



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	6.5	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts II):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	288	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

..... End of Test Report .....

D. Anurupa  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Pooja Nayak  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.

2511 | 507411AB

Page 3 of 3

KLPL- 341728A







# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUDANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004521P

Test Report No : 2512 | 507511A9KLPL/7/20/WATER/02831 Issue Date: 04-Aug-2020

Amendment No : - Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020 Test Completion On: 03-Aug-2020

Sample Description : DRINKING WATER (IS 10500:2012 )

Sample Condition : SEALED

Sample Identification \* : GROUND WATER

Sampling Date : 25-Jul-2020

Batch No , Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 1

Place of Collection : OBSERVATION BORE WELL ASPOND KENDUGUDA SIDE (EAST) DT-25.07.2020

Sample Collected By : By KLPL

Ref. To Sampling Procedure:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.6	IS 3025 (PART 34):1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	57.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	88.2	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.49	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.45	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	130	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	173	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	187	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.035	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-07)

2512 | 607511A9





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-75101, ODISHA

Test Report No : 2512 | 507511A9KLPL/7/20/WATER/02831



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
I p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
II p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
III p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
IV o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
V o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
VI o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
VII α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
VIII β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
IX γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
X Lindane	µg/l, Max	2.0	<0.01	USEPA 508
XI Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
XII Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
XIII Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
XIV Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
XV Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
XVI Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
XVII Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
XVIII 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
XIX Dutechler	µg/l, Max	125	<0.01	USEPA 8141 A
XX Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
XXI Alachlor	µg/l, Max	20	<0.01	USEPA 507
XXII Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
XXIII Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
XXIV Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
XXV Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
XXVI Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
XXVII Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2512 | 507511A9

Page 2 of 3

KLPL- 341728A





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-75101, ODISHA

Test Report No : 2512 | 507511A9KLPL/7/20/WATER/02831



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.7	IS 3025 (Part-11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
V Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1994 RA 2006
VI Total dissolved solids	mg/l, Max	500	442	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

D. Anisha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Pooja Nayak  
Authorized Signatory 01/04/2020  
For Kalyani Laboratories Pvt. Ltd.



2512 | 507511A9

Page 3 of 3

KLPL- 341729A



# KALYANI LABORATORIES PVT. LTD.

78/94, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004522P

**Test Report No** : 2513 | 507711AAKLPL/7/20/WATER/02832 **Issue Date**: 04-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 03-Aug-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1 LTR X 1 **Place of Collection** : OBSERVATION BORE WELL ASH POND (NORTH) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** :

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	0.65	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	8.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	13.4	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.15	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.32	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	5.10	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.5	Clause E of IS 1025 (Part- 19): 1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	4	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max.	200	58	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	43	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.012	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max.	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)

2513 | 507711AA





# KALYANI LABORATORIES PVT. LTD.

780944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2513 | S07711AAKLPL/7/20/WATER/02832



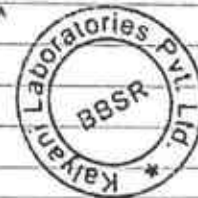
Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.02	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2513 | S07711AA

Page 2 of 3

KLPL- 341731A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2513 | 507711AAKLPL/7/20/WATER/02832



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1994 RA 2006
v Turbidity	NTU, Max	1	0.2	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	64	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anurupa  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Seetha Laxay  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2513 | 507711AA

Page 3 of 3

KLPL- 341732A



# KALYANI LABORATORIES PVT. LTD.

78<sup>th</sup> PH-4, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004523P

Test Report No : 2514 | 507911ABKLPL/7/20/WATER/02833

Issue Date : 04-Aug-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-660013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020

Test Completion On: 03-Aug-2020

Sample Description : DRINKING WATER (IS 10500:2012 )

Sample Condition : SEALED

Sample Identification \* : GROUND WATER

Sampling Date : 25-Jul-2020

Batch No , Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 1

Place of Collection : OBSERVATION DORE WELL DIRTY WATER POND  
DT-25.07.2020

Sample Collected By : By KLPL

Ref.To Sampling Procedure:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.8	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	61.9	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	30.7	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.22	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.74	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	8.75	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.05	Clause 6 of IS 3025 (Part 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	7.5	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	190	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	191	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.04	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-52-

2514 | 507911AB





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2514 | 507911ABKLPL/7/20/WATER/02B33



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as HBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii b-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix g-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1057 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	5.0	<0.01	USEPA 334
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2514 | 507911ABKLPL/7/20/WATER/02833



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.5	IS 3025 (Part-11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
V Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	320	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Ananta  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Prabha Klaya  
Authorized Signatory 4/10/2020  
For Kalyani Laboratories Pvt. Ltd





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78<sup>th</sup> 44, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004524P

Test Report No : 2515 | 508011ACKLPL/7/20/WATER/02834 Issue Date: 04-Aug-2020

Amendment No : - Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020 Test Completion On: 03-Aug-2020

Sample Description : DRINKING WATER (IS 10500:2012 )

Sample Condition : SEALED

Sample Identification \* : GROUND WATER Sampling Date : 25-Jul-2020

Batch No , Lot No : NA MFG Date : NA EXP Date : NA

Received Quantity : 1LTR X 1 Place of Collection : OBSERVATION BORE WELL ASHPOND KASIBADI

Sample Collected By : By KLPL SIDE (WEST) DT-25.07.2020

Ref.To Sampling Procedure:

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
II Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
III E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Nitrate as NO3	mg/l, Max	45	1.4	IS 3025 (PART 34): 1988 RA 2003
II Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
III Calcium (as Ca)	mg/l, Max	75	31.7	IS 3025 (Part 40):1991 RA 2009
IV Chloride (as Cl)	mg/l, Max	250	11.5	IS 3025 (Part 32):1988 RA 2009
V Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
VI Fluoride (as F)	mg/l, Max	1	0.3	IS 3025 (Part 60):2008
VII Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
VIII Iron (as Fe)	mg/l, Max	1	0.2	IS 3025 (Part 53):2003 RA 2014
IX Magnesium (as Mg)	mg/l, Max	30	14.09	IS 3025 (Part 46):1994 RA 2003
X Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 56):2006 RA 2012
XI Mineral oil	mg/l, Max	0.5	<0.5	Clause 6 of IS 1031 (Part- 10):1991 RA 2003
XII Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
XIII Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
XIV Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
XV Total alkalinity (as CaCO3),	mg/l, Max	200	144	IS 3025 (Part 23):1986 RA 2009
XVI Total hardness (as CaCO3),	mg/l, Max	200	137	IS 3025 (Part 21):2009
XVII Zinc (as Zn)	mg/l, Max	5	0.024	IS 3025 (Part 49):1994 RA 2009
XVIII Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
XIX Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2--5)

2515 | 508011AC





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2515 | 508011ACKLPL/7/20/WATER/02834



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β -HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 332
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER

2515 | 508011AC

Page 2 of 3

KLPL- 341737A





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2515 | 508011ACKLPL/7/20/WATER/02634



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 6):1984 RA 2006
V Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	160	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

\*\*\*\*\* End of Test Report \*\*\*\*\*

D. Anupama  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Pooja Nayak  
Authorized Signatory 4/10/2020  
For Kalyani Laboratories Pvt. Ltd



2515 | 508011AC

Page 3 of 3

KLPL- 341738A



# KALYANI LABORATORIES PVT. LTD.

789944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004504P

**Test Report No** : 2499 | 50841198KLPL/7/20/WATER/02836 **Issue Date:** 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : - ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On** : 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : STREAM NEAR TENTULIPADAR DT-25.07.2020

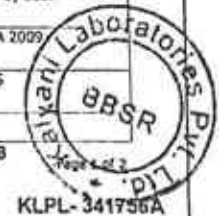
**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml.	5000	33	IS: 1622:1991 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Sulphate as SO4	mg/l, Max	400	3.5	APHA 23rd Edition (4500-So42 - -E), 2017
ii Nitrate as NO3	mg/l, Max	50	0.08	APHA 23rd Edition (4500-NO3 - -E), 2017
iii Electrical Conductivity	µs/cm	-	55	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D, -C), 2017
v Total Dissolved Solid	mg/l, Max	1500	50	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	10.1	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	3.65	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	9.4	APHA 23rd Edition(4500-O-C), 2017
x Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	1.5	APHA 23rd Edition 2012(5210 B), 2017
xi Total Hardness as CaCO3	mg/l, Max	--	40	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	11.5	IS 3025 (Part 32):1988, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.07	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2499 | 50841198

KLPL-341756A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2499 | 50841198KLPL/7/20/WATER/02836



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0007	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.48	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.8	APHA 23rd Edition (4300-H+-6), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

D. Anilika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Peeha Chayon  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd  
8/05/2020





# KALYANI LABORATORIES PVT. LTD.

78744, PATIAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004505P

**Test Report No** : 2500 | 50851199KLPL/7/20/WATER/02837 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification #** : SURFACE WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : STREAM NEAR KENDUBADI DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml.	5000	60	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	9.6	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	4.5	APHA 23rd Edition (4500-So42 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.1	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µs/cm	-	38	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	36	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	4.3	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	6.08	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	8.8	APHA 23rd Edition(4500-O-C), 2017
xi Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	2.0	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	36	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	<0.05	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 7014 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 1342B:2005

2500 | 50851199





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2500 | 50851199KLPL/7/20/WATER/02837



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0007	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.51	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTISIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BOL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BOL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

..... End of Test Report .....

D. Anuska  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Recha Nayak  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd. 31/04/2020



2500 | 50851199

Page 2 of 2

KLPL- 341759A





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-751001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004506P

**Test Report No** : 2501 | 8086119AKLPL/7/20/WATER/02838 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 25-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : STREAM NEAR RENGOPALI DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml.	5000	30	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chloride as Cl	mg/l, Max	600	9.6	APHA 23rd Edition (4500-Cl - -B), 2017
II Sulphate as SO4	mg/l, Max	400	2.0	APHA 23rd Edition (4500-SO42 - -E), 2017
III Nitrate as NO3	mg/l, Max	50	0.09	APHA 23rd Edition (4500-NO3 - -E), 2017
IV Electrical Conductivity	µs/cm	-	66	APHA 23rd Edition (2510 B) 2017
V Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D,-C), 2017
VI Total Dissolved Solid	mg/l, Max	1500	52	APHA 23rd Edition (2540 C), 2017
VII Calcium as Ca	mg/l, Max	-	5.8	APHA 23rd Edition (3500-Ca-B), 2017
VIII Magnesium as Mg	mg/l, Max	-	6.32	APHA 23rd Edition (3500-Mg-B), 2017
IX Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
X Dissolved Oxygen	mg/l, Max	4.0	6.9	APHA 23rd Edition(4500-O-C), 2017
XI Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	1.7	APHA 23rd Edition(2012(5210 B), 2017
XII Total Hardness as CaCO3	mg/l, Max	--	40	APHA 23rd Edition (2340 C), 2017
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	0.3	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max	-	<0.1	IS 1025 (Part 58) 2006 RA 1011
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
XIX Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2501 | 8086119A





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004509P

Test Report No : 2502 | 5087119DKLPL/7/20/WATER/02839 Issue Date: 03-Aug-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020 Test Completion On: 31-Jul-2020  
 Sample Description : SURFACE WATER

Sample Condition : SEALED  
 Sample Identification \* : SURFACE WATER Sampling Date : 25-Jul-2020  
 Batch No , Lot No : NA MFG Date : NA EXP Date : NA  
 Received Quantity : 1LTR X 1 Place of Collection : VAMSADHARA RIVER NEAR BALABHADRAPUR  
 Sample Collected By : By KLPL DT-25.07.2020  
 Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

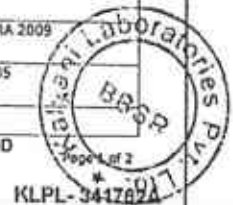
### BACTERIOLOGICAL QUALITY

I	Total Coliforms	MPN/100ml.	5000	90	IS: 1622:1981 RA 2009
---	-----------------	------------	------	----	-----------------------

### CHEMICAL PARAMETER

I	Chloride as Cl	mg/l, Max	600	11.5	APHA 23rd Edition (4500-Cl - -B), 2017
II	Sulphate as SO <sub>4</sub>	mg/l, Max	400	18	APHA 23rd Edition (4500-SO <sub>4</sub> - -E), 2017
III	Nitrate as NO <sub>3</sub>	mg/l, Max	50	1.2	APHA 23rd Edition (4500-NO <sub>3</sub> - -E), 2017
IV	Electrical Conductivity	µs/cm.	-	183	APHA 23rd Edition (2510 B) 2017
V	Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D, -C), 2017
VI	Total Dissolved Solid	mg/l, Max	1500	130	APHA 23rd Edition (2540 C), 2017
VII	Calcium as Ca	mg/l, Max	-	18.7	APHA 23rd Edition (3500-Ca-B), 2017
VIII	Magnesium as Mg	mg/l, Max	-	11.42	APHA 23rd Edition (3500-Mg-B), 2017
IX	Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
X	Dissolved Oxygen	mg/l, Max	4.0	8.7	APHA 23rd Edition (4500-O-C), 2017
XI	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	2.8	APHA 23rd Edition 2012(5210 B), 2017
XII	Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	94	APHA 23rd Edition (2340 C), 2017
XIII	Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV	Iron (as Fe)	mg/l, Max	50	0.4	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
XV	Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
XVI	Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII	Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 48):1994 RA 2009
XVIII	Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
XIX	Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
XX	Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXI	Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2502 | 5087119D





# KALYANI LABORATORIES PVT. LTD.

78,944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2502 | 5087119DKLPL/7/20/WATER/02839



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0013	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.58	--
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BOL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BOL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

..... End of Test Report .....

D. Anurupa  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Reeta Nayyar  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2502 | 5087119D

Page 2 of 2

KLPL- 341763A



Kalyani Laboratories

**KALYANI LABORATORIES PVT. LTD.**

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

**TEST REPORT**

NABL ULR NO : TC704320000004511P

Test Report No : 2503 | 5088119FKLPL/7/20/WATER/02840

Issue Date: 03-Aug-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Jul-2020 Test Commenced On : 27-Jul-2020

Test Completion On: 31-Jul-2020

Sample Description : SURFACE WATER

Sample Condition : SEALED

Sample Identification \* : SURFACE WATER

Sampling Date : 25-Jul-2020

Batch No, Lot No : NA

MFG Date : NA

EXP Date : NA

Received Quantity : 1LTR X 1

Place of Collection : VAMSADHARA RIVER NEAR NARAYANPUR CULVERT (UPSTREAM) DT-25.07.2020

Sample Collected By : By KLPL

Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml.	5000	34	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chloride as Cl	mg/l, Max	600	13.4	APHA 23rd Edition (4500-Cl - -B), 2017
II Sulphate as SO <sub>4</sub>	mg/l, Max	400	6	APHA 23rd Edition (4500-SO <sub>4</sub> - -E), 2017
III Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.5	APHA 23rd Edition (4500-NO <sub>3</sub> - -E), 2017
IV Electrical Conductivity	µs/cm	-	168	APHA 23rd Edition (2510 B) 2017
V Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D, -C), 2017
VI Total Dissolved Solid	mg/l, Max	1500	114	APHA 23rd Edition (2540 C), 2017
VII Calcium as Ca	mg/l, Max	-	17.3	APHA 23rd Edition (3500-Ca-B), 2017
VIII Magnesium as Mg	mg/l, Max	-	8.75	APHA 23rd Edition (3500-Mg-B), 2017
IX Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B - B), 2017
X Dissolved Oxygen	mg/l, Max	4.0	9.0	APHA 23rd Edition (4500-O-C), 2017
XI Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	2.3	APHA 23rd Edition 2012(5210 B), 2017
XII Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	79	APHA 23rd Edition (2340 C), 2017
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	4.2	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
XIX Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2503 | 5088119F

KLPL-341764A





# KALYANI LABORATORIES PVT. LTD.

78/44, PAHAL, BHIBANE SWAR, 751001, ODISHA

Test Report No : 2503 | 5088119FKLPL/7/20/WATER/02040



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13420:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 IIA 2009
xxv PERCENT SODIUM (%)	%	--	0.0000	CL 5.0 of IS 3025 (Part 43):1992
xxvi SODIUM ADSORPTION RATIO	--	--	0.39	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13420:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.0	APHA 23rd Edition (4500 H+ -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, IIA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1996 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA  
..... End of Test Report .....

D Anuj kumar  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Precha Nayak  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd  
4/10/2020





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004513P

**Test Report No** : 2504 | 508911A1KLPL/7/20/WATER/02841 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 25-Jul-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : VAMSADHARA RIVER NEAR CHHATRAPUR CULVERT (DOWNSTREAM) DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml.	5000	40	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Chloride as Cl	mg/l, Max	600	23	APHA 23rd Edition (4500-Cl - B), 2017
II Sulphate as SO4	mg/l, Max	400	9	APHA 23rd Edition (4500-So42 - E), 2017
III Nitrate as NO3	mg/l, Max	50	0.7	APHA 23rd Edition (4500-NO3 - E), 2017
IV Electrical Conductivity	us/cm	-	201	APHA 23rd Edition (2510 B) 2017
V Fluoride as F	mg/l, Max	1.5	0.13	APHA 23rd Edition (4500-F - D, -C), 2017
VI Total Dissolved Solid	mg/l, Max	1500	166	APHA 23rd Edition (2540 C), 2017
VII Calcium as Ca	mg/l, Max	-	18.7	APHA 23rd Edition (3500-Ca-B), 2017
VIII Magnesium as Mg	mg/l, Max	-	7.78	APHA 23rd Edition (3500-Mg-B), 2017
IX Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
X Dissolved Oxygen	mg/l, Max	4.0	8.5	APHA 23rd Edition(4500-O-C), 2017
XI Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	2.7	APHA 23rd Edition 2012(5210 B), 2017
XII Total Hardness as CaCO3	mg/l, Max	-	73	APHA 23rd Edition (2540 C), 2017
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	5.8	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 49):2006 RA 2012
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	5	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
XIX Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 32):2003 RA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2005

2504 | 508911A1

KLPL-17604





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2504 | 508911A1KLPL/7/20/WATER/02841



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 45):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0012	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.59	--
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	8.1	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	µC/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µC/mL	0.01	BDL	IS 14194 (PART-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

..... End of Test Report .....

D. Arunika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Hecha a Jayanti  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd  
31/05/2020



2504 | 508911A1

Page 2 of 2

KLPL- 341767A



Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

75944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004514P

**Test Report No** : 2505 | 509011A2KLPL/7/20/WATER/02842

**Issue Date**: 03-Aug-2020

**Amendment No** : -

**Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020

**Test Commenced On** : 27-Jul-2020

**Test Completion On**: 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER

**Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA

**MFG Date** : NA

**EXP Date** : NA

**Received Quantity** : 1LTR X 1

**Place of Collection** : TURI NALA NEAR REGHUNATHPUR DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	110	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	600	11.5	APHA 23rd Edition (4500-Cl - B), 2017
ii Sulphate as SO4	mg/l, Max	400	12	APHA 23rd Edition (4500-SO4 - E), 2017
iii Nitrate as NO3	mg/l, Max	50	0.8	APHA 23rd Edition (4500-NO3 - B), 2017
iv Electrical Conductivity	µs/cm	-	171	APHA 23rd Edition (2530 B) 2017
v Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - D, C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	124	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	18.7	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	9.48	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	6.3	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	1.4	APHA 23rd Edition 2012 (5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	86	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.8	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	--	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBA5)	mg/l	--	<0.1	Annex K of IS 13428:2005

2505 | 509011A2

Page 1 of 2

KLPL-041284







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2505 | 509011A2KLPL/7/20/WATER/02B42



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0008	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.37	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.4	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2505 | 509011A2

Page 2 of 2

KLPL- 341769A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004515P

**Test Report No** : 2506 | 509111A3KLPL/7/20/WATER/02843 **Issue Date**: 03-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Jul-2020 **Test Commenced On** : 27-Jul-2020 **Test Completion On**: 31-Jul-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 25-Jul-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : POND NEAR HAREKRUSHNAPUR DT-25.07.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP- 07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	60	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chloride as Cl	mg/l, Max	500	21.1	APHA 23rd Edition (4500-Cl - -B), 2017
ii Sulphate as SO4	mg/l, Max	400	15	APHA 23rd Edition (4500-SO4 - -E), 2017
iii Nitrate as NO3	mg/l, Max	50	1.0	APHA 23rd Edition (4500-NO3 - -E), 2017
iv Electrical Conductivity	µm/cm	-	180	APHA 23rd Edition (2510 B) 2017
v Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -D,-C), 2017
vi Total Dissolved Solid	mg/l, Max	1500	132	APHA 23rd Edition (2540 C), 2017
vii Calcium as Ca	mg/l, Max	-	17.3	APHA 23rd Edition (3500-Ca-B), 2017
viii Magnesium as Mg	mg/l, Max	-	11.42	APHA 23rd Edition (3500-Mg-B), 2017
ix Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500-B), 2017
x Dissolved Oxygen	mg/l, Max	4.0	4.6	APHA 23rd Edition (4500-O-C), 2017
xi Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	--	1.7	APHA 23rd Edition 2012(5210 B), 2017
xii Total Hardness as CaCO3	mg/l, Max	--	90	APHA 23rd Edition (2340 C), 2017
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2008
xiv Iron (as Fe)	mg/l, Max	50	1.2	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2506 | 509111A3





# KALYANI LABORATORIES PVT. LTD.

7X/44, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2506 | 509111A3KLPL/7/20/WATER/02843



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0010	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.46	--
xxvii Barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.5	APHA 23rd Edition (4500-H+-0), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µCi/ml	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µCi/ml	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NA

Any unusual feature observed during determination : NA

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2506 | 509111A3

Page 2 of 2

KLPL- 341771A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 83131240 KLPL/8/20/ENVN/00672  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 17-Aug-2020 **Commenced On** : 17-Aug-2020 **Completion On** : 22-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure** : QSP-07

**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : MID DAY MEAL, 14.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	6.14	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.48	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	60.0	IS 5182(PART-22) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.03	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.69	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Praveen*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anupama*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23284A



# KALYANI LABORATORIES PVT. LTD.

TO THE HONORABLE DISTRICT JUDGE, CUTTACK, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 342 | 53131240 KLPL/8/20/ENVN/00672A **Issue Date** : 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 17-Aug-2020 **Commenced On** : 17-Aug-2020 **Completion On** : 22-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-05

**Location & Date** : CHHATRAPUR VILLAGE, 15.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	4.48	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.23	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-15
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	30	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*P. Prasad*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anupama*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23295A



# KALYANI LABORATORIES PVT. LTD.

NO. 14/5131/201 (DINAWAL, DIST. JHANSI, M.P.)

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672B **Issue Date** : 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Location & Date** : PLANT SITE, 17.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	7.19	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.31	IS 5182 (PART 5) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	70.0	IS 5182 (PART-23) :2008
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.12	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.37	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	9.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-03
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.34	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

P. Prasad

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23281A



Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672C  
**Amendment No.** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06  
**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : - LANJIGARH VILLAGE , 17.08.2020

Parameter	Unit	Observed Value	Limit Value	Reference
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.39	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.20	IS 5182 (PART 6) :2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	62.0	IS 5182(PART-22) :2008
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants volume-1 & 2
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Mishra*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anand*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23280A



# KALYANI LABORATORIES PVT. LTD.

1, No. 43/2, High Road, Cuttack - 753001, Odisha

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/6/20/ENVN/00672E  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : REHABILITATION COLONY, 18.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.34	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	60	13.33	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	54.0	IS 5182(PART-23) : 2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.11	KLPL/SOP/AIR-04
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.70	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & 2
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prakash*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23279A





# KALYANI LABORATORIES PVT. LTD.

HOSPITAL, III BIDDHARTI, BHUBANESHWAR

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672D  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/ATR-06

Issue Date : 05-Sep-2020

Amendment Date : -

**Location & Date** : CHHATRAPUR VILLAGE, 18.08.2020

Parameter	Unit	Standard	Observed Value	Reference
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.62	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.31	IS 5182 (PART-6) : 2009
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.88	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	KLPL/SOP/AIR-15
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	160	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL  
..... End of Test Report .....

*P. Prasad.*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23282A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/6/20/ENVN/00672F  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On**: 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure**: KLPL/SOP/AIR-05

**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : MID DAY MEAL, 19.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.09	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.42	IS 5182 (PART-4) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	59.0	IS 5182 (PART-23) : 2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	50	26.44	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.68	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

..... End of Test Report .....

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

D. Ananta  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23278A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/R/20/ENVN/00672G  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020  
**Commenced On** : 24-Aug-2020  
**Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Issue Date : 05-Sep-2020

Amendment Date

**Location & Date** : BELAMBA VILLAGE, 19.08.2020

Sulphur Dioxide	ug/m <sup>3</sup>	80	4.29	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	ug/m <sup>3</sup>	80	10.31	IS 5182 (PART-4) : 2008
Particulate Matter (PM10)	ug/m <sup>3</sup>	100	51.0	IS 5182 (PART-23) : 2009
Particulate Matter (PM2.5)	ug/m <sup>3</sup>	60	21.28	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.42	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	ug/m <sup>3</sup>	180	2.3	KLPL/SOP/AIR-19
Lead (Pb)	ug/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	ug/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	ug/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prishu Singh*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23277A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVH/00672H  
**Amendment No** : -  
**Reference** : ORDER NO-560001348S DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Issue Date** : 05-Sep-2020  
**Amendment Date** : -  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

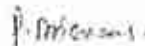
**Location & Date** : - LANJIGARH VILLAGE, 20.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.38	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.08	IS 5182 (PART-4) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	59.0	IS 5182(PART-22) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23276A



# KALYANI LABORATORIES PVT. LTD.

TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672I  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027  
**Date of receipt** : 24-Aug-2020  
**Commenced On** : 24-Aug-2020  
**Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REPRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameter	Unit	Observed Value	Standard	Reference
<b>Location &amp; Date</b> : PLANT SITE, 20.08.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.33	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.39	IS 5182 (PART-6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	67.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.35	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.7	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	4.66	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prakash*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*P. Prakash*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23275A



# KALYANI LABORATORIES PVT. LTD.

WIND ROAD, BBSR, INDIA - 751005

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672J  
**Amendment No** : -  
**Reference** : ORDER NO-6500013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO- LANJIGARH, DIST- KALAHANDI, ODISHA-766027  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020

**Amendment Date** : -

**Location & Date** : REHABILITATION COLONY, 21.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.03	IS 5182(PART-2) : 2005
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.13	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56.0	IS 5182(PART-12) : 2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-05
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.72	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CRCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prasenjit*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anubha*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23274A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672K  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Issue Date : 05-Sep-2020

Amendment Date : -

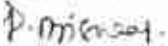
Location & Date : CHHATRAPUR VILLAGE, 21.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	4.11	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.43	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	55.0	IS 5182(PART-21) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.11	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.42	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23273A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672L  
**Amendment No.** : -  
**Reference** : ORDER NO-6600013489 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. LANJIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

Issue Date : 05-Sep-2020

Amendment Date : -

Parameter	Unit	Observed Value	Standard Value	Reference
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 22.08.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.30	IS 5182(PART-2) / 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.22	IS 5182 (PART 5) / 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	52.0	IS 5182(PART-23) / 2008
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	22.22	KLPL/SOP/AIR-07
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Anisaj*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anisaj*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23272A





# KALYANI LABORATORIES PVT. LTD.

IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION ACT OF 1986

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVH/00672M  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 29-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020

**Amendment Date** : -

**Location & Date** : MID DAY NEAL, 22.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.39	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.39	IS 5182 (PART-6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	57.0	IS 5182 (PART-22) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.44	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.67	KLPL/SOP/AIR-13
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-15
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. D. Singh*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Arulokan*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23271A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/006720  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020 **Completion On** : 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : KLPL/SOP/AIR-05  
**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : PLANT SITE, 24.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	7.17	IS 5102(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.39	IS 5102 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65.0	IS 5102(PART-23) : 2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.44	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.34	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	8.0	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-19
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	5.45	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*P. Mishra*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Mishra*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23297A



# KALYANI LABORATORIES PVT. LTD.

KALYANI LABORATORIES PVT. LTD. (INDIA)

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672N  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020 **Completion On** : 04-Sep-2020  
**Issue Date** : 05-Sep-2020  
**Amendment Date** : -  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

Parameters				
Location & Date : - LANJIGARH VILLAGE , 24.08.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.09	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.16	IS 5182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61.0	IS 5182(PART-23) :2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-10
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollution Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

P. Biswal.

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

D. Dasgupta  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23270A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672P  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commerced On** : 31-Aug-2020 **Completion On**: 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure**: KLPL/SOP/AIR-05

**Issue Date** : 05-Sep-2020  
**Amendment Date** : -

**Location & Date** : CHHATRAPUR VILLAGE, 25.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.14	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.06	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	54.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.0	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.41	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23305A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672Q  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020 **Completion On**: 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. to Sampling Procedure**: KLPL/SOP/AIR-06

Issue Date : 05-Sep-2020

Amendment Date : -

**Location & Date** : REHABILITATION COLONY, 25.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	6.17	IS 5187(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.08	IS 5187 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	55.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.71	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	4.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Anwar*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anwar*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23304A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

ISO 9001:2015 CERTIFIED

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672R  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020 **Completion On** : 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020

**Amendment Date** : -

Parameters				
Location & Date	: MID DAY NEAL, 26.08.2020			
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.39	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.36	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.66	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL  
 ..... End of Test Report .....

*P. Mishra*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23303A

# KALYANI LABORATORIES PVT. LTD.



## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVH/00572S  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST - KALAHANDI, ODISHA-766027  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-05

**Issue Date** : 05-Sep-2020  
**Amendment Date** :  
**Completion On** : 04-Sep-2020

**Location & Date** : BELAMBA VILLAGE, 26.08.2020

Parameter	Unit	Observed Value	Limit Value	Reference
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.65	IS 5182 (PART 6) : 2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	93.0	IS 5182(PART-23) : 2008
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	22.63	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prasad*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anubala*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23302A



# KALYANI LABORATORIES PVT. LTD.

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVH/00672T  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019.  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 Commenced On : 31-Aug-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020  
**Amendment Date** :

**Completion On:** 04-Sep-2020

**Location & Date** : - LANJIGARH VILLAGE , 27.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	6.45	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.34	IS 5182 (PART-6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	58.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.42	KLPL/SOP/AIR-15
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-16
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Mishra*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*P. Mishra*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23301A





# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004672P  
**Test Report No** : 542 | 53131240 KLPL/8/20/ENVN/00672U  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 31-Aug-2020 **Commenced On** : 31-Aug-2020 **Completion On** : 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Issue Date** : 05-Sep-2020

**Amendment Date** : -

**Location & Date** : PLANT SITE, 27.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	8.22	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.21	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.33	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	8.7	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-3 & II
Benza (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	5.54	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23300A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



Issue Date

05-Sep-2020

Amendment Date



NABL ULR NO  
Test Report No  
Amendment No  
Reference  
Customer Name  
Address  
Date of receipt  
Sample Name  
Sample Condition  
Quantity  
Ref. To Sampling Procedure:

TC70432000004672P  
542 | 53131240 KLPL/8/20/ENVN/00672V  
ORDER NO-6600013488 DT-16.12.2019  
**VEDANTA LIMITED, LANJIGARH**  
PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027  
31-Aug-2020 Commenced On : 31-Aug-2020  
**AMBIENT AIR QUALITY MONITORING**  
GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
1 NOS  
KLPL/SDP/AIR-06

Completion On: 04-Sep-2020

Location & Date : **REHABILITATION COLONY, 29.08.2020**

Parameter	Unit	Observed Value	Limit Value	Reference
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.13	IS 5182 (PART-2) : 2003
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.17	IS 5182 (PART-1) : 2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	54.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.11	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.69	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	06	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23299A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004672P  
**Test Report No** : 542 | 53131240 KLPL/B/20/ENVN/00672W  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. LANJIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 02-Sep-2020 **Commenced On** : 02-Sep-2020 **Completion On** : 04-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06

**Location & Date** : BELAMBA VILLAGE, 31.08.2020

Sulphur Dioxide	µg/m <sup>3</sup>	80	5.16	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.49	IS 5182 (PART 5) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	51.0	IS 5182(PART-23) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	21.28	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	< 0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	< 10	KLPL/SOP/AIR-08
Benzene (C6 H6)	µg/m <sup>3</sup>	05	< 1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	ng/m <sup>3</sup>	01	< 1	KLPL/SOP/AIR-07
Arsenic (As)	ng/m <sup>3</sup>	05	< 1	KLPL/SOP/AIR-10
Nickel (Ni)	ng/m <sup>3</sup>	20	< 4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1240467211100

Page 1 of 1

KLPL- 23298A



# KALYANI LABORATORIES PVT. LTD.

78344, PALLI, BILHANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320090094704F

**Test Report No** : 2656 | 52161267KLPL/8/20/WATER/02971A **Issue Date** : 12-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 07-Aug-2020 **Test Commenced On** : 07-Aug-2020 **Test Completion On** : 12 Aug 2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : STP OUTLET **Sampling Date** : 05-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : PLANT, DATE-06.08.2020

**Sample Collected By** : Hy KLPL

**Ref. to Sampling Procedure** : QSP-07

Parameter	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Fecal Coliform	MPN/100ml	< 100	26	IS 1622:1981, IS 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	14	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	2.5	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 B), 2017
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
V TOTAL Nitrogen	mg/l, Max	10	1.1	APHA 23rd Edition (4500-NH3-B, 4500-NO2-B, 4500-NO3-B), 2017
VI Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.9	APHA 23rd Edition (4500-H4-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurupa*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Preeti Jaiswal*  
 12/08/2020  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*Prasanna*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd



2656 | 52161267

Page 1 of 1

KLPL-342059A



# KALYANI LABORATORIES PVT. LTD.

7&944, PAHAL, BHUBANESWAR-751001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004705F  
**Test Report No** : 2655 | 52161267KLPL/8/20/WATER/02871B **Issue Date:** 12-Aug-2020  
**Amendment No** : - **Amendment Date:** -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : POO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027,  
**Date of receipt** : 07-Aug-2020 **Test Commenced On** : 07-Aug-2020 **Test Completion On:** 12-Aug-2020  
**Sample Description** : **SIP WATER**

**Sample Condition** : SEALED IN 1LTR PET BOTTLE  
**Sample Identification \*** : **STP OUTLET** **Sampling Date** : 06-Aug-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP -06.08.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Fecal Coliform	MPN/100ml	≤ 100	40	IS 1622:1981, KA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	34	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	6.6	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.25	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Goudha*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak* = 12/08/2020  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*M. S. Swain*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

7K944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004710F

**Test Report No** : 2655 | 52161267KLPL/8/20/WATER/02894A **Issue Date:** 17-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 13-Aug-2020 **Test Commenced On** : 13-Aug-2020 **Test Completion On** : 17-Aug-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED IN 1LTR PET BOTTLE

**Sample Identification \*** : STP OUTLET **Sampling Date** : 12-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : PLANT ,DATE-12.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feecal Coliform	MPN/100ml	< 100	22	IS 1622:1981, IS 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	17	APHA 23rd Edition (5220 B), 2017
ii Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 O), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.25	APHA 23rd Edition (4500-NH3g-B, 4500-NH2-B, 4500-NH3-C), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.95	APHA 23rd Edition (4500-H4-B), 2017

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

..... End of Test Report .....

*D. Anurag*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Pooja Nayak*  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd.



2655 | 52161267

Page 1 of 1

KLPL- 342057A



# KALYANI LABORATORIES PVT. LTD.

76/44, PAHAL, BHUBANESWAR-752001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004709F

**Test Report No** : 2655 | 52161267KLPL/8/20/WATER/02894B **Issue Date**: 17-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.

**Date of receipt** : 13-Aug-2020 **Test Commenced On** : 13-Aug-2020 **Test Completion On**: 17-Aug-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED III 1LTR PET BOTTLE

**Sample Identification \*** : STP OUTLET **Sampling Date** : 12-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : TOWNSHIP -12.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i. Faecal Coliform	MPN/100ml.	< 100	34	IS22:1981, IS 2009
<b>CHEMICAL PARAMETER</b>				
i. Chemical Oxygen Demand	mg/l, Max	50	39	APHA 23rd Edition (5220 B), 2017
ii. Biochemical Oxygen Demand (For 3 days @ 27deg C)	mg/l, Max	10	6	APHA 23rd Edition (5210 B), 2017
iii. Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2017
iv. Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v. TOTAL Nitrogen	mg/l, Max	10	6.7	APHA 23rd Edition (4500-NHorg-B, 4500-NH2-B, 4500-NH3-B), 2017
vi. Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<2.80	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i. pH value	---	6.5-9.0	7.2	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Panda*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Recha Jyoti* 17/08/2020  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd.

*D. S. Mohapatra*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd.



2655 | 52161267

Page 1 of 1

KLPL- 342058A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004711F

Test Report No : 2655 | 52161267KLPL/8/20/WATER/02922 Issue Date: 26-Aug-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 21-Aug-2020 Test Commenced On : 21-Aug-2020 Test Completion On: 26-Aug-2020  
 Sample Description : STP WATER

Sample Condition : SEALED IN 1LTR PET BOTTLE  
 Sample Identification \* : STP OUTLET Sampling Date : 20-Aug-2020  
 Batch No , Lot No : NA MFG Date : NA EXP Date : NA  
 Received Quantity : 1LTR X 1 Place of Collection : PLANT , DATE-20.08.2020  
 Sample Collected By : By KLPL  
 Ref.To Sampling Procedure: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Feecal Coliform	MPN/100ml	< 100	26	IS 1572:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
i Chemical Oxygen Demand	mg/l, Max	50	19	APHA 23rd Edition (5220 D), 2017
ii Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	10	3.5	APHA 23rd Edition (5210 B), 2017
iii Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2012
iv Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v TOTAL Nitrogen	mg/l, Max	10	1.2	APHA 23rd Edition (4500-Nitrog-D, 4500-NO2-B, 4500-NO3-B), 2017
vi Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i pH value	---	6.5-9.0	7.75	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd

*M. Suresh*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd



2655 | 52161267

Page 1 of 1

KLPL- 342056A





# KALYANI LABORATORIES PVT. LTD.

7/044, PAHAL, BHUBANESWAR-751001, ODISHA

## TEST REPORT



**NAHL ULR NO** : TC704320000004712F  
**Test Report No** : 2656 | 52171268KLPL/8/20/WATER/02923 **Issue Date:** 26-Aug-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARI  
**Address** : PO.- LANJIGARI, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 21-Aug-2020 **Test Commenced On** : 21-Aug-2020 **Test Completion On:** 26-Aug-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED IN 1LTR PET BOTTLE  
**Sample Identification \* :** STP OUTLET **Sampling Date :** 20-Aug-2020  
**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity** : 1LTR X 1 **Place of Collection :** TOWNSHIP ,DATE-20.08.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method	
<b>BACTERIOLOGICAL QUALITY</b>					
I	Faecal Coliform	MPN/100ml	< 100	33	IS 1022:1981, NA 2009
<b>CHEMICAL PARAMETER</b>					
I	Chemical Oxygen Demand	mg/l, Max	50	32	APHA 23rd Edition (5220 D), 2017
II	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 D), 2017
III	Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2012
IV	Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 D), 2017
V	TOTAL Nitrogen	mg/l, Max	10	6.4	APHA 23rd Edition (4500-Nitro-D), 4500-NO2-D, 4500-NO3-D, 2017
VI	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>					
I	pH value	---	6.5-9.0	7.95	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Arunata*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



2656 | 52171268

Page 1 of 1

KLPL- 342055A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004713F

**Test Report No** : 2657 | 52771269KLPL/8/20/WATER/02968 **Issue Date** : 31-Aug-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 27-Aug-2020 **Test Commenced On** : 27-Aug-2020 **Test Completion On** : 31-Aug-2020

**Sample Description** : STP WATER

**Sample Condition** : SEALED

**Sample Identification \*** : STP OUTLET **Sampling Date** : 26-Aug-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 1 **Place of Collection** : PLANT, DATE-25.08.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Fecal Coliform	MPN/100ml.	< 100	23	IS 1622:1991, IS 2009
<b>CHEMICAL PARAMETER</b>				
I Chemical Oxygen Demand	mg/l, Max	50	11	APHA 23rd Edition (5220 B), 2017
II Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	2	APHA 23rd Edition (5210 B), 2017
III Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2017
IV Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 D), 2017
V TOTAL Nitrogen	mg/l, Max	10	1.0	APHA 23rd Edition (4500-Nitrog-B, 4500-NO2-B, 4500-NO3-B), 2017
VI Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
I pH value	---	6.5-9.0	7.8	APHA 23rd Edition (4500-H+-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D Anujaha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Reha Nayak*  
21/08/2020  
Authorized Signatory (Microbiological)  
For Kalyani Laboratories Pvt. Ltd.

*M. S. Sarma*  
Authorized Signatory (Chemical)  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/44, PATALI, BUDHANESWAR, CUTTACK, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000804714F  
**Test Report No** : 2658 | 5278125AKLPL/6/20/WATER/02969  
**Amendment No** : -  
**Reference** : ORDER NO-6600D1M88 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-765027.  
**Date of receipt** : 27-Aug-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification** : STP OUTLET  
**Batch No., Lot No** : NA  
**Received Quantity** : 1LTR X 1  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 03-Sep-2020  
**Amendment Date** : -  
**Test Commenced On** : 27-Aug-2020  
**Test Completion On** : 03-Sep-2020  
**Sampling Date** : 03-Aug-2020  
**MFG Date** : NA  
**EXP Date** : NA  
**Place of Collection** : TOWNSHIP, DATE- 26.08.2020

### TEST REPORT

**BACTERIOLOGICAL QUALITY**

Sl. No.	Parameter	Unit	Requirement	Result	Test Method
I	Faecal Coliform	MPN/100ml.	< 100	32	IS 4622:1981, AA 2009

### CHEMICAL PARAMETER

Sl. No.	Parameter	Unit	Requirement	Result	Test Method
I	Chemical Oxygen Demand	mg/l, Max	50	22	APHA 23rd Edition (5220 B), 2017
II	Biochemical Oxygen Demand (For 3 days) (27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
III	Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 D), 2012
IV	Oil & Grease	mg/l, Max	10	40.4	APHA 23rd Edition (5520 B), 2017
V	TOTAL Nitrogen	mg/l, Max	10	6.0	APHA 23rd Edition (4500-Nitro-B, 4500-NO2-N, 4500-NO3-B), 2017
VI	Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	1.12	APHA 23rd Edition (4500-NH3-C), 2017

### PHYSICAL PARAMETER

Sl. No.	Parameter	Unit	Requirement	Result	Test Method
I	pH value		6.5-9.0	7.2	APHA 23rd Edition (4500-NH-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anischa*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Raxha Kalyan*  
 29/09/2020  
 Authorized Signatory (Microbiological)  
 For Kalyani Laboratories Pvt. Ltd.

*M. S. S. S. S.*  
 Authorized Signatory (Chemical)  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78514, PATIALA, BHUBANESWAR-752001, ODISHA

**NABL ULR NO** : TC704320000004673P **TEST REPORT**

**Test Report No** : 543 | 53141241 KLPL/B/20/ENVN/00673

**Amendment No** : -

**Reference** : ORDER NO-G600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 20-Aug-2020 **Commenced On** : 20-Aug-2020 **Completion On** : 24-Aug-2020

**Sample Name** : FLUE GAS | STACK MONITORING

**Sample Condition** : GASEOUS SAMPLE ADSORBING SOLUTIONS REFRIGERATEDST

**Quantity** : 1 NOS

**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06



**Issue Date** : 05-Sep-2020

**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-I, 18.08.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	703.5	IS 11255 (part-2) (1985) (IA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	24.8	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	9.81	KLPL/SOP/AIR-06
Velocity	m/sec	-	3.16	KLPL/SOP/AIR-06
Oxygen	%	-	4.80	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	-	-	413	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	301.3	IS 11255 (part-7) 2009
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1635267	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	4.24	KLPL/SOP/AIR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Anup*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101  
 KLPL-34203AA



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

78/44, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004673P **TEST REPORT**




**Test Report No** : 543 | 53141241 KLPL/B/20/ENVN/00673A **Issue Date** : 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-5500013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 20-Aug-2020 **Commenced On** : 20-Aug-2020 **Completion On** : 24-Aug-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED ST  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : KLPL/SOP/AIR-06


Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -I, 18.08.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	666.5	IS 11255(part-2):1985(IA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	20.3	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	16.25	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.09	KLPL/SOP/AIR-06
Oxygen	%	-	3.9	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	-	-	441	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	270.5	IS 11255 (part-7):2009
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3367.037	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	29.07	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101  
 KLPL-342040A



# KALYANI LABORATORIES PVT. LTD.

78/941, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004673P

## TEST REPORT



Test Report No : 543 | 53141241 KLPL/8/20/ENVN/00673B Issue Date : 05-Sep-2020

Amendment No : - Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 24-Aug-2020 Commenced On : 24-Aug-2020 Completion On: 28-Aug-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NOS

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : POWER PLANT UNIT-II , 22.08.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	709.5	IS 11215(part-2):1995(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	29.4	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.2	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.81	KLPL/SOP/AIR-06
Oxygen	%	-	5.4	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	-	410	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	310.1	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1587655	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	3.01	KLPL/SOP/AIR-06

Remarks : NL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1241467311101  
KLPL-34201A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

789144, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004673P **TEST REPORT**




**Test Report No** : 543 | 53141241 KLPL/B/20/ENVN/00673C  
**Amendment No** : - **Issue Date** : 05-Sep-2020  
**Reference** : ORDER NO-6600013488 DT-16.12.2019 **Amendment Date** : -  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027.  
**Date of receipt** : 24-Aug-2020 **Commenced On** : 24-Aug-2020 **Completion On** : 28-Aug-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure** : KLPL/SOP/AIR-06

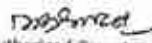
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II, 22.08.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	702.8	IS 11255(part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	26.8	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	13.75	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.67	KLPL/SOP/AIR-06
Oxygen	%	-	4.53	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	-	443	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	297.5	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3451329	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	30.48	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101

Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004673P

### TEST REPORT



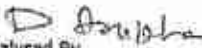
**Test Report No** : 543 | S3141241 KLPL/B/20/ENVN/00673D Issue Date : 05-Sep-2020  
**Amendment No** : - Amendment Date : -  
**Reference** : ORDER NO-6600013488 DT-15.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 27-Aug-2020 Commenced On : 27-Aug-2020 Completion On: 31-Aug-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
**Quantity** : 1 NOS  
**Ref.To Sampling Procedure:** KLPL/SOP/AIR-06

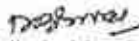
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-I, 25.08.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	733.2	IS 11255(part-2):1989(ISA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	36.1	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.1	KLPL/SOP/AIR-06
Velocity	m/sec	-	8.26	KLPL/SOP/AIR-06
Oxygen	%	-	5.1	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	°C	-	408	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	332.5	IS 11255 (part-7):2009
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1654459	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	4.4	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101  
 KLPL- 3422646





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

NABL ULR NO : TC704320000004673P

### TEST REPORT



Test Report No : 543 | 53141241 KLPL/8/20/ENVN/00673E

Issue Date : 05-Sep-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 27-Aug-2020 Commenced On : 27-Aug-2020 Completion On: 31-Aug-2020

Sample Name : FLUE GAS | STACK MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST

Quantity : 1 NOS

Ref. To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CALCINER -I, 25.08.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	578.3	IS 11255 (part-2):1985(RA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	23.4	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	16.4	KLPL/SOP/AIR-06
Velocity	m/sec	-	23.67	KLPL/SOP/AIR-06
Oxygen	%	-	4.05	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	-	448	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	280.1	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3562353	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.04	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	32.88	KLPL/SOP/AIR-06

Remarks : NL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1241467311101  
KLPL-3420830



Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, DHUBANESWAR-752101, ODISHA

NABL ULR NO : TC70432000004673P

## TEST REPORT



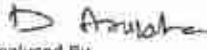
Test Report No : 543 | 53141241 KLPL/8/20/ENVN/00673F Issue Date : 05-Sep-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 02-Sep-2020 Commenced On : 02-Sep-2020 Completion On: 05-Sep-2020  
 Sample Name : FLUE GAS | STACK MONITORING  
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
 Quantity : 1 NOS  
 Ref.To Sampling Procedure: KLPL/SOP/AIR-06

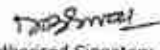
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : POWER PLANT UNIT-IF, 31.08.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	718.6	IS 11255(part-2):1985(PA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	32.4	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.35	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.28	KLPL/SOP/AIR-06
Oxygen	%	-	5.5	KLPL/SOP/AIR-06
Stack Temperature In Deg kelvin	--	-	402	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	320.2	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1513774	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	3.47	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101  
 KLPL- 3420526



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

79744, PAHAL, BILUBANESWAR, 752101, ODISHA

NABL ULR NO : TC70432000004673P

### TEST REPORT



Test Report No : 543 | 53141241 KLPL/8/20/ENVN/00673G Issue Date : 05-Sep-2020  
 Amendment No : - Amendment Date : -  
 Reference : ORDER NO-6600013488 DT-16.12.2019  
 Customer Name : VEDANTA LIMITED, LANJIGARH  
 Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
 Date of receipt : 02-Sep-2020 Commenced On : 02-Sep-2020 Completion On: 05-Sep-2020  
 Sample Name : FLUE GAS | STACK MONITORING  
 Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATEDST  
 Quantity : 1 NOS  
 Ref.To Sampling Procedure: KLPL/SOP/AIR-06

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : CALCINER -II, 31.08.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	713.8	IS 11255(part-2):1995(IA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	30.4	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	13.85	KLPL/SOP/AIR-06
Velocity	m/sec	-	19.47	KLPL/SOP/AIR-06
Oxygen	%	-	4.6	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	-	437	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	308.5	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	2984656	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	22.8	KLPL/SOP/AIR-06

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1241467311101  
 KLPL- 342061A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-751101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004715F

**Test Report No** : 2659 | 5284126BKLPL/8/20/WATER/02975 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND (WEST)

**Sample Collected By** : By KLPL **DT-27.08.2020**

**Ref. To Sampling Procedure:**

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<1	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	3.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 24): 1990 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	64.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	23	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.22	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	7.05	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2001 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 35):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.025	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	20	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 23):1906 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	191	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.055	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-5)



2659 | 5284126B

KLPL-347033A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2659 | 52841268KLPL/8/20/WATER/02975



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - X OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.01	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.01	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfen α	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	50	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 6141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxx Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175
<b>PHYSICAL PARAMETER</b>				

2659 | 52841268





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2659 | 5284126BKLPL/B/20/WATER/02975



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.2	IS 3025 (Part-11):1984 RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	454	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1998 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1998 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Boudha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Boudha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78, 94, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004716F

**Test Report No** : 2660 | 5285126CKLPL/B/20/WATER/02976 **Issue Date** : 10-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On** : 10-Sep-2020

**Sample Description** : DRINKING WATER (IS 10500:2012)

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND

**Sample Collected By** : By KLPL **MATERIAL** : GATE SIDE (NORTH) DT-27.08.2020

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.8	IS 3025 (Part 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	35	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	5.6	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.05	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.76	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.45	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 35):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	35	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	144	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	133	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.026	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S)

2660 | 5285126C





# KALYANI LABORATORIES PVT. LTD.

7th/44, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2660 | 5285126CKLPL/B/20/WATER/02976



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MDAS)	mg/l, Max	0.2	<0.1	Annex - K Of IS 13428:2003 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H Of IS 13428 : 2003 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6140)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2003 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii o-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan D	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	10	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

### PHYSICAL PARAMETER

2660 | 5285126CKLPL/B/20/WATER/02976







# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2660 | 5285126CKLPL/B/20/WATER/02976



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	234	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

D. Anuska  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004717F

**Test Report No** : 2661 | 5286126DKLPL/8/20/WATER/02977 **Issue Date**: 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-765027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On**: 05-Sep-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL, RED MUD POND RENGOPALI SIDE (SOUTH) DT-26.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1991 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1991 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1991 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	1.8	IS 3025 (PART 34):1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	30.7	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	9.8	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.4	IS 3025 (Part 60):2006
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	10.45	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	50	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	96	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	119	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.023	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)

2661 | 5286126DKLPL/8/20/WATER/02977  
 KLPL-382027A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2661 | 5286126DKLPL/8/20/WATER/02977



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Duthachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175
<b>PHYSICAL PARAMETER</b>				

2661 | 5286126DKLPL/8/20/WATER/02977  
Kalyani Laboratories Pvt. Ltd.  
SR  
KLPL-342026A



# KALYANI LABORATORIES PVT. LTD.

78934, PATAI, BHUBANESWAR-751014, ODISHA

Test Report No : 2661 | 5206126DKLPL/8/20/WATER/02977



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.6	IS 3025 (Part 11):1983, RA 2012
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.2	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	160	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 27):1986 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2661 | 5206126D

Page 3 of 3

KLPL- 342025A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752100, ODISHA

## TEST REPORT



**LAB ID/R NO** : TC704320000004718F

**Test Report No** : 2662 | 5287128EKLPL/8/20/WATER/02978 **Issue Date** : 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-G600013468 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On** : 05-Sep-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification** : GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No. / Lot No** : NA **MRZ Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL PROCESS WATER LAKE (NORTH) DT -27.08.2020

**Sample Collected By** : By KLM.

**Ref. To Sampling Procedure** : QSP-07

### Parameters, Units, Requirement, Result, Test Method

Parameter	Units	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1522:1991 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1522:1991 RA 2009
iii E. coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1522:1991 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	0.3	IS 3025 (Part 34): 1988 RA 2009
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii Calcium (as Ca)	mg/l, Max	75	8.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	5.6	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.12	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.3	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.62	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	5.10	IS 3025 (Part 46):1994 RA 2009
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 5A):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	41	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	43	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.011	IS 3025 (Part 45):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 32): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (1998)

2662 | 5287128EKLPL/8/20/WATER/02978





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2662 | 5207126EKLPL/8/20/WATER/02978



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MOAS)	mg/l, Max	0.2	<0.1	Annex - K Of IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H Of IS 13428:2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.4	Annex F of IS 13428-RA 2017
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 - 2005 RA 2009

### PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

### PHYSICAL PARAMETER

2662 | 5207126E





# KALYANI LABORATORIES PVT. LTD.

78941, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2662 | 5287126EKLPL/B/20/WATER/02978



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
V Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	55	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CH)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2001 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

76944, PAHAL, BHUBANESWAR 752101, ODISHA

Kalyani Laboratories

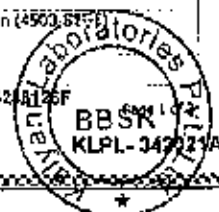
## TEST REPORT



**LAB. U/R NO :** TC70432000004719F  
**Test Report No :** 2663 | 5288126FKLPI/8/20/WATER/02978 **Issue Date:** 05-Sep-2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO-6600013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO. - LANJIGARH, DIST. - KALAHANDI, odisha-766027.  
**Date of receipt :** 28-Aug-2020 **Test Commenced On :** 28-Aug-2020 **Test Completion On:** 05-Sep-2020  
**Sample Description :** DRINKING WATER (IS 10500:2012 )  
**Sample Condition :** SEALED **Sampling Date :** 27-Aug-2020  
**Sample Identification \* :** GROUND WATER **EXP Date :** NA  
**Batch No. , Lot No :** NA **MPG Date :** NA  
**Received Quantity :** 1LTR X 3 **Place of Collection :** OBSERVATION BORE WEL PROCESS WATER LAKE(EAST) DT-27.08.2020  
**Sample Collected By :** By KLPL  
**Ref. To Sampling Procedure:** QSP-07

Parameter	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.6	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	24.5	IS 3025 (Part 40):1981 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	15.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 25):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2004
ix Magnesium (as Mg)	mg/l, Max	30	9.72	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	8	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	192	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	300	101	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.025	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphides	mg/l	2.0	<0.05	APHA 22nd Edition (4503.875)

2663 | 6288126F







# KALYANI LABORATORIES PVT. LTD.

78/94, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No

2

2663 | 5288126FKLPL/B/20/WATER/02979



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APIA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	3.0	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	3.0	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Atrachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	150	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2663 | 5288126





# KALYANI LABORATORIES PVT. LTD.

78044, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2663 | 5288126FKLPL/8/20/WATER/02979



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.1	IS 3025 (Part 11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	298	IS 3025 (Part 15):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 22):1985 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 40):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1989 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... end of Test Report .....

D. Anjaha  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2663 | 5288126F

Page 3 of 3

KLPL- 342019A



# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO :** TC704320000004720F  
**Test Report No :** 2664 | 52891270KLPL/8/20/WATER/02980 **Issue Date:** 05-Sep-2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO-6600013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-765027.  
**Date of receipt :** 28-Aug-2020 **Test Commenced On :** 28-Aug-2020 **Test Completion On:** 05-Sep-2020  
**Sample Description :** DRINKING WATER (IS 10500:2012)  
**Sample Condition :** SEALED  
**Sample Identification \* :** GROUND WATER **Sampling Date :** 27-Aug-2020  
**Batch No , Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** 1LTR X 3 **Place of Collection :** OBSERVATION BORE WELL ASPOND KENDUGUDA  
**Sample Collected By :** By KLPL **SIDE (EAST) DT -27.08.2020**  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO <sub>3</sub>	mg/l, Max	45	2.9	IS 3025 (Part 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	53.3	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	82.4	IS 3025 (Part 31):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.52	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1988 RA 2009
viii Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	11.42	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2005 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	120	IS 3025 (Part 24):1988 RA 2009
xv Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	168	IS 3025 (Part 23):1988 RA 2009
xvi Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	180	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.033	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500.02)

2664 | 52891270





# KALYANI LABORATORIES PVT. LTD.

78744, PALLAL, BIRUBANESWAR-752101, ODISHA

Test Report No : 2664 | 52891270KLPL/B/20/WATER/02980



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MDAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2664 | 52891270





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2664 | 52891270KLPL/8/20/WATER/02980



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.6	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2005
v Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	432	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Anil Kumar*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anil Kumar*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2664 | 52891270

Page 3 of 3

KLPL- 342016A

## TEST REPORT



**NABL ULR NO** : TC704320000004724F  
**Test Report No** : 2668 | 52931274KLPL/8/20/WATER/02984 **Issue Date:** 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED  
**Sample Identification \*** : GROUND WATER **Sampling Date** : 27-Aug-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL WATERED MUD POND BASANTAPADA SIDE(EAST) DT-27.08.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Nitrate as NO <sub>3</sub>	mg/l, Max	45	1.6	IS 3025 (Part 34): 1988 RA 2009
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii	Calcium (as Ca)	mg/l, Max	75	27.4	IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	26.8	IS 3025 (Part 32):1988 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.22	IS 3025 (Part 60):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.76	IS 3025 (Part 53):2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	11.42	IS 3025 (Part 46):1994 RA 2009
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 80):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	7.0	IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	132	IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	115	IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.022	IS 3025 (Part 49):1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	3.0	<0.05	APIA 22nd Edition (1800-82)

2668 | 52931274





# KALYANI LABORATORIES PVT. LTD.

78/94, PSJAL, BHILANESWAR, 752014, ODISHA

Test Report No : 2668 | 52931274KLPL/8/20/WATER/02984



Parameters	Unit	Requirement	Result	Test Method
xx Aluminium (as Al)	mg/L Max	0.03	<0.02	IS 3025 (part-15)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K of IS 13428: 2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 13428: 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428: 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii A-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 500
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**

2668 | 52931274





# KALYANI LABORATORIES PVT. LTD.

70/944, PADMAL, BHUBANESWAR-752001, ODISHA

**Test Report No** : 2668 | 52931274KLPL/B/20/WATER/02984



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1993 RA 2012
iii pH value	---	6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 01):1984 RA 2006
v Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2000
vi Total dissolved solids	mg/l, Max	500	162	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.001	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 40):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2007 RA 2009

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

..... End of Test Report .....

*D. Boudha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Boudha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.







# KALYANI LABORATORIES PVT. LTD.

70941, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004721F

**Test Report No** : 2665 | 52901271KLPL/B/20/WATER/02981 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : P.O.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : DRINKING WATER (15 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*:** GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL ASH POND (NORTH) DT-27.08.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	8.7	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	4.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	10.1	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	15.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.2	IS 3025 (Part 50):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.35	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	7.05	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 55):2006 RA 2012
xi Mineral oil	mg/l, Max	3.5	<0.025	Clause 6 of IS 3025 (Part- 35):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	6.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	60	IS 3025 (Part 33):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	54	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.014	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -01)

2665 | 52901271





# KALYANI LABORATORIES PVT. LTD.

78/9-H, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2665 | 52901271KLPL/B/20/WATER/02981



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K of IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

## PESTICIDE

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan D	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 512
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

## PHYSICAL PARAMETER

2665 | 5290127





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78744, PATIAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2665 | 52901271KLPL/8/20/WATER/029B1



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1993 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1993 RA 2012
III pH value	---	6.5-8.5	7.2	IS 3025 (Part 11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
V Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	70	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as Cn)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1996 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

D. Anilika  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2665 | 52901271

Page 3 of 3

KLPL- 342013A



# KALYANI LABORATORIES PVT. LTD.

78/11, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004722F  
**Test Report No** : 2666 | 52911272XLPL/B/20/WATER/02982 **Issue Date:** 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027  
**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On** : 05-Sep-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED **Sampling Date** : 27-Aug-2020  
**Sample Identification \*** : GROUND WATER **EXP Date** : NA  
**Batch No, Lot No** : NA **MFG Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL DIRTY WATER POND DT-27.08.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	3.0	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	64.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	32.6	IS 3025 (Part 37):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.25	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.8	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.08	IS 3025 (Part 46):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	09	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3),	mg/l, Max	200	194	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3),	mg/l, Max	200	187	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.043	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-1)

2666 | 52911272  
**BBQR**  
 KLPL-342057A



# KALYANI LABORATORIES PVT. LTD.

76/941, PADAL, BHUBANESWAR-751001, ODISHA

Test Report No : 2666 | 52911272KLPL/B/20/WATER/02952



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K of IS 13428:2005 PA 1009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 13428 : 2005 PA 1009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 PA 1009
<b>PESTICIDE</b>				
I p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
II p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
III p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
IV o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
V o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
VI o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
VII p-HCH	µg/l, Max	0.01	<0.01	USEPA 508
VIII o-HCH	µg/l, Max	0.04	<0.01	USEPA 508
IX γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
X Lindane	µg/l, Max	2.0	<0.01	USEPA 508
XI Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
XII Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
XIII Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
XIV Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 0141 A
XV Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
XVI Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 0141 A
XVII Phorate	µg/l, Max	2.0	<0.01	USEPA 0141 A
XVIII 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
XIX Doflathion	µg/l, Max	125	<0.01	USEPA 0141 A
XX Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
XXI Alachlor	µg/l, Max	20	<0.01	USEPA 507
XXII Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
XXIII Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
XXIV Malathion	µg/l, Max	150	<0.01	USEPA 8141 A
XXV Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
XXVI Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
XXVII Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175
<b>PHYSICAL PARAMETER</b>				

2666 | 52911272 BBSR KLPL-342056A





# KALYANI LABORATORIES PVT. LTD.

78/914, PAILAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2666 | 52911272KLPL/B/20/WATER/02982



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.7	IS 3025 (Part-11):1983, RA 2012
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.9	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	336	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1996 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2000
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2000
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1980 RA 2000
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Ananta*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

78/11, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004723F

**Test Report No** : 2667 | 52921273KLPL/8/20/WATER/02983 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** :

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : GROUND WATER **Sampling Date** : 27-Aug-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL ASHPOND KASIBADI SIDE (WEST) DT -27.08.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO <sub>3</sub>	mg/l, Max	45	1.5	IS 3025 (PART 34): 1988 RA 2003
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii Calcium (as Ca)	mg/l, Max	75	34.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	13.4	IS 3025 (Part 37):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.35	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.25	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	14.09	IS 3025 (Part 44):1994 RA 2003
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 50):2005 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 38):1991 RA 2003
xii Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	154	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	144	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	3	0.027	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S <sub>2</sub> -F)

2667 | 52921273





# KALYANI LABORATORIES PVT. LTD.

7894, PAHAL, BHUBANESWAR-75101, ODISHA

Test Report No : 2667 | 52921273KLPL/8/20/WATER/02983



Parameters	Unit	Requirement	Result	Test Method
xi Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 2025 (part-95)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2012
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 509
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 509
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 509
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 509
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.01	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8142 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175
<b>PHYSICAL PARAMETER</b>				

2667 | 52921273







Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78/PAH, PATAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2667 | 52921273KLPL/8/20/WATER/02983



Parameters	Unit	Requirement	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
II Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
III pH value	---	6.5-8.5	7.5	IS 3025 (Part 11):1983, RA 2012
IV Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 12):1984 RA 2006
V Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
VI Total dissolved solids	mg/l, Max	500	170	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

I Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part-2):2013
II Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-1):2013

### TOXIC SUBSTANCES

I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

D. Anupama  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2667 | 52921273

Page 3 of 3

KLPL- 342052A



# KALYANI LABORATORIES PVT. LTD.

78/94, PALLA, BHUDANESWAR-75101, ODISHA

## TEST REPORT



**NAEL ULR NO :** TC28432000004706P  
**Test Report No :** 2650 | 52941262KLPL/B/20/WATER/02989 **Issue Date:** 05-Sep-2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO-6610013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 28-Aug-2020 **Test Commenced On :** 28-Aug-2020 **Test Completion On:** 05-Sep-2020  
**Sample Description :** SURFACE WATER  
**Sample Condition :** SEaled  
**Sample Identification # :** SURFACE WATER **Sampling Date :** 27-Aug-2020  
**Batch No. / Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** 1LIR x 2 **Place of Collection :** STREAM NEAR TENTULIPADA DT-27.08.2020  
**Sample Collected By :** By KLPL  
**Ref. To Sampling Procedure:** QSP-07

**Parameters Tested against Requirements as per IS:1622:1991 RA 2009. Result as per Method**

BACTERIOLOGICAL QUALITY					
I	Total Coliforms	MPN/100ml	5000	34	IS:1622:1991 RA 2009

CHEMICAL PARAMETER					
I	Sulphate as SO <sub>4</sub>	mg/l, Max	400	4	APHA 23rd Edition (4500-SO <sub>4</sub> -F), 2017
II	Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.1	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
III	Electrical Conductivity	µS/cm		60	APHA 23rd Edition (2510 B) 2017
IV	Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F-D, C), 2017
V	Total Dissolved Solid	mg/l, Max	1500	54	APHA 23rd Edition (2540 C), 2017
VI	Calcium as Ca	mg/l, Max	-	11.5	APHA 23rd Edition (3500-Ca-B), 2017
VII	Magnesium as Mg	mg/l, Max	-	3.40	APHA 23rd Edition (3500-Mg-B), 2017
VIII	Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B-B), 2017
IX	Dissolved Oxygen	mg/l, Max	4.0	9.2	APHA 23rd Edition (4500-O-C), 2017
X	Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.7	APHA 23rd Edition 2012 (5210 B), 2017
XI	Total Hardness as CaCO <sub>3</sub>	mg/l, Max	-	43	APHA 23rd Edition (2540 C), 2017
XII	Chloride (as Cl)	mg/l, Max	600	13.4	IS 3025 (Part 32):1968, RA 2009
XIII	Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV	Iron (as Fe)	mg/l, Max	50	0.09	APHA 23rd Edition (3500-Fe-B, 3151 B), 2017
XV	Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
XVI	Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII	Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII	Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	-	<0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
XX	Oil & Grease	mg/l, Max	-	<0.025	APHA 23rd Edition (5520 B) 2017
XXI	Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXII	Anionic Surface Active Agents (as NRAS)	mg/l	-	<0.1	Annex K of IS 13428:2002

2650 | 52941262  
 Page 2  
**BBSR**  
 KLPL-34205A



Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78244, PAHAL, BIRJANESWAR-752101, ODISHA.

Test Report No : 2650 | 52941262KLPL/B/20/WATER/02985



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	-	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	-	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	-	0.0008	CL 5.0 of IS 3025 (Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	-	0.59	-
xxvii Barium	mg/l	-	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	ug/l	-	<0.0001	ISOPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120-0), 2017
ii pH Value	--	6.5-8.5	7.9	APHA 23rd Edition (4500-44+0), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120-0), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 0): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) 1096 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	-	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D Anilika*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2650 | 52941262

Page 2 of 2

KLPL- 342050A



# KALYANI LABORATORIES PVT. LTD.

78004, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004707F

**Test Report No** : 2651 | 52951263KLPL/8/20/WATER/02986 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \* :** SURFACE WATER **Sampling Date :** 27-Aug-2020

**Batch No , Lot No** : NA **MFS Date :** NA **EXP Date :** NA

**Received Quantity** : 1LTR X 2 **Place of Collection :** STREAM NEAR KENDUBADI DT-27.08.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	50	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO4	mg/l, Max	400	5	APHA 23rd Edition (4500-SO42 - -E), 2017
ii Nitrate as NO3	mg/l, Max	50	0.15	APHA 23rd Edition (4500-NO3 - -E), 2017
iii Electrical Conductivity	µs/cm	-	44	APHA 23rd Edition (2510 a) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - -O,-C), 2017
v Total Dissolved Solid	mg/l, Max	1500	38	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	5.9	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	6.08	APHA 23rd Edition (3500-Mg B), 2017
viii Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B- B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	8.6	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (for 3 days 27deg C)	mg/l, Max	--	2.2	APHA 23rd Edition 2012(5210 B), 2017
xi Total Hardness as CaCO3	mg/l, Max	--	32	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	11.5	IS 3025 (Part 32):1988, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	<0.05	APHA-23rd Edition (3500-Fe-B , 3111 B ) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 56):2006 RA 2009
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	---	<0.01	APHA-23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 53):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2651 | 52951263





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2651 | 52951263KLPL/8/20/WATER/02986



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0009	CL 5.0 of IS 3025 (Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.69	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTISIDE	ug/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	8.0	APHA 23rd Edition (4500-H+ B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 0): 1994, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Bhowika*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2651 | 52951263

Page 2 of 2

KLPL- 342048A



# KALYANI LABORATORIES PVT. LTD.

78244, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004706F

**Test Report No** : 2652 | 52961264KLPL/8/20/WATER/02987 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-15.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \* :** SURFACE WATER **Sampling Date :** 27-Aug-2020

**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA

**Received Quantity** : 1LTR X 2 **Place of Collection :** STREAM NEAR RENGOPALI DT -27.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	32	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO <sub>4</sub>	mg/l, Max	400	3	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.1	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
iii Electrical Conductivity	µs/cm	-	72	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -D, C), 2017
v Total Dissolved Solid	mg/l, Max	1500	58	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	7.2	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	7.05	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500-B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	6.7	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (For 5 days @ 20 deg C)	mg/l, Max	--	1.9	APHA 23rd Edition 2012 (5210 B), 2017
xi Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	47	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	11.5	IS 3025 (Part 32):1988, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.35	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2005 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	--	<0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA 23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13420:2005

2652 | 52961264





# KALYANI LABORATORIES PVT. LTD.

73/44, PAHAL, BHUBANESWAR-751011, ODISHA

Test Report No : 2652 | 52961264KLPL/B/20/WATER/02987



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 8440
xxii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13420:2005
xxiii Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxiv PERCENT SODIUM (%)	%	--	0.0007	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ADSORPTION RATIO	--	--	0.44	--
xxvii Barium	mg/l	--	<0.2	Annex F of IS 13420:2005
xxviii TOTAL PESTICIDE	ppb/l	--	<0.0001	USCPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H++-0), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/ml	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/ml	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27): 1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 7):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D Anupha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2652 | 52961264

Page 2 of 2

KLPL- 342046A



# KALYANI LABORATORIES PVT. LTD.

78/44, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004709F

**Test Report No** : 2653 | 52971265KLPL/B/20/WATER/02988 **Issue Date**: 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On**: 05-Sep-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 27-Aug-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSADHARA RIVER NEAR BALABHADRAPUR DT-27.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	110	IS: 1632:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO <sub>4</sub>	mg/l, Max	400	19	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	1.4	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
iii Electrical Conductivity	µS/cm	-	195	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -D, -C), 2017
v Total Dissolved Solid	mg/l, Max	1500	140	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	20.2	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	11.42	APHA 23rd Edition (3500-Mg-B), 2017
viii Barium as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500-B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	8.5	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (For 5 days 27deg C)	mg/l, Max	--	2.9	APHA 23rd Edition (5210 B), 2017
xi Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	97	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	13.4	IS 3025 (Part 33):1981, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 47):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.5	APHA 23rd Edition (3500-Fe-D, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	--	<0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA 23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13420:2005

2653 | 52971265







# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALI, BHUBANESWAR-752101, ODISHA

Test Report No : 2653 | 52971265KLPL/6/20/WATER/02988



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13438:2005
xxiv Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0014	Cl. 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.61	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13438:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.7	APHA 23rd Edition (4500-H+-B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1990 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Anubha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*Prasanna*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2653 | 52971265

Page 2 of 2

KLPL- 342044A



# KALYANI LABORATORIES PVT. LTD.

78/044, PAHAL, BHUDANESWAR-752101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC704320000004710F

**Test Report No** : 2654 | 52961266KLPL/8/20/WATER/02989 **Issue Date**: 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI,

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On**: 05-Sep-2020

**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED

**Sample Identification \*** : SURFACE WATER **Sampling Date** : 27-Aug-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSADHARA RIVER NEAR NARAYANPUR CULVERT (UPSTREAM) DT-27.08.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	40	IS: 1622:1981 RA 2006
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO <sub>4</sub>	mg/l, Max	400	15	APHA 23rd Edition (4500-SO <sub>4</sub> -2 - (C), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.6	APHA 23rd Edition (4500-NO <sub>3</sub> -4), 2017
iii Electrical Conductivity	µs/cm	-	100	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - (C), 2017
v Total Dissolved Solid	mg/l, Max	1500	122	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	18.7	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	9.48	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B - B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	8.9	APHA 23rd Edition(4500-O-C), 2017
x Biochemical Oxygen Demand(For 3 days 27deg C)	mg/l, Max	--	2.5	APHA 23rd Edition 2012(5210 B), 2017
xi Total Hardness as CaCO <sub>3</sub>	mg/l, Max	--	86	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	15.3	IS 3025 (Part 2):1988, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	4.4	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	--	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	--	<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max	--	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	--	<0.1	Annex K of IS 13428:2005

2654 | 52961266



**Test Report No** : 2654 | 52981266KLPL/8/20/WATER/02989



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex 3 of IS 13428:2005
xxiv Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0009	Cl. 5.0 of IS 3025 (Part 45):1993
xxvi SODIUM ADSORPTION RATIO	--	--	0.42	--
xxvii Barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	ppb	--	<0.0001	IS EPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H <sub>+</sub> -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	---	Agreeable	AGREEABLE	IS 3025 (Part B): 1984, RA 2005
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	uCi/mL	0.001	NIL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	NIL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as Cn)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D Anand*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*Anand*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/244, PAHAL, BHUBANESWAR-752011, ODISHA

## TEST REPORT



**NABL URL NO** : TC70432000004725F

**Test Report No** : 2689 | 52991273KLPL/S/20/WATER/02990 **Issue Date** : 05 Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6500013400 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : P.O.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28 Aug-2020 **Test Completion On** : 05 Sep 2020

**Sample Description** : SURFACE WATER

---

**Sample Condition** : SEALED

**Sample Identification #** : SURFACE WATER **Sampling Date** : 27-Aug-2020

**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : VAMSADIARA RIVER NEAR CHHATRAPUR CULVERT (DOWNSTREAM) DT-27.08.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

### Parameters, Units, Requirement, Result, Test Method

BACTERIOLOGICAL QUALITY				
I	Total Coliforms	MPN/100ml	5000	50 IS: 1622:1981 RA 2009
CHEMICAL PARAMETER				
I	Sulphate as SO <sub>4</sub>	mg/l, Max	400	30 APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
II	Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.8 APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
III	Electrical Conductivity	µs/cm	-	215 APHA 23rd Edition (2510-B), 2017
IV	Fluoride as F	mg/l, Max	1.5	0.15 APHA 23rd Edition (4500-F -D,-C), 2017
V	Total Dissolved Solid	mg/l, Max	1500	172 APHA 23rd Edition (2540-C), 2017
VI	Calcium as Ca	mg/l, Max	-	21.6 APHA 23rd Edition (3500-Ca-B), 2017
VII	Magnesium as Mg	mg/l, Max	-	8.75 APHA 23rd Edition (3500-Mg-B), 2017
VIII	Boron as B	mg/l, Max	-	<0.1 APHA 23rd Edition (4500-B), 2017
IX	Dissolved Oxygen	mg/l, Max	4.0	9.4 APHA 23rd Edition (4500-O-C), 2017
X	Biochemical Oxygen Demand (For 5 days 27deg C)	mg/l, Max	-	2.8 APHA 23rd Edition 2012 (5210-B), 2017
xi	Total Hardness as CaCO <sub>3</sub>	mg/l, Max	-	90 APHA 23rd Edition (2340-C), 2017
xii	Chloride (as Cl)	mg/l, Max	600	24.9 IS 3025 (Part 32):1988, RA 2009
xiii	Copper (as Cu)	mg/l, Max	1.5	<0.01 IS 3025 (Part 42):1992 RA 2009
xiv	Iron (as Fe)	mg/l, Max	50	6.0 APHA 23rd Edition (3500-Fe-B, J111-B), 2017
xv	Manganese (as Mn)	mg/l, Max	-	<0.1 IS 3025 (Part 59):2006 RA 2012
xvi	Selenium (as Se)	mg/l, Max	0.01	<0.01 IS 3025 (Part 56):2003 RA 2009
xvii	Zinc (as Zn)	mg/l, Max	15	<0.01 IS 3025 (Part 49):1994 RA 2009
xviii	Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	-	<0.01 APHA 23rd Edition (4500-NH <sub>3</sub> -B), 2017
xix	Oil & Grease	mg/l, Max	-	<0.025 APHA 23rd Edition (5520-N), 2017
xx	Total Chromium	mg/l, Max	0.05	<0.01 IS 3025 (Part 52):2003 RA 2009
xxi	Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1 Annex K of IS 15420:2005

2689 | 52991273





# KALYANI LABORATORIES PVT. LTD.

78944, PAHAL, BILHANESWAR-752101, ODISHA

Test Report No : 2669 | 52991275KLPL/B/20/WATER/02990



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.001	APHA 6440
xxiii Silver (as Ag)	mg/l	--	<0.001	Annex J of IS 13420:2005
xxiv Phenols	mg/l,Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0013	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.59	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13420:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	6.0	APHA 23rd Edition (4500-H+8), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) :1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Boudha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Boudha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78914, PAHAL, BHUBANESWAR-751101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO** : TC70432000004726F

**Test Report No** : 2670 | 53001276KLPL/8/20/WATER/02991 **Issue Date:** 05-Sep-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On:** 05-Sep-2020

**Sample Description** : SURFACE WATER

---

**Sample Condition** : SEALED **Sampling Date** : 27-Aug-2020

**Sample Identification \*** : SURFACE WATER **MFG Date** : NA **EXP Date** : NA

**Batch No , Lot No** : NA **Place of Collection** : TURI NALA NEAR REGHUNATHPUR DT-27.08.2020

**Received Quantity** : 1LTR X 2

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml	5000	90	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Sulphate as SO <sub>4</sub>	mg/l, Max	400	10	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
II Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.7	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
III Electrical Conductivity	µs/cm	-	163	APHA 23rd Edition (2510 B) 2017
IV Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - D, C), 2017
V Total Dissolved Solid	mg/l, Max	1500	118	APHA 23rd Edition (2540 G), 2017
VI Calcium as Ca	mg/l, Max	-	17.3	APHA 23rd Edition (3500-Ca-B), 2017
VII Magnesium as Mg	mg/l, Max	-	9.72	APHA 23rd Edition (3500-Mg-B), 2017
VIII Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B-B), 2017
IX Dissolved Oxygen	mg/l, Max	4.0	6.5	APHA 23rd Edition (4500-D-C), 2017
X Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.2	APHA 23rd Edition 2012 (5210 B), 2017
XI Total Hardness as CaCO <sub>3</sub>	mg/l, Max	-	83	APHA 23rd Edition (2340 C), 2017
XII Chloride (as Cl)	mg/l, Max	600	10.1	IS 3025 (Part 22):1988, RA 2009
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	0.75	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
XIX Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 IIA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13420:2005

2670 | 53001276





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78/94, PAHAL, BHUBANESWAR-752101, ODISHA.

Test Report No : 2570 | 53001276KLPL/8/20/WATER/02991



Parameters	Unit	Requirement	Result	Test Method
xxii. Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 6440
xxiii. Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv. Phenols	mg/l,Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv. PERCENT SODIUM (%)	%	--	0.0007	CL 5.0 of IS 3025(Part 45):1993
xxvi. SODIUM ABSORPTION RATIO	--	--	0.33	
xxvii. barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii. TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i. Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii. pH Value	--	6.5-8.5	7.2	APHA 23rd Edition (4500-H+-B), 2017
iii. Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv. Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i. Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii. Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i. Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 22): 1986 RA 2003
iii. Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v. Nickel (as Ni)	mg/l	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi. Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D Anuraj*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





Kalyani Laboratories

# KALYANI LABORATORIES PVT. LTD.

78044, PAHAL, DHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004727F  
**Test Report No** : 2671 | 53011277KLPL/8/20/WATER/02992 **Issue Date:** 05-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Aug-2020 **Test Commenced On** : 28-Aug-2020 **Test Completion On** : 05-Sep-2020  
**Sample Description** : SURFACE WATER

**Sample Condition** : SEALED  
**Sample Identification \* :** SURFACE WATER **Sampling Date** : 27-Aug-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : POND NEAR HAREKRUSHNAPUR DT -27.08.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I Total Coliforms	MPN/100ml	5000	50	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Sulphate as SO <sub>4</sub>	mg/l, Max	400	17	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
II Nitrate as NO <sub>3</sub>	mg/l, Max	50	1.2	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
III Electrical Conductivity	µs/cm	-	190	APHA 23rd Edition (2510 B) 2017
IV Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -O, -C), 2017
V Total Dissolved Solid	mg/l, Max	1500	140	APHA 23rd Edition (2540 C), 2017
VI Calcium as Ca	mg/l, Max	-	18.7	APHA 23rd Edition (3500-Ca-B), 2017
VII Magnesium as Mg	mg/l, Max	-	11.42	APHA 23rd Edition (3500-Mg-B), 2017
VIII Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B-B), 2017
IX Dissolved Oxygen	mg/l, Max	4.0	4.5	APHA 23rd Edition (4500-O-C), 2017
X Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.8	APHA 23rd Edition 2012 (5210 B), 2017
XI Total Hardness as CaCO <sub>3</sub>	mg/l, Max	-	94	APHA 23rd Edition (2340 C), 2017
XII Chloride (as Cl)	mg/l, Max	600	23	IS 3025 (Part 32):1988, RA 2009
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	1.4	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 58):2006 RA 2012
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	-	<0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
XIX Oil & Grease	mg/l, Max	-	<0.025	APHA 23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13420:2005

2671 | 53011277







# KALYANI LABORATORIES PVT. LTD.

78/945, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2671 | 53011277KLPL/8/20/WATER/02992



Parameters	Unit	Requirement	Result	Test Method
xxii Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 8440
xxiii Silver (as Ag)	mg/l	--	<0.01	Annex J of IS 13428:2005
xxiv Phenols	mg/l, Max	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv PERCENT SODIUM (%)	%	--	0.0011	CL 5.0 of IS 3025(Part 45):1993
xxvi SODIUM ABSORPTION RATIO	--	--	0.49	
xxvii barium	mg/l	--	<0.2	Annex F of IS 13428:2005
xxviii TOTAL PESTICIDE	µg/l	--	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4520-H+U), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6): 1994, RA 2005
<b>RADIOACTIVITY SUBSTANCES</b>				
i Gross Alpha-activity	µCi/mL	0.001	BDL	IS 14134 (PART-2):2013
ii Gross Beta-activity	µCi/mL	0.01	BDL	IS 14134 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27) (1986 RA 2001
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Ananta*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

75, 914, PARALA, BHUBANESWAR, ODISHA

## TEST REPORT



**NABL IIR NO** : TC704320000004R36P  
**Test Report No** : 549 | KLPL/09/20/ENVN/06695  
**Amendment No** : -  
**Reference** : (KOPR NO-6600013488 DT-16.12.2019)  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 01-Sep-2020 **Commenced On** : 07 Sep 2020 **Completion On** : 12-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

**Parameters** (Unit) **Standard Value** (Result) **Test Method**

Location & Date : CHHATRAPUR VILLAGE, 01.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.34	IS 5182 (PART-2) : 2011
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.24	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	55.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	50	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	34	0.47	KLPL/SOP/AIR-18
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollution Volume-1 & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

Analysed By  
*[Signature]*  
 For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
*[Signature]*  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342182 A



# KALYANI LABORATORIES PVT. LTD.

78/44, PATAI A, BHUBANESWAR 752001, ODISHA

## TEST REPORT



**NABL ULR NO** : YC704320000004836P  
**Test Report No** : 549 | KLPL/09/20/EHVN/D0695A  
**Amendment No** : -  
**Reference** : ORDER NO-6000013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAIANDI, ODISHA-766027.  
**Date of receipt** : 07-Sep-2020 **Commenced On** : 07-Sep-2020 **Completion On** : 12-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : MID DAY MEAL, 02.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.17	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.11	IS 5182 (PART 5) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	300	59.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.09	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.67	KLPL/SOP/AIR-16
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prasad.*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Arunika*

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342181A



# KALYANI LABORATORIES PVT. LTD.

78-09, PATALA, BHUBANESWAR-751010, ODISHA

## TEST REPORT



**NABL BLR NO** : TC704320000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/00695B  
**Arrangement No** : -  
**Reference** : ORDER NO 8600013400 DT 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. - LANJIGARH, DIST. - KALAHANDI, ODISHA-756027.  
**Date of receipt** : 07-Sep-2020 **Commenced On** : 07-Sep-2020 **Completion On** : 12-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020  
**Arrangement Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : LANJIGARH VILLAGE, 03.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.18	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.21	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.29	KLPL/SOP/AIR-03
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	94	0.46	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.4	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollution Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prasad*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Arjun*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1284483611344  
KLPL-JA1788A



# KALYANI LABORATORIES PVT. LTD.

5000, PAHALA, BHURANESWAR-751001, ODISHA

## TEST REPORT



**NABL UR NO** : TC704320000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/00695C  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAJANDI, ODISHA-756027.  
**Date of receipt** : 07-Sep-2020 **Commenced On** : 07-Sep-2020 **Completion On** : 12-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref to Sampling Procedure** : QSP-U7

**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 04.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.08	IS 5182(PART-2) : 2004
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.27	IS 5182 (PART 4) : 2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	63.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	23.17	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.78	KLPL/SOP/AIR-18
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-20
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SDP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SDP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SDP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*P. Prasad*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anurag*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E44836A1344  
KLPL/09/20/79A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

## TEST REPORT



**NABL IIR NO** : TC704320000004826P  
**Test Report No** : 349 | KLPL/06/20/ENVN/0069SD  
**Amendment No** : -  
**Reference** : ORDER NO 5600013438 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 07-Sep-2020 **Commenced On** : 07-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020  
**Amendment Date** :

**Completion On** : 12-Sep-2020

Parameter	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : BELAMBA VILLAGE, 05.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.12	IS 8182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.12	IS 8182 (PART 6) :2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	51.0	IS 8182(PART-29) :2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	23.48	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.43	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



**12E4483611344**  
**KLPL- 342293A**



# KALYANI LABORATORIES PVT. LTD.

78/AM, PARAL A, BHUBANI 751018, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004836F  
**Test Report No** : 549 | KLP/09/20/ENVN/00895E **Issue Date** : 05-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 14-Sep-2020 **Continenced On** : 14-Sep-2020 **Completion On** : 19-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 07.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.76	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	15.07	IS 5182 (PART 2) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	72.0	IS 5182(PART-2) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	32.42	KLP/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.39	KLP/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	7.3	KLP/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLP/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLP/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCA Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLP/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLP/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.67	KLP/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prasad*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anurupa*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611704



# KALYANI LABORATORIES PVT. LTD.

KALYANI SWARAJ, BBSR, ODISHA

## TEST REPORT



**NABL NLR NO :** TC7D4320000004836P  
**Test Report No :** 549 | KLPL/09/20/ENVH/00695P  
**Amendment No :** -  
**Reference :** ORDER NO-6600013488 DT- 16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 14-Sep-2020 **Commenced On :** 14-Sep-2020 **Completion On:** 19-Sep-2020  
**Sample Name :** AMBIENT AIR QUALITY MONITORING  
**Sample Condition :** GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity :** 1 NO  
**Ref. To Sampling Procedure:** QSM-07

**Issue Date :** 05-Oct-2020

**Amendment Date :** -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date :</b> CHHATRAPUR VILLAGE, 08.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.34	IS 5102(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.31	IS 5102 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	56.0	IS 5102(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.21	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I § 11
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks :** NIL

**Any unusual feature observed during determination :** NIL

End of Test Report

*P. Prasad*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anuska*

Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342176 A





# KALYANI LABORATORIES PVT. LTD.

2594, RAJALAKSHMI BANESWAR, CUTTACK, ODISHA

## TEST REPORT



**NABL ULR NO** : TC7043200D0004836P  
**Test Report No** : 549 | KLPL/D9/20/ENVH/00695G  
**Amendment No** :  
**Reference** : ORDER NO 650061488 DTD 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- I ANJIGARH, DIST.- KALAHANDI, ODISHA-768027.  
**Date of receipt** : 14-Sep-2020  
**Commenced On** : 14-Sep-2020  
**Completion On** : 19-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020

**Amendment Date** :

Parameters	Unit	Standard Value	Result	Test Method
------------	------	----------------	--------	-------------

Location & Date : MID DAY NEAL, 09.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.36	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.32	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	89.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.03	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.82	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*[Signature]*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611244



# KALYANI LABORATORIES PVT. LTD.

394C, PATAIA, BILUPESWAR, TENDULI, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004838F  
**Test Report No** : 549 | KLPL/09/20/ENVH/00695H  
**Amendment No** :  
**Reference** : ORDER NO: 6500013488 DT-16 12 2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 14-Sep-2020 Commenced On : 14-Sep-2020 Completion On: 19-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure:** QSP-07



Issue Date : 05-Oct-2020

Amendment Date : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANJIGARH VILLAGE , 10.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.08	IS 5302(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.21	IS 5302 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	66.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.54	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.48	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<1.0	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<1	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prasad*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anand*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



12E4836119A9  
KLPL-342174A



# KALYANI LABORATORIES PVT. LTD.

7994, PAHALA, BHUBANESWAR 751001, ODISHA

## TEST REPORT



**NABL LMR NO** : YG70432000004826P  
**Test Report No** : 549 | KLPL/09/20/EMVN/00695T  
**Amendment No** : -  
**Reference** : ORDER NO-5600013488 DT-16.12.2019  
**Customer Name** : YEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-761027.  
**Date of receipt** : 14-Sep-2020 **Commenced On** : 14-Sep-2020 **Completion On** : 19-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : QSP-07  
**Issue Date** : 05-Oct-2020  
**Amendment Date** :

**Parameters** : **Unit** : **Standard Value** : **Remarks** : **Test Method**

Parameters	Unit	Standard Value	Remarks	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 11.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.26	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	14.39	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	65.0	IS 5182(PART-23) :2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.17	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.75	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.1	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-08
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483641244



# KALYANI LABORATORIES PVT. LTD.

SOMI PATH, V. BELURAM SWARGADEH, BIRNHA

## TEST REPORT



NABL DLR NO : TC704320000004636P

Test Report No : 549 | KLPL/09/20/ENVH/006953

Issue Date : 05-Oct-2020

Amendment No :

Amendment Date :

Reference : ORDER NO-6600013406 DT 16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 14-Sep-2020 Commenced On : 14-Sep-2020

Completion On: 19-Sep-2020

Sample Name : AMBIENT AIR QUALITY MONITORING

Sample Condition : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED

Quantity : 1 NO

Ref. To Sampling Procedure: QSP-07

Parameters

Unit Standard Value Results Test Method

Location & Date : BELANDA VILLAGE, 12.09.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.21	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	10.42	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	53.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	22.13	KLPL/SDP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.44	KLPL/SDP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	KLPL/SDP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SDP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SDP/AIR-35
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SDP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SDP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SDP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prigoyal*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anurag*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.



1254483611344  
KLPL/SDP/AIR-07



# KALYANI LABORATORIES PVT. LTD.

75/961, P. ATIALA, B.H.P. BANGS-WAR, 751001, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004836P  
**Test Report No** : 549 | KLPL/DR/20/ENVN/00595K  
**Amendment No** :  
**Reference** : ORDER NO 6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA 756027.  
**Date of receipt** : 21-Sep-2020 **Commenced On** : 21-Sep-2020 **Completion On** : 26-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Standard Value	Result	Test Method
<b>Location &amp; Date</b> : PLANT SITE , 14.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.62	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.26	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	75.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	33.62	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.43	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	6.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	EPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-30
Nickel (Ni)	µg/m <sup>3</sup>	20	2.93	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prigudal*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anurag*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
 KLPL-342171A  
 Page 1 of 1



# KALYANI LABORATORIES PVT. LTD.

TRULI, PALI A. S. BIHARANISWAR 75101, ODISHA

## TEST REPORT



**NABL IIR NO :** TC70432000004838P  
**Test Report No :** 349 | KLPL/09/20/ENVN/0066SL  
**Issue Date :** 05-Oct-2020  
**Amendment No :** -  
**Amendment Date :** -  
**Reference :** ORDER NO-6600013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 21-Sep-2020 **Commenced On :** 21-Sep-2020 **Completion On :** 26-Sep-2020  
**Sample Name :** AMBIENT AIR QUALITY MONITORING  
**Sample Condition :** GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity :** 1 NO  
**Ref. To Sampling Procedure :** QSP-07

**Parameters**      **Unit**      **Standard Value**      **Results**      **Test Method**  
**Location & Date :** CHHATRAPUR VILLAGE, 15.09.2020

Parameters	Unit	Standard Value	Results	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.37	IS 5102(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.05	IS 5102 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	50.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.50	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<20	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCO Guidelines of Ambient Air Pollutants Volume-I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prigoyal*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anuketa*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342170 A



# KALYANI LABORATORIES PVT. LTD.

75/54, CALATA, BHUBANESWAR 751016, ODISHA

## TEST REPORT



**KALYANI DLR No** : TC70432000004836P  
**Test Report No** : 349 | KEPL/09/20/ENVN/00695M  
**Amendment No** : -  
**Reference** : ORDER NO-6600013480 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PD.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 21-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ADSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07  
**Issue Date** : 07-Oct-2020  
**Amendment Date** :  
**Commenced On** : 21-Sep-2020  
**Completion On** : 26-Sep-2020

**Parameters** : **Unit** : **Standard Value** : **Result** : **Test Method**

**Location & Date** : MID DAY MEAL, 16.09.2020

Parameters	Unit	Standard Value	Result	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.32	IS 5182(PART 2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.39	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61.8	IS 5182(PART-23) : 2004
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	28.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.71	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.29	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Biswal*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Nayak*

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342169 A



# KALYANI LABORATORIES PVT. LTD.

50/4, PADMA VIBHUSANWAR 72101, BOMBAY

## TEST REPORT



**NAAL ULR NO** : TC7043200000483EP  
**Test Report No** : 549 | KLPL/09/20/ENVN/00695N  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-15.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, OISHMA-766027.  
**Date of receipt** : 21-Sep-2020 **Commenced On** : 21-Sep-2020 **Completion On** : 26-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ADSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07  
**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANJIGARH VILLAGE, 17.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.31	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.49	IS 5182 (PART 8) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	68.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	30.18	KLPL/SOP/AIR-03
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.49	KLPL/SOP/AIR-13
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<1.0	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume I & II
Benza (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342168 A

KLPL





# KALYANI LABORATORIES PVT. LTD.

75944, PATAVA, BIL, BANESWAR, 752001, INDIA

## TEST REPORT



**NABL CLR NO** : TC70432000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/000950  
**Amendment No** : -  
**Reference** : ORDER NO-GG00013188 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 21-Sep-2020 Commenced On : 21-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

**Completion On** : 26-Sep-2020

**Parameters** : **Unit** : **Standard Value** : **Remarks** : **Test Method**

Location & Date : REHABILITATION COLONY, 16.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.37	IS 5182(PART-2) : 2006
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.17	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	64.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.41	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.74	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	3.6	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prasad*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anupama*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
 KLPL-342187 A

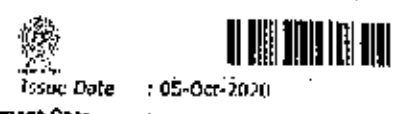


# KALYANI LABORATORIES PVT. LTD.

74, PABALA, BHUBANESWAR 751011, ODISHA

## TEST REPORT

**NABL ID No** : YC704320DD0004836P  
**Test Report No** : 549 | KLPL/09/20/ENVH/00895P  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766007,  
**Date of receipt** : 21-Sep-2020 **Commenced On** : 21-Sep-2020 **Completion On** : 26-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-01



**Parameters** : **Unit** : **Standard/Limit** : **Result** : **Test Method**

Location & Date : BELAMBRA VILLAGE, 19.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.05	IS 5182 (PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	9.41	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	57.0	IS 5182 (PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	26.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & 11
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Biswal*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anandhan*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.




12E4483611344  
KLPL-02168A



# KALYANI LABORATORIES PVT. LTD.

NEW PATILIA, BILHASNAPUR, BILASPUR, CHHATTISGARH

**NABL ULR NO** : TC70432000004836P  
**Test Report No** : 348 | KLP/LD9/20/ENVN/00695Q  
**Amendment No** :  
**Reference** : ORDER NO-8600013488 D1-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 28-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. to Sampling Procedure** : QSP-07

**TEST REPORT**  
  
**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

**Completion On** : 03-Oct-2020

Parameters	Unit	Standard Value	Result	Test Method
<b>Location &amp; Date</b> : PLANT SITE, 21.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	8.20	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	16.31	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	73.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	31.26	KLP/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.4	KLP/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	7.3	KLP/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLP/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLP/SOP/AIR-06
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-1 § 11
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLP/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLP/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.19	KLP/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

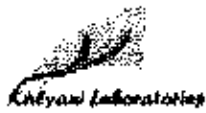
End of Test Report

*P. Singhwal*  
 Analyzed By  
 For Kalyani Laboratories Pvt. Ltd.

*Arun Kumar*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
 KLP/L-342185 A



# KALYANI LABORATORIES PVT. LTD.

75/1, PARAS, BHUVANESWAR, 751016, INDIA

## TEST REPORT



**NABL UR NO** : YC20492000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/00695R  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEIDANYA LIMITED, LANTIGARH  
**Address** : PO.- LANTIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28 Sep-2020 **Commenced On** : 28-Sep-2020 **Completion On** : 03-Oct-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07  
**Parameters** :

Location & Date	Unit	Standard Value	Result	Test Method
<b>Location &amp; Date</b> : CHHATRAPUR VILLAGE, 22.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	4.40	IS 5102(PART-2) : 2002
Nitrogen Dioxide	µg/m <sup>3</sup>	80	11.49	IS 5102 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	61.0	IS 5102(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.52	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	160	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	488	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollution Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*J. Prasad.*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*S. Anil Kumar*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
 KLPL-342164 X



# KALYANI LABORATORIES PVT. LTD.

28443, PALLI, A. Hill BANSWARI ROAD, ODISHA

**NABL IIR NO** : TC704320000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/066958  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. LANJIGARH, DIST. KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 29-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 05-Oct-2020  
**Amendment Date** :  
**Completion On** : 03-Oct-2020



**Parameters** : **Unit** : **Standard Value** : **Result** : **Test Method**  
**Location & Date** : MID DAY MEAL, 23.09.2020

Parameters	Unit	Standard Value	Result	Test Method
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.29	IS 5182(PART 2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	12.35	IS 5182 (PART 1) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	89.0	IS 5182(PART-1) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	25.32	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.67	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.2	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-30

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*P. Prasad*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anand*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E4483611344  
KLPL-342163A



# KALYANI LABORATORIES PVT. LTD.

30, PALLA, ATTHI HANI SWAR, BHOJ, ODISHA

## TEST REPORT



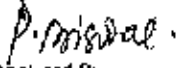
**NABL ULR NO** : TC704310100004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/00695T  
**Amendment No** : -  
**Referent** : OUPRIL NO. 6600013400 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANDIGARH  
**Address** : PO. - LANDIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 / **Commenced On** : 28 Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref. To Sampling Procedure** : QSP-07  
**Issue Date** : 05 Oct-2020  
**Amendment Date** : -  
**Completion On** : 03-Oct-2020

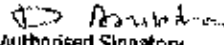
Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : - LANDIGARH VILLAGE , 24.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.24	IS 5182(PART 2) : 2006
Nitrogen Dioxide	µg/m <sup>3</sup>	90	13.08	IS 5182 (PART 6) : 2008
Particulate Matter (PM10)	µg/m <sup>3</sup>	500	65.0	IS 5182(PART-20) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	29.39	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.47	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	EPCB Guidelines of Ambient Air Pollutants Volume I & D
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E44B3611244



# KALYANI LABORATORIES PVT. LTD.

N 34, PALMVA RIDE, BANASWARI, 560075, BANGALORE, INDIA

## TEST REPORT



**NABL IIR NO** : TC20432000004836P  
**Test Report No** : 549 | KLPL/DS/20/ENVN/00695U  
**Amendment No** :  
**Reference** : ORDER NO-8600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANIGARH  
**Address** : PO- LANIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 28-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASOLIN SAMPLE ADSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref.To Sampling Procedure** : QSI-07

**Issue Date** : 05-Oct-2020  
**Amendment Date** : -

**Completion On** : 03-Oct-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : REHABILITATION COLONY, 25.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	6.45	IS 5182(PART-2) : 2001
Nitrogen Dioxide	µg/m <sup>3</sup>	80	13.05	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	88.0	IS 5182(PART-28) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	27.03	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.72	KLPL/SOP/AIR-10
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	2.9	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollution Volume-I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

..... End of Test Report .....

*P. Prindal*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1254483641344  
 KLPL/DS/20/1874

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

35/44, CALMATA, SRI LAKSHMI NAGAR, Bhubaneswar, ODISHA

## TEST REPORT

**NABL ULR NO** : TC704320000004836P  
**Test Report No** : 549 | KLPL/09/20/ENVN/0069SV  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Client Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, OTSI - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 28-Sep-2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref To Sampling Procedure** : QSP-07



**Issue Date** : 05-Oct-2020  
**Amendment Date** :

**Completion On** : 03-Oct-2020

**Parameters** : **Unit** : **Standard Value** : **Results** : **Test Method**

Location & Date : SELANBA VILLAGE, 26.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	5.18	IS 5182(PART-2) : 2005
Nitrogen Dioxide	µg/m <sup>3</sup>	80	9.21	IS 5182 (PART 6) : 2005
Particulate Matter (PM10)	µg/m <sup>3</sup>	100	54.0	IS 5182(PART-23) : 2005
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	24.16	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	0.45	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	1.5	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-08
Benzene (C6 H6)	µg/m <sup>3</sup>	03	<1	CPCB Guidelines of Ambient Air Pollutants Volume-1 & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	05	<1	KLPL/SOP/AIR-10
Nickel (NI)	µg/m <sup>3</sup>	20	<4	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prasad*  
 Analyzed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Anubha*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



12E44835A13AA





# KALYANI LABORATORIES PVT. LTD.

TRADE REG. NO. 111/BANASWAR 77101, ODISHA

**NABL ULR NO** : TC70432000004836P  
**Test Report No** : B49 | KLPL/09/20/ENVN/00695W  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAJANDI, ODISHA-756027.  
**Date of receipt** : 30-Sep-2020 **Commenced On** : 30-Sep 2020  
**Sample Name** : AMBIENT AIR QUALITY MONITORING  
**Sample Condition** : GASEOUS SAMPLE ABSORBING SOLUTIONS REFRIGERATED  
**Quantity** : 1 NO  
**Ref To Sampling Procedure** : QSP-07  
**Parameters** : Type Standard Value Results Test Method



**Issue Date** : 05-Oct-2020  
**Amendment Date** :

**Completion On** : 03-Oct-2020

Location & Date	Type	Standard Value	Results	Test Method
PLANT SITE, 28.09.2020				
Sulphur Dioxide	µg/m <sup>3</sup>	80	7.20	IS 5182(PART-2) : 2005
Nitrogen Dioxide	µg/m <sup>3</sup>	80	17.43	IS 5182 (PART 6) : 2006
Particulate Matter (PM10)	µg/m <sup>3</sup>	300	74.0	IS 5182(PART-23) : 2006
Particulate Matter (PM2.5)	µg/m <sup>3</sup>	60	33.48	KLPL/SOP/AIR-02
Carbon Monoxide (CO) (01 Hrs.)	mg/m <sup>3</sup>	04	1.41	KLPL/SOP/AIR-19
Ozone (O3) (01 Hrs.)	µg/m <sup>3</sup>	180	5.8	KLPL/SOP/AIR-19
Lead (Pb)	µg/m <sup>3</sup>	1.0	<0.02	KLPL/SOP/AIR-10
Ammonia (NH3)	µg/m <sup>3</sup>	400	<10	KLPL/SOP/AIR-05
Benzene (C6 H6)	µg/m <sup>3</sup>	05	<1	CPCB Guidelines of Ambient Air Pollutants Volume I & II
Benzo (a) Pyrene (BaP)	µg/m <sup>3</sup>	01	<1	KLPL/SOP/AIR-07
Arsenic (As)	µg/m <sup>3</sup>	06	<1	KLPL/SOP/AIR-10
Nickel (Ni)	µg/m <sup>3</sup>	20	4.01	KLPL/SOP/AIR-10

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*P. Prigal*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



1254483641344



# KALYANI LABORATORIES PVT. LTD.

Plot 11, Phase 1, Hill Road, New Warangal, Dist. Warangal, T.S. 506001

## TEST REPORT



**NABL URL NO** : TC704320000904859f  
**Test Report No** : 2741 | S46812FBKPL/LN/20/WATER/03106 **Issue Date** : 07-Oct-2020  
**Amendment No** : - **Amendment Date** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARI  
**Address** : PO.- LANJIGARI, DIST.- KALAHANDI, ODISHA-756027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification No** : GROUND WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTK X 3 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND (WEST)  
**Sample Collected By** : By KLP1 **DT-28.09.2020**  
**Ref To Sampling Procedure** : QSP-07

### Parameters

Sl. No.	Parameter	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>					
i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml.	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>					
i	Nitrate as NO <sub>3</sub>	mg/l, Max	45	3.3	IS 3025 (Part 34): 1988 RA 2009
ii	Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii	Calcium (as Ca)	mg/l, Max	75	64	IS 3025 (Part 40): 1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	20.8	IS 3025 (Part 32): 1986 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42): 1982 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.7	IS 3025 (Part 40): 2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26): 1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.68	IS 3025 (Part 53): 2003 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	2.78	IS 3025 (Part 46): 1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59): 2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39): 1991 RA 2003
xii	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	2.001	<0.091	IS 3025 (Part 43): 1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56): 2003 RA 2009
xiv	Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	18	IS 3025 (Part 24): 1985 RA 2008
xv	Total alkalinity (as CaCO <sub>3</sub> )	mg/l, Max	200	162	IS 3025 (Part 23): 1985 RA 2008
xvi	Total hardness (as CaCO <sub>3</sub> )	mg/l, Max	200	152	IS 3025 (Part 21): 2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.054	IS 3025 (Part 49): 1994 RA 2009
xviii	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05	APHA 2200 Edition (4500-S <sub>2</sub> -05)

2741 | S46812FB





# KALYANI LABORATORIES PVT. LTD.

INDUSTRIAL AREA, BHILAI, BILASPUR DISTRICT, CHHATTISGARH

Test Report No : 2741 | 545812FB/KLPL/09/20/WATER/09106



Parameters	Unit	Requirement	Result	Test Method
xvii Ammonium (as N)	mg/l, Max	0.03	<0.02	IS 3026 (part-55)
xviii Anionic Surface Active Agents (as HBSA)	mg/l, Max	0.2	<0.1	Annex 3 of IS 13428 : 2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.3	Annex 1 of IS 13428 : 2005 RA 2009
xxii Polychlorinated Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	ISHA 22ml EG08a (6410)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex 1 of IS 13428 RA 2009
xxvi Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex 3 of IS 13428 : 2005 RA 2009
<b>PESTICIDE</b>				
i p p DDC	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	25	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	4.0	<0.01	USEPA 531
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Alifluazone	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8241 A
xxv Amin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2741 | 545812FB

Page 2 of 3

KLPL-342241 A



# KALYANI LABORATORIES PVT. LTD.

KALYANI, PATIL & BILHANIPUR, WILSON COLONY, CHENNAI

Test Report No

2741 | 545812FBKLPL/09/20/WATER/03106



Parameters	Unit	Requirement	Result	Test Method
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1993 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1993 RA 2012
iii pH value		6.5-8.5	6.9	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1994 RA 2009
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	448	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part 2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part 1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1996 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 42):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1989 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

108, Kalyani Nagar, Bangalore - 560075, India

## TEST REPORT



**NABL ULR NO** : TC704320000048604  
**Test Report No** : 2742 | 549912FCKLHL/09/20/WATER/03107  
**Issued Date** : 07-Oct-2020  
**Amendment No** :  
**Reference** : ORDER NO-6609CL3486 07-10-2019  
**Customer Name** : VECONTA LIMITED, LAKSHGARRH  
**Address** : PG - LAKSHGARRH, DIST - KALAHANDI, ODISHA-766027  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification** : GROUND WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MIS Date** : NA **EQ Date** : NA  
**Reserved Quantity** : ULTR X 3 **Place of Collection** : OBSERVATION BOREWELL RED MUD POND  
**Sample Collected By** : By NLR **BASANTPRADA STGE(EAST), DT-28.09.2020**  
**Ref. to Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
E. coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Nitrate as NO3	mg/l, Max	45	1.7	IS 3025 (PART 34):1988 RA 2009
Ammonia	mg/l, Max	2.5	<0.3	IS 3025 (Part 34):1988 RA 2009
Calcium (as Ca)	mg/l, Max	75	28.8	IS 3025 (Part 40):1991 RA 2009
Chloride (as Cl)	mg/l, Max	250	37	IS 3025 (Part 32):1988 RA 2009
Copper (as Cu)	mg/l, Max	3.00	<0.02	IS 3025 (Part 42):1992 RA 2009
Fluoride (as F)	mg/l, Max	1	6.25	IS 3025 (part 60):2006
Free residual chlorine	mg/l, Min	0.2	6.2	IS 3025 (Part 26):1986 RA 2009
Iron (as Fe)	mg/l, Max	3	3.6	IS 3025 (Part 53):2003 RA 2014
Magnesium (as Mg)	mg/l, Max	30	9.72	IS 3025 (Part 46):1994 RA 2009
Manganese (as Mn)	mg/l, Max	0.3	<0.05	IS 3025 (Part 59):2006 RA 2012
Mineral oil	mg/l, Max	3.0	<0.075	Clause 6 of IS 3025 (Part 10):1991 (A 2003)
Phenolic compounds (as C6H5OH)	mg/l, Max	5.001	<0.001	IS 3025 (Part 47):1992 RA 2009
Selenium (as Se)	mg/l, Max	3.02	<0.005	IS 3025 (Part 56):2003 RA 2009
Sulfate (as SO4)	mg/l, Max	100	8.0	IS 3025 (Part 24):1986 RA 2009
Total alkalinity (as CaCO3)	mg/l, Max	250	140	IS 3025 (Part 23):1988 RA 2009
Total hardness (as CaCO3)	mg/l, Max	250	112	IS 3025 (Part 23):2009
Zinc (as Zn)	mg/l, Max	5	0.624	IS 3025 (Part 49):1994 RA 2009
Total Chromium	mg/l, Max	0.50	<0.02	IS 3025 (PART 52): 2003 RA 2009
Suloxide	mg/l	2.0	<0.05	APHA 22nd Edition (4507-90-01)



2742 | 549912F

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

10/14, PAVANA, SIDDHAPUR, WARD NO. 10, BANGALORE

Test Report No: 2742 | 545912FCKLPL/09/20/WATER/03107



Parameter	Unit	Requirement	Result	Reference Method
xxi Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xxii Anionic Surface Active Agents (as Methylene)	mg/l, Max	0.2	<0.1	Annex - X OF IS 13428:2005 RA 2009
xxiii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xxiv Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0011	<0.0011	APHA 72nd Edition (6440)
xxv Barium (as Ba)	mg/l, Max	0.2	<0.2	Annex F of IS 13428 RA 2005
xxvi Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009
<b>PCSTISIDE</b>				
i p,p' DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii o,p' DDE	µg/l, Max	1.0	<0.05	USEPA 508
iii p,p' DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o,p' DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o,p' DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o,p' DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	2.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5125

**PHYSICAL PARAMETER**



2742 | 545912FC

Page 2 of 3

KLPL-342238 A



# KALYANI LABORATORIES PVT. LTD.

Plot No. 12, Phase 1, Sector 10, Gurgaon, Haryana - 122001, INDIA

Test Report No : 2742 | 545912PCKLPL/D9/20/WATER/03107



Parameters	Unit	Requirement	Result	Test Method
i. Ca/Knt	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2006
ii. Colour	—	Acceptable	AGREEABLE	IS 3025 (Part 3):1983 RA 2006
iii. pH value	—	6.5-8.5	7.0	IS 3025 (Part 11):1983, RA 2006
iv. Taste	—	Acceptable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v. Turbidity	NTU, Max	5	0.4	IS 3025 (Part 10):1984 RA 2006
vi. Total dissolved solids	mg/l, Max	500	170	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i. Gross Alpha-activity	Bq/l, Max	37.1	<0.004	IS 34194 (Part-2):2003
ii. Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 34194 (Part-3):2003
<b>TOXIC SUBSTANCES</b>				
i. Cadmium (as Cd)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.

# KALYANI LABORATORIES PVT. LTD.

TEST REPORT



**NAAL ULR NO** : YC70432000004861F  
**Test Report No** : 2743 | 549012PDKL/05/20/WATER/03100 **Issue Date** : 07-Oct-2020  
**Amendment No** : **Amendment Date** :  
**Reference** : ORDER NO-GGIR013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification #** : GROUND WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X3 **Place of Collection** : OBSERVATION BOREWELL RED MUD POND  
**Sample Collected By** : By KLFL **MATERIAL GATE SIDE(NORTH) DT-28.09.2020**  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
E coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Nitrate as NO3	mg/l, Max	45	2.0	IS 3025 (Part 34): 1986 RA 2003
Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1986 RA 2003
Calcium (as Ca)	mg/l, Max	75	46.4	IS 3025 (Part 43): 1991 RA 2009
Chloride (as Cl)	mg/l, Max	250	11.3	IS 3025 (Part 32): 1988 RA 2009
Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42): 1991 RA 2009
Fluoride (as F)	mg/l, Max	1	0.08	IS 3025 (Part 60): 2008
Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26): 1986 RA 2009
Iron (as Fe)	mg/l, Max	1	0.85	IS 3025 (Part 53): 2003 RA 2014
Magnesium (as Mg)	mg/l, Max	30	11.65	IS 3025 (Part 46): 1994 RA 2003
Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59): 2006 RA 2012
Mineral oil	mg/l, Max	0.3	<0.024	Clause 6 of IS 3025 (Part 30): 1991 RA 2003
Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43): 1991 RA 2009
Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56): 2003 RA 2009
Sulphate (as SO4)	mg/l, Max	200	40	IS 3025 (Part 24): 1986 RA 2009
Total Alkalinity (as CaCO3)	mg/l, Max	200	156	IS 3025 (Part 23): 1986 RA 2009
Total hardness (as CaCO3)	mg/l, Max	200	164	IS 3025 (Part 23): 2009
Zinc (as Zn)	mg/l, Max	5	0.029	IS 3025 (Part 49): 1994 RA 2009
Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2003
Sulphide	mg/l	2.0	<0.05	IS 3025 (PART 52): 2003 RA 2003

2743 | 549012PDKL





# KALYANI LABORATORIES PVT. LTD.

10/1, PAVAI & BHIMAVENKATapuram, CHENNAI

Kalyani Laboratories

Test Report No : **2743 | 546012F0KLPL/09/20/WATER/03100**



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/L, Max	0.03	<0.02	IS 3025 (part-5)
xxi Atomic Sulphate As SO <sub>4</sub> (as SO <sub>4</sub> )	mg/L, Max	0.2	<0.1	Method B of IS 15428: 2005 RA 2009
xxii Iron (as Fe)	mg/L, Max	0.5	<0.1	Annex H of IS 15428 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/L, Max	0.0001	<0.0001	APHA 42nd Edition (8440)
xxiv Sulfate (as SO <sub>4</sub> )	mg/L, Max	0.7	<0.2	Annex F of IS 15428 RA 2012
xxv Silver (as Ag)	mg/L, Max	0.1	<0.005	Annex J of IS 15428 : 2005 RA 2009

**PESTICIDE**

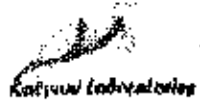
i p p DDE	µg/L, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/L, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/L, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/L, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/L, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/L, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/L, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/L, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/L, Max	0.04	<0.01	USEPA 508
x Lindane	µg/L, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/L, Max	0.4	<0.01	USEPA 508
xii Endosulfan S	µg/L, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/L, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/L, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/L, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/L, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/L, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/L, Max	30	<0.05	USEPA 515.1
xix Botaphlor	µg/L, Max	125	<0.01	USEPA 8141 A
xx Isoprocureol	µg/L, Max	2.0	<0.01	USEPA 972
xxi Alachlor	µg/L, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/L, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/L, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/L, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/L, Max	0.0005	<0.0005	ASTM 5175

**PHYSICAL PARAMETER**



2743 | 546012F0

**KLPL-342290 A**



# KALYANI LABORATORIES PVT. LTD.

KALYANI, PABALA, BIRAJANESWAR, 720003, KARNATAKA

Test Report No : 2743 | 546012FD/KLPL/D9/20/WATER/03108



Parameters	Unit	Requirement	Result	Test Method
i. Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii. Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii. pH value	---	6.5-8.5	6.9	IS 3025 (Part 11):1983 RA 2012
iv. Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
v. Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1981 RA 2000
vi. Total dissolved solids	mg/l, Max	500	260	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i. Gross Alpha-activity	Bq/L, Max	10.1	<0.004	IS 14194 (Part 2):2013
ii. Gross Beta-activity	Bq/L, Max	1.0	<0.02	IS 14194 (Part 3):2013
<b>TOXIC SUBSTANCES</b>				
i. Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1985 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total Arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 57):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54):2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

75/93, RAJAWA BIRI, BANGSAR, 11100, BUKIT TIMUR

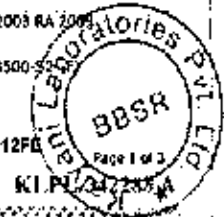
## TEST REPORT



**NARI IQR NO** : TC704230000004862P  
**Test Report No** : 2744 | 546112FKLPL/09/20/WATER/03109 **Issue Date** : 07-Oct-2020  
**Amendment No** : **Amendment Date** :  
**Reference** : ORDER NO-GG00013488 dt 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )  
**Sample Condition** : SEALED  
**Sample Identification #** : **GROUND WATER** **Sampling Date** : 28-Sep-2020  
**Batch No. / Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 11 TR X3 **Place of Collection** : OBSERVATION BORE WELL RED MUD POND  
**Sample Collected By** : By KLPL **RENGOPALI SLIDE (SOUTH) DT-28.09.2020**  
**Ref To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Nitrate as NO <sub>3</sub>	mg/l, Max	45	2.0	IS 3025 (Part 34):1988 RA 2003
Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34):1988 RA 2003
Calcium (as Ca)	mg/l, Max	75	32	IS 3025 (Part 40):1991 RA 2009
Chloride (as Cl)	mg/l, Max	250	5.7	IS 3025 (Part 32):1988 RA 2009
Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
Magnesium (as Mg)	mg/l, Max	30	9.72	IS 3025 (Part 46):1994 RA 2003
Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2003
Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2008
Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	6.0	IS 3025 (Part 24):1986 RA 2009
Total Alkalinity (as CaCO <sub>3</sub> )	mg/l, Max	200	127	IS 3025 (Part 23):1986 RA 2009
Total hardness (as CaCO <sub>3</sub> )	mg/l, Max	200	120	IS 3025 (Part 21):2009
Zinc (as Zn)	mg/l, Max	5	0.027	IS 3025 (Part 49):1994 RA 2009
Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S)

2744 | 546112FKLPL



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

57/40, PATEL A, BHUBANESWAR-751004, INDIA

Test Report No

2744 | 546112FEKLP/09/2D/WATER/03109



Parameters	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-5)
xxi Anionic Surface Active Agents (as SDBS)	mg/l, Max	0.2	<0.1	Annex K of IS 13428:2005 RA 2005
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex J of IS 13428:2005 RA 2005
xxiii Polynuclear Aromatic Hydrocarbons	µg/l, Max	0.0001	<0.0001	APIA 77nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428:2005 RA 2005
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex I of IS 13428:2005 RA 2005

**PESTICIDE**

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan β	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Espropranol	µg/l, Max	5.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

**PHYSICAL PARAMETER**



2744 | 546112FE

Page 2 of 3

KLP/342287 A



# KALYANI LABORATORIES PVT. LTD.

TR-44, PAULIYA, BHI BANGSAR, GORE, INDIA

Test Report No : 2744 | 546112FEKLP/09/20/WATER/03109



Parameters	Unit	Requirement	Result	Reference
i. Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii. Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii. pH VALUE		6.5-8.5	7.5	IS 3025 (Part 11):1983, RA 2012
iv. Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v. Turbidity	NTU, Max	1	0.3	IS 3025 (Part 10):1984 RA 2006
vi. Total dissolved solids	mg/l, Max	500	176	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i. Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part 2):2013
ii. Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part 1):2013

### TOXIC SUBSTANCES

i. Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd

# KALYANI LABORATORIES PVT. LTD.

75/44, PAHARI, BIL, BANESWAR, 75101, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL ULR NO :** TC704320000004863F  
**Test Report No :** 2745 | 546212FFKLPL/09/20/WATER/03110  
**Amendment No :**   
**Reference :** ORDER NO-6600013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-756027  
**Date of receipt :** 29-Sep-2020 **Test Commenced On :** 29-Sep-2020 **Test Completion On:** 06-Oct-2020  
**Sample Description :** DRINKING WATER (15 L0500:2012 )  
**Sample Condition :** SEALED  
**Sample Identification :** GROUND WATER  
**Batch No. / Lot No :** NA  
**Received Quantity :** 1LTR X 3  
**Sample Collected By :** By KLPL  
**Ref. To Sampling Procedure:** QSP-07  
**ISSUE Date:** 07 Oct 2020  
**Amendment Date :**   
**MFG Date :** NA  
**EXP Date :** NA  
**Place of Collection :** OBSERVATION BORE WELL PROCESS WATER LAKE (EAST) DT-28.09.2020  
**Sampling Date :** 28-Sep-2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i. Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii. Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii. E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i. Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.5	IS 3025 (PART 34): 1988 RA 2003
ii. Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
iii. Calcium (as Ca)	mg/l, Max	75	6.4	IS 3025 (Part 40):1991 RA 2009
iv. Chloride (as Cl)	mg/l, Max	250	7.6	IS 3025 (Part 37):1988 RA 2009
v. Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi. Fluoride (as F)	mg/l, Max	1	0.15	IS 3025 (Part 60):2008
vii. Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii. Iron (as Fe)	mg/l, Max	1	0.65	IS 3025 (Part 53):2003 RA 2014
ix. Magnesium (as Mg)	mg/l, Max	30	5.83	IS 3025 (Part 46):1994 RA 2003
x. Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 69):2006 RA 2012
xi. Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part: 30):1991 RA 2003
xii. Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii. Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv. Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xv. Total alkalinity (as CaCO <sub>3</sub> )	mg/l, Max	200	49	IS 3025 (Part 23):1986 RA 2009
xvi. Total hardness (as CaCO <sub>3</sub> )	mg/l, Max	200	40	IS 3025 (Part 21):2009
xvii. Zinc (as Zn)	mg/l, Max	5	0.012	IS 3025 (Part 49):1994 RA 2009
xviii. Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2006
xix. Sulphide	mg/l	2.0	<0.05	APHA 22ed Edition (4500-S <sub>2</sub> )

2745 | 546212FF

KLPL/09/20/WATER/03110



# KALYANI LABORATORIES PVT. LTD.

KALYANI PATIL CHILDRAN SWAIN STREET CHENNAI

Kalyani Laboratories

Test Report No: **2745 | 54821ZFFKLPL/09/20/WATER/0311D**



Parameter	Unit	Requirement	Result	Test Method
xxi Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-05)
xxii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex B of IS 13428: 2005 RA 2009
xxiii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 13428: 2005 RA 2009
xxiv Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0003	<0.0001	APHA 22nd Edition (6440)
xxv Barium (as Ba)	mg/l, Max	0.2	<0.2	Annex F of IS 13428 RA 2012
xxvi Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428: 2005 RA 2009
<b>PESTICIDE</b>				
i Chlordane	µg/l, Max	30	<0.01	USEPA 8141 A
ii p,p DDE	µg/l, Max	1.0	<0.05	USEPA 508
iii p,p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iv p,p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o,p DDT	µg/l, Max	1.0	<0.05	USEPA 508
vi o,p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vii o,p DDE	µg/l, Max	1.0	<0.05	USEPA 508
viii α-HCH	µg/l, Max	0.01	<0.01	USEPA 508
ix β-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
xi Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xii Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiv Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xv Monocrotophos	µg/l, Max	2.0	<0.01	USEPA 8141 A
xvi Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 539
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Ktrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2745 | 54821ZFF

Page 2 of 3

KLPL-342284 A



# KALYANI LABORATORIES PVT. LTD.

NO. 41/1, 1ST FLOOR, BSR, JAYANagar, Bangalore

**Test Report No** : 2745 | 846212FFKLPL/09/20/WATER/03110



Parameter	Unit	Requirement	Result	Method
i. Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii. Odour		Agreeable	AGREEABLE	IS 3025 (Part 3):1983 RA 2012
iii. pH value		6.5-8.5	7.3	IS 3025 (Part 11):1983 RA 2012
iv. Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v. Turbidity	NTU, Max	3	0.5	IS 3025 (Part 10):1984 RA 2006
vi. Total dissolved solids	mg/l, Max	500	62	IS 3025 (Part 16):1984 RA 2006

**RADIOACTIVITY SUBSTANCES**

i. Gross Alpha-activity	Bq/l, Max	0.3	<0.004	IS 14194 (Part-2):2013
ii. Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part-5):2013

**TOXIC SUBSTANCES**

i. Calcium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii. Cyanide (as Cl <sup>-</sup> )	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1985 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

*D. Aravind*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*D. Aravind*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

10, NGELI MAIN ROAD, BHUBANESWAR, 751002, ODISHA

## TEST REPORT



**NABL UR NO** : TC704320000004868F  
**Test Report No** : 2747 | K4631301KLPL/09/20/WATER/03111 **Issue Date** : 07-Oct-2020  
**Amendment No** : **Amendment Date** : -  
**Reference** : ORDER NO-6500013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. - LANJIGARH, DIST. - KALAHANDI, ODISHA-766027  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012 )  
**Sample Condition** : SEALED  
**Sample Identification #** : GROUND WATER **Sampling Date** : 28-Sep-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BOREWELL PROCESS WATER LAKE (EAST) DT-28.09.2020  
**Sample Collected By** : By KLPL  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

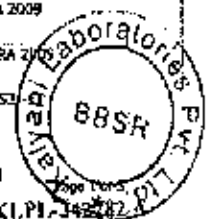
Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i Nitrate as NO3	mg/l, Max	45	3.2	IS 3025 (PART 34): 1988 RA 2009
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2009
iii Calcium (as Ca)	mg/l, Max	75	22.4	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	7.6	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.45	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.6	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	3.69	IS 3025 (Part 46):1994 RA 2009
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Hexavalent Cr	mg/l, Max	0.1	<0.015	Clause 6 of IS 3025 (Part 30):1991 RA 2001
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 58):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	7	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	187	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	72	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.024	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	IS 3025 (PART 52): 2003 RA 2009

2747 | K4631301

KLPL-142020





# KALYANI LABORATORIES PVT. LTD.

WATER ANALYSIS, BHUPAL NAGAR, BBSR, ODISHA

Test Report No : 2747 | 54631301KLPL/09/20/WATER/03111



Parameter	Unit	Requirement	Result	Test Method
xx Aluminium (As Al)	mg/l, Max	0.03	<0.02	IS 4325 (part-55)
xxi Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex K of IS 13478:2005 RA 2000
xxii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 13420 : 2005 RA 2009
xxiii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxiv Barium (as Ba)	mg/l, Max	3.7	<0.2	Annex F of IS 13478 RA 2002
xxv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex I of IS 13426 : 2005 RA 2009

## PESTICIDE

i p,p DDE	µg/l, Max	3.0	<0.05	USEPA 503
ii p,p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p,p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o,p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o,p DDB	µg/l, Max	1.0	<0.05	USEPA 508
vi o,p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii p-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii o-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/l, Max	0.04	<0.01	USEPA 508
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan b	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 8157 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 592
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Atrazine	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	190	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

## PHYSICAL PARAMETER



2747 | 54631301

Page 2 of 2

KLPL-342281 A



# KALYANI LABORATORIES PVT. LTD.

18/111, PATEL VYOMHANS ROAD, CHENNAI

Test Report No : 2747 | 54631301 KLPL/09/10/WATER/03111



Parameters	Unit	Requirement	Result	Test Method
i Colour	Maxon, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value		6.5-8.5	7.0	IS 3025 (Part 11):1983, RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
v Turbidity	NTU, Max	1	0.9	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	290	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha activity	Bq/l, Max	0.5	<0.004	IS 34134 (Part-2):2013
ii Gross Beta activity	Bq/l, Max	1.0	<0.02	IS 34134 (Part-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1983 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1985 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1984 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1984 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2005

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D Arivel*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*Pragnan*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

S-10, PAJAN, BHIMANESWAR, 570001, KARNATAKA

## TEST REPORT



**MARK ULR NO :** TC70492000004866F  
**Test Report No :** 2748 | 54641302KLPL/09/20/WATER/03112 **Issue Date:** 07-Oct-2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO-060003488 DT-16.12.2019  
**Customer Name :** VEENIA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA- 756027  
**Date of receipt :** 29-Sep-2020 **Test Commenced On :** 29-Sep-2020 **Test Completion On:** 06-Oct-2020  
**Sample Description :** DRINKING WATER (IS 10500:2012 )  
**Sample Condition :** SEALED  
**Sample Identification \* :** GROUND WATER **Sampling Date :** 28-Sep-2020  
**Batch No. / Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** 1LTR X 3 **Place of Collection :** OBSERVATION BOREWELL ASHPOND KASIBADI  
**Sample Collected By :** By KLPL **SIDE(WEST) DT-28.09.2020**  
**Ref. to Sampling Procedure:** QSP-07

**Parameters Unit Requirement Result Test Method**

BACTERIOLOGICAL QUALITY				
i	Total Coliforms	MPN/100 ml	Should not be detected in any 100 ml sample	<2 IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Should not be detected in any 100 ml sample	IS 1622:1981 RA 2009
iii	E.coli	MPN/100ml	Should not be detected in any 100ml. Sample	IS 1622:1981 RA 2009

CHEMICAL PARAMETER				
i	Nitrate as NO3	mg/l, Max	45	1.4 IS 3025 (PART 34): 1989 RA 2003
ii	Ammonia	mg/l, Max	0.5	<0.3 IS 3025 (Part 34): 1989 RA 2003
iii	Calcium (as Ca)	mg/l, Max	75	35.3 IS 3025 (Part 40):1991 RA 2009
iv	Chloride (as Cl)	mg/l, Max	250	5.7 IS 3025 (Part 32):1990 RA 2009
v	Copper (as Cu)	mg/l, Max	0.05	<0.02 IS 3025 (Part 47):1992 RA 2009
vi	Fluoride (as F)	mg/l, Max	1	0.4 IS 3025 (Part 50):2008
vii	Free residual chlorine	mg/l, Min	0.2	0.2 IS 3025 (Part 26):1986 RA 2009
viii	Iron (as Fe)	mg/l, Max	1	0.3 IS 3025 (Part 33):2005 RA 2014
ix	Magnesium (as Mg)	mg/l, Max	30	7.78 IS 3025 (Part 46):1994 RA 2003
x	Manganese (as Mn)	mg/l, Max	0.1	<0.05 IS 3025 (Part 59):2006 RA 2012
xi	Mineral oil	mg/l, Max	0.5	<0.025 Clause 6 of IS 3025 (Part- 39):1991 RA 2003
xii	Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001 IS 3025 (Part 43):1992 RA 2009
xiii	Selenium (as Se)	mg/l, Max	0.01	<0.005 IS 3025 (Part 56):2003 RA 2009
xiv	Sulphate (as SO4)	mg/l, Max	200	<1.0 IS 3025 (Part 24):1986 RA 2009
xv	Total alkalinity (as CaCO3)	mg/l, Max	200	140 IS 3025 (Part 23):1986 RA 2009
xvi	Total hardness (as CaCO3)	mg/l, Max	200	120 IS 3025 (Part 21):2009
xvii	Zinc (as Zn)	mg/l, Max	5	0.020 IS 3025 (Part 49):1994 RA 2003
xviii	Total Chromium	mg/l, Max	0.05	<0.02 IS 3025 (PART 52): 2003 RA 2009
xix	Sulphide	mg/l	2.0	<0.05 APHA 22nd Edition (4500-S2-



2748 | 54641302

KLPL-342279



# KALYANI LABORATORIES PVT. LTD.

ANALYSIS REPORT NO. 2748 | 2024



Test Report No

2748 | 54641302KLPL/09/20/WATER/02112

Parameter	Unit	Requirement	Result	Reference Method
14. Alkalinity (as M)	mg/L Max	0.03	<0.02	IS 3025 (part 55)
15. Anionic Surface Active Agents (as MBAS)	mg/L Max	0.2	<0.1	Annex 3 of IS 13428: 2005 RA 2009
16. BOD <sub>5</sub> (as B)	mg/L Max	0.5	<0.1	Annex H of IS 13428: 2005 RA 2009
17. Polynuclear Aromatic Hydrocarbon	mg/L Max	0.0001	<0.0001	APHA 22nd Edition (6440)
18. Diform (as B)	mg/L Max	0.2	<0.2	Annex F of IS 13428 RA 2012
19. Silver (as Ag)	mg/L Max	0.1	<0.005	Annex I of IS 13428: 2005 RA 2009
<b>POSTIVE</b>				
20. o p DDT	µg/L Max	1.0	<0.05	USEPA 508
21. p p DDT	µg/L Max	1.0	<0.05	USEPA 508
22. o o DDT	µg/L Max	1.0	<0.05	USEPA 508
23. o p DDE	µg/L Max	1.0	<0.05	USEPA 508
24. o p DDE	µg/L Max	1.0	<0.05	USEPA 508
25. α-HCH	µg/L Max	0.01	<0.01	USEPA 508
26. β-HCH	µg/L Max	0.04	<0.01	USEPA 508
27. γ-HCH	µg/L Max	0.04	<0.01	USEPA 508
28. Lindane	µg/L Max	2.0	<0.01	USEPA 508
29. Endosulfan a	µg/L Max	0.4	<0.01	USEPA 508
30. Endosulfan B	µg/L Max	0.4	<0.01	USEPA 508
31. Endosulfan sulfate	µg/L Max	0.4	<0.01	USEPA 508
32. Monocrotophos	µg/L Max	1.0	<0.01	USEPA 8141 A
33. Ethion	µg/L Max	3.0	<0.01	USEPA 1657 A
34. Chlorpyrifos	µg/L Max	30	<0.01	USEPA 8141 A
35. Phorate	µg/L Max	2.0	<0.01	USEPA 8141 A
36. 2,4-D	µg/L Max	30	<0.05	USEPA 515.1
37. Butachlor	µg/L Max	125	<0.01	USEPA 8141 A
38. Isoproturon	µg/L Max	9.0	<0.01	USEPA 592
39. Alachlor	µg/L Max	20	<0.01	USEPA 507
40. Atrazine	µg/L Max	2.0	<0.01	USEPA 8141 A
41. Methyl Parathion	µg/L Max	0.3	<0.01	USEPA 8141 A
42. Malathion	µg/L Max	100	<0.01	USEPA 8141 A
43. Aldrin	µg/L Max	0.03	<0.01	USEPA 508
44. Dieldrin	µg/L Max	0.03	<0.01	USEPA 508
45. Polychlorinated biphenyls	µg/L Max	0.0005	<0.0005	ASTM 5175

**PHYSICAL PARAMETER**



2748 | 54641302

Page 2 of 3

KLPL-342278 A



# KALYANI LABORATORIES PVT. LTD.

A. RA. PAMAI & BHI. HANUWAR, SEBIL, DRUGITA

Test Report No : 2748 | 84641302KLPL/09/20/WATER/03112



Parameters	Unit	Requirement	Result	Reference
i Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
ii Colour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iii pH value	---	6.5-8.5	7.6	IS 3025 (Part 1):1983 RA 2012
iv Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1983 RA 2006
v Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vi Total dissolved solids	mg/l, Max	500	102	IS 3025 (Part 16):1984 RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	Bq/l, Max	0.1	<0.001	IS 14194 (Part 2):2013
ii Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part 1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.0003	IS 3025 (Part 48):1994 RA 2009
v Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1998 RA 2009
vi Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54):2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

*D. Anurag*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*D. Anurag*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

75/44, PATIALA, BILUPAL, BILASWAR, ODISHA

## TEST REPORT



**NABL UR No** : TC70432000004868F  
**Test Report No** : 2750 | 54651304KLPL/09/20/WATER/03113 **Issue Date** : 07-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO 6000013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGAKH  
**Address** : PD.- LANJIGAKH, DIST.- KALAHANDI, ODISHA- 766027  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (IS 10500:2012)  
**Sample Condition** : SEALED  
**Sample Identification #** : GROUND WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL ASHPOND KENDUGUDA  
**Sample Collected By** : By KLPL **SIDE (EAST) DT-28.09.2020**  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	2.8	IS 3025 (Part 34): 1986 RA 2009
ii Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1986 RA 2009
iii Calcium (as Ca)	mg/l, Max	75	60.8	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	150	56.6	IS 3025 (Part 32):1986 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (IS Fe)	mg/l, Max	1	0.06	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2009
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part 39):1991 RA 2009
xii Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	110	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	169	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	180	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.031	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 23rd Edition (4500-S-20)

2760 | 54651304



KLPL/03113

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

38/44, PAKALU, BHIJANENWAR, 721024, ODISHA

Test Report No : 2750 | 54651304|KLPL/09/20/WATER/03113



Parameter	Unit	Requirement	Result	Test Method
xx Aluminum (as Al)	mg/L, Max	0.03	<0.01	IS 1014 (part-05)
xxi Anionic Surface Active Agents (as SOAS)	mg/L, Max	0.7	<0.1	Annex K of IS 11728 : 2005 RA 1000
xxii Barium (as Ba)	mg/L, Max	0.3	<0.1	Annex H of IS 13428 : 2005 RA 1000
xxiii Polynuclear Aromatic Hydrocarbon	mg/L, Max	0.0001	<0.0001	APIA 22nd Edition (6440)
xxiv Boron (as B)	mg/L, Max	0.7	<0.2	Annex F of IS 13428 : 2005 RA 1000
xxv Silver (as Ag)	mg/L, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 1000

**PESTICIDE**

i p p DDE	µg/L, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/L, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/L, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/L, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/L, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/L, Max	1.0	<0.05	USEPA 508
vii α-HCH	µg/L, Max	0.01	<0.01	USEPA 508
viii β-HCH	µg/L, Max	0.04	<0.01	USEPA 508
ix γ-HCH	µg/L, Max	0.04	<0.01	USEPA 508
x Lindane	µg/L, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/L, Max	0.4	<0.01	USEPA 508
xxii Endosulfan B	µg/L, Max	0.4	<0.01	USEPA 508
xxiii Endosulfan sulphate	µg/L, Max	0.4	<0.01	USEPA 508
xxiv Monocrotophos	µg/L, Max	1.0	<0.01	USEPA 8141 A
xxv Ethion	µg/L, Max	3.0	<0.01	USEPA 1657 A
xxvi Chlorpyrifos	µg/L, Max	30	<0.01	USEPA 8141 A
xxvii Phorate	µg/L, Max	2.0	<0.01	USEPA 8141 A
xxviii 2,4-D	µg/L, Max	30	<0.05	USEPA 515.1
xxix Butachlor	µg/L, Max	125	<0.01	USEPA 8141 A
xxx Isoproturon	µg/L, Max	9.0	<0.01	USEPA 512
xxxi Alachlor	µg/L, Max	20	<0.01	USEPA 307
xxxii Atrazine	µg/L, Max	2.0	<0.01	USEPA 8141 A
xxxiii Methyl Parathion	µg/L, Max	0.3	<0.01	USEPA 8141 A
xxxiv Malathion	µg/L, Max	190	<0.01	USEPA 8141 A
xxxv Aldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxxvi Dieldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxxvii Polychlorinated biphenyls	µg/L, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



2750 | 54651304

Page 2 of 3

KLPL-342275 A



# KALYANI LABORATORIES PVT. LTD.

WATER ANALYSIS REPORT

Kalyani Laboratories

Test Report No : 2750 | 54651304KLPL/09/20/WATER/03113

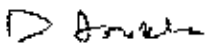


Parameters	Unit	Requirements	Result	Test Method
I Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1981 RA 2012
II Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1981 RA 2012
III pH value		6.5-8.5	7.6	IS 3025 (Part 11):1983 RA 2012
IV Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1981 RA 2012
V Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2012
VI Total dissolved solids	mg/l, Max	500	412	IS 3025 (Part 16):1984 RA 2012
<b>RADIOACTIVITY SUBSTANCES</b>				
I Gross Alpha-activity	Bq/l, Max	10.1	<0.004	IS 14194 (Part 2):2013
II Gross Beta-activity	Dq/l, Max	1.0	<0.02	IS 14194 (Part 3):2013
<b>TOXIC SUBSTANCES</b>				
I Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
II Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
III Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
IV Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
V Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
VI Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

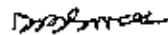
Remarks : NIL

Any unusual feature observed during determination : NIL

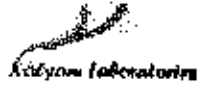
End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.

# KALYANI LABORATORIES PVT. LTD.



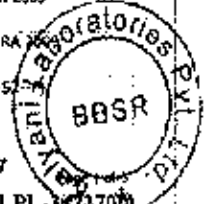
35/44, P. BALAJI, HILLTOP, NEW AIR 751004, ODISHA

## TEST REPORT



**NABL CLR NO** : TC704320000004871F  
**Test Report No** : 7753 | 5467130YKLPL/09/20/WATER/03115 **Issue Date** : 07-Oct-2020  
**Amendment No** : **Amendment Date** : -  
**Reference** : ORDER NO 6500013400 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST - KALAHANDI, ODISHA 756027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : DRINKING WATER (19 10600:2012 )  
**Sample Condition** : SEALED  
**Sample Identification** : **GROUND WATER** **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : OBSERVATION BORE WELL ASHPOND (NORTH)  
**Sample Collected By** : By KLPL **DT-28.09.2020**  
**Ref. to Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
iii E.coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Nitrate as NO3	mg/l, Max	45	0.9	IS 3025 (Part 34):1986 RA 2009
ii Ammonia	mg/l, Max	0.5	<0.3	IS 2025 (Part 34):1989 RA 2009
iii Calcium (as Ca)	mg/l, Max	75	12.6	IS 3025 (Part 40):1991 RA 2009
iv Chloride (as Cl)	mg/l, Max	250	11.3	IS 3025 (Part 32):1988 RA 2009
v Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vi Fluoride (as F)	mg/l, Max	1	0.22	IS 3025 (Part 60):2008
vii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
viii Iron (as Fe)	mg/l, Max	1	0.42	IS 3025 (Part 53):2003 RA 2014
ix Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2009
x Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xi Mineral oil	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 39):1991 RA 2009
xii Phenolic compounds (as CGHSOH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
xiii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiv Sulphate (as SO4)	mg/l, Max	200	5.0	IS 3025 (Part 24):1986 RA 2009
xv Total alkalinity (as CaCO3)	mg/l, Max	200	70	IS 3025 (Part 23):1986 RA 2009
xvi Total hardness (as CaCO3)	mg/l, Max	200	60	IS 3025 (Part 21):2009
xvii Zinc (as Zn)	mg/l, Max	5	0.016	IS 3025 (Part 49):1994 RA 2009
xviii Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xix Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2)



7753 | 64671307  
KLPL-367209



# KALYANI LABORATORIES PVT. LTD.

75/92, PAMELA, HITECHYMSW, KR. 751001, ODISHA

Test Report No : 2753 | 54671307KLPL/09/20/WATER/03115



Parameter	Unit	Requirement	Result	Test Method
xx Aluminium (as Al)	mg/l, Max	0.05	<0.02	IS 1025 (part-5)
xli Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xlii Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xliii Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 2nd Edition (8410)
xliiii Barium (as Ba)	mg/l, Max	0.7	<0.2	Annex F of IS 13428 RA 2009
xlv Silver (as Ag)	mg/l, Max	0.1	<0.005	Annex J of IS 13428 : 2005 RA 2009

**PESTICIDE**

i p p DDE	µg/l, Max	1.0	<0.05	USEPA 508
ii p p DDD	µg/l, Max	1.0	<0.05	USEPA 508
iii p p DDT	µg/l, Max	1.0	<0.05	USEPA 508
iv o p DDT	µg/l, Max	1.0	<0.05	USEPA 508
v o p DDD	µg/l, Max	1.0	<0.05	USEPA 508
vi o p DDE	µg/l, Max	1.0	<0.05	USEPA 508
vii a-HCH	µg/l, Max	0.01	<0.01	USEPA 508
viii B-HCH	µg/l, Max	0.04	<0.01	USEPA 508
ix β-HCH	µg/l, Max	0.04	<0.01	USEPA 500
x Lindane	µg/l, Max	2.0	<0.01	USEPA 508
xi Endosulfan a	µg/l, Max	0.4	<0.01	USEPA 508
xii Endosulfan B	µg/l, Max	0.4	<0.01	USEPA 508
xiii Endosulfan sulphate	µg/l, Max	0.4	<0.01	USEPA 508
xiv Monocrotophos	µg/l, Max	1.0	<0.01	USEPA 8141 A
xv Ethion	µg/l, Max	3.0	<0.01	USEPA 1657 A
xvi Chlorpyrifos	µg/l, Max	30	<0.01	USEPA 8141 A
xvii Phorate	µg/l, Max	2.0	<0.01	USEPA 8141 A
xviii 2,4-D	µg/l, Max	30	<0.05	USEPA 515.1
xix Butachlor	µg/l, Max	125	<0.01	USEPA 8141 A
xx Isoproturon	µg/l, Max	9.0	<0.01	USEPA 532
xxi Alachlor	µg/l, Max	20	<0.01	USEPA 507
xxii Malathion	µg/l, Max	2.0	<0.01	USEPA 8141 A
xxiii Methyl Parathion	µg/l, Max	0.3	<0.01	USEPA 8141 A
xxiv Malathion	µg/l, Max	100	<0.01	USEPA 8141 A
xxv Aldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxvi Dieldrin	µg/l, Max	0.03	<0.01	USEPA 508
xxviii Polychlorinated biphenyls	µg/l, Max	0.0005	<0.0005	ASTM 5175

**PHYSICAL PARAMETER**





# KALYANI LABORATORIES PVT. LTD.

WATER, PHARMACY, INDUSTRIAL AND FOOD CHEMISTRY

Test Report No : 2753 | 54671307KLPL/09/20/WATER/03115



Parameters	Unit	Requirement	Result	Reference Method
i. Colour	Hazen, Max	5	<1.0	IS 3024 (Part 1):1983 RA 2012
ii. Odour		Agreeable	AGREEABLE	IS 3024 (Part 6):1983 RA 2012
iii. pH value	---	6.5-8.5	7.1	IS 3024 (Part 11):1983 RA 2012
iv. Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
v. Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vi. Total dissolved solids	mg/l, Max	500	80	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i. Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 14194 (Part 2):2012
ii. Gross Beta-activity	Bq/l, Max	1.0	<0.02	IS 14194 (Part 1):2012
<b>TOXIC SUBSTANCES</b>				
i. Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 41):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 37):1986 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 47):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 33):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54):2003 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analyzed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

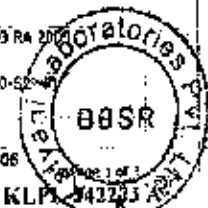
ISO 9001:2015, ISO 17025:2017, ISO 14001:2015

## TEST REPORT



**NABL QLR NO :** TC704320000048707  
**Test Report No :** 2752 | 64881306KLP/09/10/WATER/03114 **Issue Date:** 07 Oct 2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO-560013488 DT-16-12-2019  
**Customer Name :** VIDANTA LIMITED, LANIGARH  
**Address :** PO.- LANIGARH, DIST.- KALAHANDI, ODISHA-766027  
**Date of receipt :** 29-Sep-2020 **Test Commenced On :** 29-Sep-2020 **Test Completion On:** 06-Oct-2020  
**Sample Description :** DRINKING WATER (IS 10500:2012 )  
**Sample Condition :** SEALED  
**Sample Identification \* :** GROUND WATER **Sampling Date :** 28-Sep-2020  
**Batch No. , Lot No :** NA **MTG Data :** NA **EXP Date :** NA  
**Received Quantity :** 1LTR X 3 **Place of Collection :** OBSERVATION BORE WELL DIRTY WATER POND  
**Sample Collected By :** By KLP  
**Ref. to Sampling Procedure:** QSP-07 DT-28.09.2020

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
E. coli	MPN/100ml	Shall not be detected in any 100ml. Sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Nitrate as NO3	mg/l, Max	45	2.8	IS 3025 (PART 34): 1988 RA 2003
Ammonia	mg/l, Max	0.5	<0.3	IS 3025 (Part 34): 1988 RA 2003
Calcium (as Ca)	mg/l, Max	75	56	IS 3025 (Part 40):1991 RA 2009
Chloride (as Cl)	mg/l, Max	250	28.3	IS 3025 (Part 32):1909 RA 2009
Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
Fluoride (as F)	mg/l, Max	1	0.22	IS 3025 (Part 80):2008
Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2014
Magnesium (as Mg)	mg/l, Max	30	11.65	IS 3025 (Part 46):1984 RA 2003
Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2005 RA 2012
Mineral pH	mg/l, Max	0.5	<0.025	Clause 6 of IS 3025 (Part- 34):1991 RA 2003
Phenolic compounds (as C6H5OH)	mg/l, Max	0.001	<0.001	IS 3025 (Part 43):1992 RA 2009
Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
Sulphate (as SO4)	mg/l, Max	200	8	IS 3025 (Part 24):1986 RA 2009
Total alkalinity (as CaCO3)	mg/l, Max	200	190	IS 3025 (Part 23):1986 RA 2009
Total hardness (as CaCO3)	mg/l, Max	200	188	IS 3025 (Part 21):2009
Zinc (as Zn)	mg/l, Max	5	0.041	IS 3025 (Part 49):1994 RA 2009
Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
Sulphide	mg/l	2.0	<0.05	APHA 22nd Edition (4500-S2-04)



2752 | 64881306

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

NO. 1, P. CHAI, E. PH. ROAD, KARUNAPUR, DIST. CHENNAI

Test Report No

2752 | 84661306KLPL/09/20/WATER/03114



Parameters

Sl. No	Parameter	Unit	Requirement	Result	Test Method
xx	Aluminum (as Al)	mg/L, Max	0.03	<0.02	IS 3025 (part-55)
xxi	Anionic Surface Active Agents (as S.B.A.S)	mg/L, Max	0.2	<0.1	Prinac K 01 IS 13420, 2005 RA 2009
xxii	Boron (as B)	mg/L, Max	0.5	<0.1	Annex II of IS 13428 : 2005 RA 2009
xxiii	Polynuclear Aromatic Hydrocarbon	mg/L, Max	0.0005	<0.0001	ISIRI 22nd Edition (G440)
xxiv	Barium (as Ba)	mg/L, Max	0.2	<0.1	Annex F of IS 13428 RA 2012
xxv	Cadmium (as Cd)	mg/L, Max	0.1	<0.005	Annex J of IS 13420 : 2005 RA 2009

**PESTICIDE**

i	p p DDE	µg/L, Max	1.0	<0.05	USEPA 508
ii	p p DDD	µg/L, Max	1.0	<0.05	USEPA 508
iii	p p DDT	µg/L, Max	1.0	<0.05	USEPA 508
iv	o p DDT	µg/L, Max	1.0	<0.05	USEPA 508
v	o p DDD	µg/L, Max	1.0	<0.05	USEPA 508
vi	o p DDE	µg/L, Max	1.0	<0.05	USEPA 508
vii	p-HCH	µg/L, Max	0.01	<0.01	USEPA 508
viii	o-HCH	µg/L, Max	0.04	<0.01	USEPA 508
ix	γ-HCH	µg/L, Max	0.04	<0.01	USEPA 508
x	Lindane	µg/L, Max	2.0	<0.01	USEPA 508
xi	Endosulfan a	µg/L, Max	0.4	<0.01	USEPA 508
xii	Endosulfan B	µg/L, Max	0.4	<0.01	USEPA 508
xiii	Endosulfan sulphate	µg/L, Max	0.4	<0.01	USEPA 508
xiv	Monocrotophos	µg/L, Max	1.0	<0.01	USEPA 8141 A
xv	Ethion	µg/L, Max	3.0	<0.01	USEPA 1657 A
xvi	Chlorpyrifos	µg/L, Max	30	<0.01	USEPA 8141 A
xvii	Phorate	µg/L, Max	2.0	<0.01	USEPA 8141 A
xviii	2,4-D	µg/L, Max	30	<0.05	USEPA 515.1
xix	Butachlor	µg/L, Max	125	<0.01	USEPA 8141 A
xx	Isoproturon	µg/L, Max	9.0	<0.01	USEPA 512
xxi	Atrachlor	µg/L, Max	20	<0.01	USEPA 507
xxii	Azinphos	µg/L, Max	2.0	<0.01	USEPA 8141 A
xxiii	Methyl Parathion	µg/L, Max	0.3	<0.01	USEPA 8141 A
xxiv	Malathion	µg/L, Max	300	<0.01	USEPA 8141 A
xxv	Aldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxvi	Dieldrin	µg/L, Max	0.03	<0.01	USEPA 508
xxvii	Polychlorinated Biphenyls	µg/L, Max	0.0005	<0.00005	ASTM 5175

**PHYSICAL PARAMETER**



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

75/12, PADALU, BILIRISAN, S.W. DISTRICT, CHENNAI

**Test Report No**

**2752 | 54661306KLPL/06/20/WATER/03114**



Parameters	Unit	Requirement	Result	Reference
i. Colour	Hazen, Max	5	1.0	IS 3025 (Part 1):1984 RA 2011
ii. Odour		Acceptable	ACCEPTABLE	IS 3025 (Part 5):1983 RA 2011
iii. Oil Value		6.5-8.5	7.6	IS 3025 (Part 14):1983 RA 2011
iv. Taste		Acceptable	ACCEPTABLE	IS 3025 (Part 6):1984 RA 2006
v. Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vi. Total dissolved solids	mg/l, Max	500	342	IS 3025 (Part 16):1984 RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i. Gross Alpha-activity	Bq/l, Max	0.1	<0.004	IS 34194 (Part-2):2011
ii. Gross Beta-activity	Bq/l, Max	1.0	<0.07	IS 34194 (Part-1):2011
<b>TOXIC SUBSTANCES</b>				
i. Cadmium (as Cd)	mg/l, Max	0.003	<0.001	IS 3025 (Part 43):1992 RA 2009
ii. Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1988 RA 2009
iii. Lead (as Pb)	mg/l, Max	0.01	<0.005	IS 3025 (Part 42):1994 RA 2009
iv. Mercury (as Hg)	mg/l, Max	0.001	<0.0005	IS 3025 (Part 48):1994 RA 2009
v. Total arsenic (as As)	mg/l, Max	0.01	<0.001	IS 3025 (Part 37):1988 RA 2009
vi. Nickel (as Ni)	mg/l, Max	0.02	<0.01	IS 3025 (Part 54): 2003 RA 2009

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. Praveen*  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



*Praveen*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

75/94, PARIKAT, BRICKFIELD SWAR, CUTTACK, ODISHA

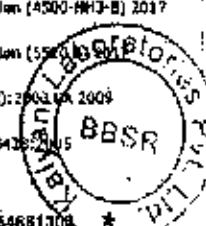
Kalyani Laboratories

## TEST REPORT



**NABL CLR NO** : YC704320000048G4P  
**Test Report No** : 2746 | 64681300KLPL/09/20/WATER/03116 **Issue Date**: 07-Oct-2020  
**Amendment No** : **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766007.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On**: 05-Oct-2020  
**Sample Description** : **SURFACE WATER**  
**Sample Condition** : SEALED  
**Sample Identification #** : **SURFACE WATER** **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : STREAM NEAR TENTUL, IPADAR, DATE-28.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100ml.	5000	33	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
I Solphate as SO <sub>4</sub>	mg/l, Max.	400	2	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
II Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.08	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
III Electrical Conductivity	µs/cm		57	APHA 23rd Edition (2510 B) 2017
IV Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -D-C), 2017
V Total Dissolved Solid	mg/l, Max	1500	44	APHA 23rd Edition (2540 C), 2017
VI Calcium as Ca	mg/l, Max		6.4	APHA 23rd Edition (3500-Ca-B), 2017
VII Magnesium as Mg	mg/l, Max		1.94	APHA 23rd Edition (3500-Mg-B), 2017
VIII Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500-B), 2017
IX Dissolved Oxygen	mg/l, Max	4.0	6.6	APHA 23rd Edition (4500-D-E), 2017
X Biochemical Oxygen Demand (For 5 days 27deg C)	mg/l, Max		1.5	APHA 23rd Edition 2012 (5210 D), 2017
XI Total Hardness as CaCO <sub>3</sub>	mg/l, Max		24	APHA 23rd Edition (2340 C), 2017
XII Chloride (as Cl)	mg/l, Max	600	11.3	IS 3025 (Part 32):1998, RA 2009
XIII Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
XIV Iron (as Fe)	mg/l, Max	50	0.11	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
XV Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
XVI Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
XVII Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
XVIII Free Ammonia (as NH <sub>3</sub> )	mg/l, Max		<0.01	APHA 23rd Edition (4500-NH <sub>3</sub> -B) 2017
XIX Oil & Grease	mg/l, Max		<0.025	APHA 23rd Edition (5520 B) 2017
XX Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
XXI Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2015



2746 | 64681300 \* Page 1 of 2

KLPL-342185 A





# KALYANI LABORATORIES PVT. LTD.

NO. 1, PARALAKH, BILKASIPUR, MEERUT, U.P. INDIA

Test Report No : **2746 | 54681300KLPL/09/20/WATER/03116**



Parameters	Unit	Requirement	Result	Test Method
xxv: Physicochemical Attributes: Hardness	mg/L Max		<0.001	APHA 640
xxvi: Silica (as SiO <sub>2</sub> )	mg/l		<0.01	Annex J of IS 14194:2013
xxvii: Phosphate	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxviii: PERCENT SODIUM (%)	%		0.0006	CI 5.0 of IS 3025(Part 45):1993
xxix: SODIUM ABSORPTION RATIO			0.53	
xxx: Iron	mg/l		<0.2	Annex F of IS 13476:2005
xxxi: TOTAL PESTICIDE	µg/l		<0.0001	ISPM
<b>PHYSICAL PARAMETER</b>				
i: Color		PCD	≤1.0	APHA 21rd Edition (2120 B), 2017
ii: pH Value		6.5-8.5	7.3	APHA 23rd Edition (4800-H+0), 2017
iii: Odour		Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv: Taste		Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>				
i: Gross Alpha-activity	µCi/mL	0.061	BDL	IS 14194 (PART-2):2013
ii: Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>				
i: Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 43):1992 RA 2009
ii: Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2009
iii: Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv: Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v: Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2005 RA 2009
vi: Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

*D. Anupha*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. Anupha*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

7043, P.M.E.M.A. BLD, DAM SWAR, Bhubaneswar

## TEST REPORT



**NABL ULR NO** : TC704320000004867P  
**Test Report No** : 2749 | 54691303KLPL/D9/20/WATER/03117 **Issue Date** : 07-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-18.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : SURFACE WATER  
**Sample Condition** : SEALED  
**Sample Identification** : SURFACE WATER **Sampling Date** : 29-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : ILTR X 3 **Place of Collection** : STREAM NEAR KENDUBAD, DATE-28.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100ml	5000	40	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Sulphate as SO4	mg/l, Max	400	3	APHA 23rd Edition (4500-SO4-E), 2017
Nitrate as NO3	mg/l, Max	50	0.11	APHA 23rd Edition (4500-NO3-E), 2017
Electrical Conductivity	µs/cm	-	25	APHA 23rd Edition (2510 B) 2017
Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F-D, C), 2017
Total Dissolved Solids	mg/l, Max	1500	20	APHA 23rd Edition (2540 C), 2017
Calcium as Ca	mg/l, Max	-	3.2	APHA 23rd Edition (3500-Ca-B), 2017
Magnesium as Mg	mg/l, Max	-	0.97	APHA 23rd Edition (3500-Mg-B), 2017
Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500-B), 2017
Dissolved Oxygen	mg/l, Max	4.0	7.1	APHA 23rd Edition (4500-O-C), 2017
Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	-	1.9	APHA 23rd Edition 2012 (5410 B), 2017
Total Hardness as CaCO3	mg/l, Max	-	22	APHA 23rd Edition (2340 C), 2017
Chloride (as Cl)	mg/l, Max	600	3.8	IS 3025 (Part 32):1988, RA 2009
Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
Iron (as Fe)	mg/l, Max	50	<0.05	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2009 RA 2009
Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA 23rd Edition (4500-NH3-B) 2017
Oil & Grease	mg/l, Max	-	<0.025	APHA 23rd Edition (5520 B) 2017
Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2006





# KALYANI LABORATORIES PVT. LTD.

NO. TABLES: 01-02-03-04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100



Test Report No: 2749 | 54691303KLPL/09/20/WATER/03117

Sl. No.	Parameter	Unit	Requirement	Result	Test Method
xiii	Polynuclear Aromatic Hydrocarbon	mg/l, Max	---	<0.001	APHA 8110
xviii	Silver (as Ag)	mg/l	---	<0.01	Annex 1 of IS 13438:2005
xix	Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xv	PERCENT SOLIDUM (%)	%	---	0.0007	I.L.S.O of IS 3025 (Part 43):1992
xvi	ECOLOGICAL ABSORPTION RATIO	---	---	0.88	---
xvii	Barium	mg/l	---	<0.2	Annex F of IS 13438:2005
xviii	TOTAL PESTICIDE	µg/l	---	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>					
i	Color	---	300	<1.0	APHA 2105 Edition (2120 B), 2017
ii	pH Value	---	6.5-8.5	7.7	APHA 2316 Edition (4502-H+BL), 2017
iii	Odour	---	Unobjectionable	AGREEABLE	APHA 2311 Edition (2120 B), 2017
iv	Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2008
<b>RADIOACTIVITY SUBSTANCES</b>					
i	Gross Alpha-activity	µCi/mL	0.001	BDL	IS 34194 (PART-2):2013
ii	Gross Beta-activity	µCi/mL	0.01	BDL	IS 34194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>					
i	Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 43):1992 RA 2009
ii	Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii	Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2008
iv	Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v	Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2008
vi	Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1986 RA 2008

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

SONA, PATHAL A, BSI GANESHWAR, 751001, ODISHA

## TEST REPORT



**NABL IIR NO :** TC70432000004869F  
**Test Report No :** 2751 | 84701806KLPL/09/10/WATER/03118 **Issue Date :** 07 Oct 2020  
**Amendment No :** - **Amendment Date :** -  
**Reference :** ORDER NO: E500019488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 28-Sep-2020 **Test Commenced On :** 29-Sep-2020 **Test Completion On:** 06-Oct-2020  
**Sample Description :** SURFACE WATER  
**Sample Condition :** SEALED  
**Sample Identification \* :** SURFACE WATER **Sampling Date :** 28-Sep-2020  
**Batch No , Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** 1 LTR X 3 **Place of Collection :** STREAM NEAR RENGOPALI , DATE-28.09.2020  
**Sample Collected By :** By KLPL  
**Ref.To Sampling Procedure :** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	30	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO <sub>4</sub>	mg/l, Max	400	1	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.07	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
iii Electrical Conductivity	µs/cm	-	40	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -D, -C), 2017
v Total Dissolved Solid	mg/l, Max	1500	34	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	4.8	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	0.97	APHA 23rd Edition (3500-Mg-B), 2017
viii Barium as Ba	mg/l, Max	-	<0.1	APHA 23rd Edition (4500-B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	7.4	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (For 3 days 20deg C)	mg/l, Max	-	1.6	APHA 23rd Edition 2012 (5210 B), 2017
xi Total Hardness as CaCO <sub>3</sub>	mg/l, Max	-	16	APHA 23rd Edition (2540 C), 2017
xii Chloride (as Cl)	mg/l, Max	500	3.8	IS 3025 (Part 32):1969, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.28	APHA-23rd Edition (3500-Fe-D, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2009 RA 2009
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2009 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max	-	<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA-23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2009 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13428:2015



2751 | 84701806  
KLP-342069 A

# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

S-11, PATEL NAGAR, BANGALORE - 560025

**Test Report No :** 2753 | 54701305RPL/09/2D/WATER/02115



Parameter	Unit	Requirement	Result	Reference
Iron (as Fe)	mg/L, Max	—	<0.1001	IS 3025 (Part 41): 1992 RA 2009
Copper (as Cu)	mg/L	—	<0.01	IS 3025 (Part 41): 1992 RA 2009
Chloride	mg/L	0.005	<0.001	IS 3025 (Part 41): 1992 RA 2009
PERMANGANATE (Mn)	mg/L	—	0.0005	IS 3025 (Part 41): 1992 RA 2009
SODIUM ADSORPTION RATIO	—	—	0.54	—
Barium	mg/L	—	<0.2	IS 3025 (Part 41): 1992 RA 2009
TOTAL NITROGEN	mg/L	—	<0.0001	IS 3025 (Part 41): 1992 RA 2009
<b>PHYSICAL PARAMETER</b>				
Color	—	300	<1.0	APHA 21st Edition (2120 B), 2017
pH Value	—	6.5-8.5	7.2	APHA 21st Edition (4500-H <sup>+</sup> -B), 2017
Odour	—	Unobjectionable	AGREEABLE	APHA 21st Edition (2120 B), 2017
Taste	—	Agreeable	AGREEABLE	IS 3025 (Part 41): 1992 RA 2009
<b>RADIOACTIVITY SUBSTANCES</b>				
Gross Alpha activity	μCi/mL	0.001	NDL	IS 14194 (PART-2): 2013
Gross Beta activity	μCi/mL	0.01	NDL	IS 14194 (PART-4): 2013
<b>TOXIC SUBSTANCES</b>				
Cadmium (as Cd)	mg/L, Max	0.01	<0.001	IS 3025 (Part 41): 1992 RA 2009
Cyanide (as CN)	mg/L, Max	0.05	<0.02	IS 3025 (Part 27): 1986 RA 2003
Lead (as Pb)	mg/L, Max	0.1	<0.01	IS 3025 (Part 47): 1994 RA 2009
Mercury (as Hg)	mg/L, Max	0.001	<0.001	IS 3025 (Part 40): 1994 RA 2009
Nickel (as Ni)	mg/L, Max	—	<0.01	IS 3025 (Part 54): 2003 RA 2009
Arsenic (as As)	mg/L, Max	0.05	<0.01	IS 3025 (Part 37): 1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By : *D. Ananta*  
For Kalyani Laboratories Pvt. Ltd.

*D. Ananta*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

PROF. P. PAUSE & BILWADEWAR T. M. ODISHA

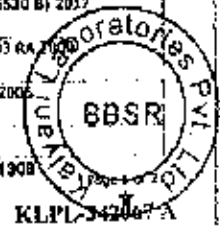
## TEST REPORT



**NABL ULR NO** : TC70432000004872P  
**Test Report No** : 2764 | 64711308KLPL/08/20/WATER/03119 **Issue Date:** 08-Oct-2020  
**Amendment No** : **Attachment Date** :  
**Reference** : ORDER NO-660001JANDISH-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-755027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On**: 05-Oct-2020  
**Sample Description** : **SURFACE WATER**  
**Sample Condition** : **SEALED**  
**Sample Identification +** : **SURFACE WATER** **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MPQ Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X3 **Place of Collection** : VAMSADHARA RIVER NEAR BALABHADRAPUR, DATE-28.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml.	5000	90	IS: 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulfate as SO <sub>4</sub>	mg/l, Max	400	15	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
ii Nitrate as NO <sub>3</sub>	mg/l, Max	50	1.2	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
iii Electrical Conductivity	µs/cm		179	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - D, C), 2017
v Total Dissolved Solid	mg/l, Max	1500	122	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max		22.4	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max		6.80	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500B-B), 2017
ix Dissolved Oxygen	mg/l, Max	8.0	6.8	APHA 23rd Edition (4500-D-C), 2017
x Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max		2.7	APHA 23rd Edition 2012 (5210 B), 2017
xi Total Hardness as CaCO <sub>3</sub>	mg/l, Max		84	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	3.8	IS 3025 (Part 32):1986, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	0.37	APHA-23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH <sub>3</sub> )	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5530 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 53):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 15428:2006

2764 | 64711308



KLPL-342067-A



# KALYANI LABORATORIES PVT. LTD.

75-941, PATEL A, RITHANISWAR, 700091, GUJARAT

Test Report No : 2754 | 54711308KLPL/09/10/WATER/03119



Parameters	Unit	Requirement	Result	Test Method
xxia Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.0001	APHA 8410
xxbi Silver (as Ag)	mg/l	--	<0.01	Annex I of IS 14126:2005
xxiv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxv FERRIC SODIUM (%)	%	--	0.0012	Cl. 5.0 of IS 3025 (Part 15):1993
xxvi SODIUM ADSORPTION RATIO	--	--	0.57	--
xxvii Barium	mg/l	--	<0.2	Annex F of IS 15426:2005
xxviii TOTAL PCP RESIDUE	ug/l	--	<0.0001	IS 8971

### PHYSICAL PARAMETER

i Colour	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.4	APHA 23rd Edition (4500-H+), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2008

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/mL	0.001	BDL	IS 14194 (PART-2):2013
ii Gross Beta-activity	uCi/mL	0.01	BDL	IS 14194 (PART-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

7, SRI PARVATI, BHIRAVANIMATHI, CHOLAR, DIST. THIRU. CHELVU

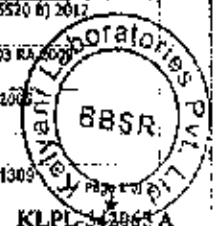
## TEST REPORT



**NABL ULR NO** : TC704320000004873P  
**Test Report No** : 2755 | 54721309KLPL/09/20/WATER/03120  
**Amendment No** :  
**Reference** : ORDER NO-6680013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANIGARRH  
**Address** : PO. - LANIGARRH, DIST. - KALAIANDI, ON (SHA-766027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 05-Oct-2020  
**Sample Description** : SURFACE WATER  
**Sample Condition** : SEALED  
**Sample Identification** : SURFACE WATER  
**Batch No., Lot No** : NA  
**Received Quantity** : 1LITR X3  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07  
**Issue Date** : 08-Oct-2020  
**Amendment Date** :  
**Sampling Date** : 28-Sep-2020  
**MFG Date** : NA  
**EXP Date** : NA  
**Place of Collection** : VANSADHANA RIVER NEAR NARAYANPUR CULVERT(UPSTREAM), DATE-28.09.2020

### Parameters, Units, Requirement, Result, Reference Method

Parameters	Units	Requirement	Result	Reference Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100ml	5000	34	IS: 16221:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
Sulphate as SO4	mg/l, Max	400	12	APHA 23rd Edition (4500-SO42 -E), 2017
Nitrate as NO3	mg/l, Max	50	6.5	APHA 23rd Edition (4500-NO3 -E), 2017
Electrical Conductivity	µS/cm		168	APHA 23rd Edition (2510 D) 2017
Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F -B, -C), 2017
Total Dissolved Solid	mg/l, Max	1500	110	APHA 23rd Edition (2540 C), 2017
Calcium as Ca	mg/l, Max		22.4	APHA 23rd Edition (3500-Ca-B), 2017
Magnesium as Mg	mg/l, Max		4.06	APHA 23rd Edition (3500-Mg-B), 2017
Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500-B), 2017
Dissolved Oxygen	mg/l, Max	1.0	7.6	APHA 23rd Edition(4500-O-C), 2017
Biochemical Oxygen Demand (For 3 days at 27deg C)	mg/l, Max		2.2	APHA 23rd Edition 2012(5210 B), 2017
Total Hardness as CaCO3	mg/l, Max		76	APHA 23rd Edition (2340 C), 2017
Chloride (as Cl)	mg/l, Max	600	5.7	IS 3025 (Part 32):1996, RA 2009
Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992, RA 2009
Iron (as Fe)	mg/l, Max	50	4.0	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006, RA 2012
Selenium (as Se)	mg/L, Max	0.01	<0.01	IS 3025 (Part 56):2003, RA 2009
Zinc (as Zn)	mg/l, Max	35	<0.01	IS 3025 (Part 49):1994, RA 2009
Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA 23rd Edition (4500-NH3-B) 2017
Oil & Grease	mg/l, Max		<0.025	APHA 23rd Edition (5520 B) 2017
Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003, RA 2009
Anionic Surface Active Agents (as MSAS)	mg/l		<0.1	Annex. K of IS 13428:2016



2755 | 54721309  
 KLPL/343863A





# KALYANI LABORATORIES PVT. LTD.

808, PATAVA, BH. BANENWAR, SIDA, DUDHA

Test Report No : 2755 | 54721309KLPL/09/20/WATER/03120



Parameter	Unit	Requirement	Result	Reference
xxxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	--	<0.001	APHA 6440
xxvii Silver (as Ag)	mg/l	--	<0.01	Annex I of IS 13478:2015
xxv Phenols	mg/l	0.005	<0.001	IS 3025 (Part 43):1992 RA 2009
xxvi PERCENT SODIUM (%)	%	--	0.0009	CL 5.0 of IS 3025(Part 45):1990
xxviii SODIUM ADSORPTION RATIO	--	--	0.40	--
xxviii Barium	mg/l	--	<0.2	Annex F of IS 13478:2015
xxviii TOTAL PESTICIDE	ppb/l	--	<0.0001	USEPA

### PHYSICAL PARAMETER

i Color	--	300	<1.0	APHA 23rd Edition (2120 D), 2017
ii pH Value	--	6.5-8.5	7.6	APHA 23rd Edition (4500-H+8), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 D), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006

### RADIOACTIVITY SUBSTANCES

i Gross Alpha-activity	uCi/ml	0.001	BDL	IS 14154 (PART-2):2013
ii Gross Beta-activity	uCi/ml	0.01	BDL	IS 14154 (PART-1):2013

### TOXIC SUBSTANCES

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27): 1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1989 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.



2755 | 54721309

Page 2 of 2

KLPL-342064 A



# KALYANI LABORATORIES PVT. LTD.

78012, PATAH A, BHUBANESWAR 751014, ODISHA

Kalyani Laboratories

## TEST REPORT



**NABL UR NO** : TC7043200000048749  
**Test Report No** : 2756 | 5473130A/08/20/WATER/03131  
**Amendment No** :  
**Reference** : ORDER NO-6600013480 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. - LANJIGARH, DIST. - KALAHANDI, ODISHA-756027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : SURFACE WATER  
**Sample Condition** : SEALED  
**Sample Identification #** : SURFACE WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : ILTR X 3 **Place of Collection** : VAMSADHARA RIVER NEAR CHMATRAPUR  
**Sample Collected By** : By KLPL **CULVERT(DOWNSTREAM), DATE-28.09.2020**  
**Ref.To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100ml	5000	60	IS: 1622:1991 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO4	mg/l, Max	400	12	APHA 23rd Edition (4500-SO42 -E), 2017
ii Nitrate as NO3	mg/l, Max	50	0.95	APHA 23rd Edition (4500-NO3 -E), 2017
iii Electrical Conductivity	µs/cm	-	223	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	0.2	APHA 23rd Edition (4500-F -D, -C), 2017
v Total Dissolved Solid	mg/l, Max	1500	180	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max	-	20.6	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max	-	5.83	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max	-	<0.1	APHA 23rd Edition (4500B -B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	7.5	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (For 5 days @ 20deg C)	mg/l, Max	-	2.9	APHA 23rd Edition 2012(5210 B), 2017
xi Total Hardness as CaCO3	mg/l, Max	-	76	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	600	18.9	IS 3025 (Part 32):1988, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	7.0	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max	-	<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max	-	<0.01	APHA 23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max	-	<0.025	APHA 23rd Edition (5520 O) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l	-	<0.1	Annex K of IS 13426:2003

2756 | 5473130A

KLPL-342063 A



# KALYANI LABORATORIES PVT. LTD.

15/11, PALLI A, BILKAPANEWADI, TQ. GOLIBINDRA

*Kalyani Laboratories*

**Test Report No :** 2756 | 5475130AKLPL/09/20/WATER/03121



Parameters	Unit	Pres. Limit	Test Unit	Test Method	
xxii	Polynuclear Aromatic Hydrocarbons	mg/l, Max	--	<0.0041	APHA 6410
xxiii	Filter (as Ag)	mg/l	--	NDL	APHA 1671B (1947)2005
xxiv	Microbs	mg/l	11.015	<0.001	IS 3025 (Part 4):1992 RA 2009
xxv	PERCENT SODIUM (%)	%	--	0.0015	CL 5.0 67 IS 3025(PART 45):1993
xxvi	SODIUM ABSORPTION RATIO	--	--	0.75	--
xxvii	Barium	mg/l	--	<0.2	APHA F of TB 1312B:2005
xxviii	TOTAL PESTICIDE	µg/l	--	<0.0001	ISLPA
<b>PHYSICAL PARAMETER</b>					
i	Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii	pH Value	--	6.5-8.5	7.7	APHA 23rd Edition (4500-H+)-01, 2017
iii	Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv	Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 8): 1984, RA 2006
<b>RADIOACTIVITY SUBSTANCES</b>					
i	Gross Alpha-activity	µC/mL	0.001	NDL	IS 14194 (PART-2):2013
ii	Gross Beta-activity	µC/mL	0.01	NDL	IS 14194 (PART-1):2013
<b>TOXIC SUBSTANCES</b>					
i	Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii	Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27): 1986 RA 2003
iii	Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv	Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v	Nickel (as Ni)	mg/l, Max	--	<0.01	IS 3025 (Part 54):2003 RA 2009
vi	Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*D. H. ...*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D. H. ...*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



2756 | 5475130A

Page 2 of 2

KLPL-342862 A



# KALYANI LABORATORIES PVT. LTD.

35001, PATIALA, REH. BAHU, NW. CR. 152001, INDIA

## TEST REPORT



**NAEL ULR NO :** TC70432000004675P  
**Test Report No :** 2757 | 84741308KLPL/09/20/WATER/03122 **Issue Date:** 00-Oct-2020  
**Amendment No :** **Amendment Date :**  
**Reference :** ORDER NO- 5600013488 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARI  
**Address :** PO- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 29-Sep-2020 **Test Commenced On :** 29-Sep-2020 **Last Completion On:** 06-Oct-2020  
**Sample Description :** SURFACE WATER  
**Sample Condition :** SEALED  
**Sample Identification \* :** SURFACE WATER **Sampling Date :** 28-Sep-2020  
**Batch No , Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** 1LTR X 3 **Place of Collection :** TURI NALA NEAR RAGHUNATHPUR,  
**Sample Collected by :** By KLPL **DATE-28.09.2020**  
**Ref.To Sampling Procedure :** QSP-07

Parameter	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Total Coliforms	MPN/100ml	5000	60	IS: 1622:1991 RA 2009
<b>CHEMICAL PARAMETER</b>				
Sulphate as SO <sub>4</sub>	mg/l, Max	400	6	APHA 23rd Edition (4500-SO <sub>4</sub> -E), 2017
Nitrate as NO <sub>3</sub>	mg/l, Max	50	0.55	APHA 23rd Edition (4500-NO <sub>3</sub> -E), 2017
Electrical Conductivity	µs/cm		138	APHA 23rd Edition (2550-B), 2017
Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - O-C), 2017
Total Dissolved Solid	mg/l, Max	1500	102	APHA 23rd Edition (2540-C), 2017
Calcium as Ca	mg/l, Max		16	APHA 23rd Edition (3500-Ca-B), 2017
Magnesium as Mg	mg/l, Max		4.86	APHA 23rd Edition (3500-Mg-B), 2017
Barium as B	mg/l, Max		<0.1	APHA 23rd Edition (4500-B - B), 2017
Dissolved Oxygen	mg/l, Max	4.0	5.5	APHA 23rd Edition (4500-O-C), 2017
Biochemical Oxygen Demand (For 3 days @ 20deg C)	mg/l, Max		1.0	APHA 23rd Edition (5210-B), 2017
Total Hardness as CaCO <sub>3</sub>	mg/l, Max		60	APHA 23rd Edition (2340-C), 2017
Chloride (as Cl)	mg/l, Max	600	3.8	IS 3025 (Part 32):1988, RA 2009
Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
Iron (as Fe)	mg/l, Max	50	0.60	APHA-23rd Edition (3500-Fe-B, 3111-B) 2017
Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
Zinc (as Zn)	mg/l, Max	1.5	<0.01	IS 3025 (Part 49):1994 RA 2009
Free Ammonia (as NH <sub>3</sub> )	mg/l, Max		<0.01	APHA-23rd Edition (4500-NH <sub>3</sub> -D) 2017
Oil & Grease	mg/l, Max		<0.025	APHA-23rd Edition (5520-B) 2017
Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2010



2757 | 84741308

KLPL-342061 A



# KALYANI LABORATORIES PVT. LTD.

K-94, PAVAI A, IBBE BANGALURU, CHENNAI, INDIA

Test Report No : 2767 | 84741308/09/20/WATER/03122



Parameter	Unit	Requirement	Result	Reference
Microbiological				
coliform	mpn/100ml		<0.0001	IS 14194
coliform	mpn/100ml		<0.01	Annex 1 of IS 14194:2013
coliform	mpn/l	0.005	<0.001	IS 3025 (Part 41):1992 RA 2009
coliform	%		0.0006	CL 5.0 of IS 3025(Part 45):1993
coliform	---	---	0.30	
coliform	mpn/l		<0.2	Annex F of IS 14194:2013
coliform	µg/l		<0.0001	USEPA

**PHYSICAL PARAMETER**

i	Color	300	±1.0	IS 3025 (Part 41):1992 RA 2009
ii	pH Value	6.5-8.5	7.3	IS 3025 (Part 41):1992 RA 2009
iii	Odour	Unobjectionable	AGREEABLE	IS 3025 (Part 41):1992 RA 2009
iv	Taste	Agreeable	AGREEABLE	IS 3025 (Part 41):1992 RA 2009

**RADIOACTIVITY SUBSTANCES**

i	Gross Alpha-activity	µCi/mL	0.001	BDL	IS 14194 (PART-3):2013
ii	Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-1):2013

**TOXIC SUBSTANCES**

i	Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2009
ii	Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1988 RA 2009
iii	Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2009
iv	Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 48):1994 RA 2009
v	Nickel (as Ni)	mg/l, Max	---	<0.01	IS 3025 (Part 54):2003 RA 2009
vi	Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1988 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

75 961, PAHALA, BILHANESWAR 751001, ODISHA

Kalyani Laboratories

## TEST REPORT

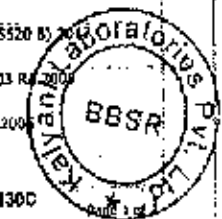


**NABL ULR NO** : TC704320000004875P  
**Test Report No** : 2758 | 5475130CKLPL/09/20/WATER/03123 **Issue Date**: 08-Oct-2020  
**Amendment No** : **Amendment Date** : -  
**Reference** : ORDER NO-6600013408 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 29-Sep-2020 **Test Commenced On** : 29-Sep-2020 **Test Completion On** : 06-Oct-2020  
**Sample Description** : SURFACE WATER  
**Sample Condition** : SEALED.  
**Sample Identification #** : SURFACE WATER **Sampling Date** : 28-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 3 **Place of Collection** : POND NEAR HAREKUNSHAMUR, DATE-28.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Units	Requirement	Obs. Results	Ref. Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPPN/100ml.	5000	40	IS: 1622/1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Sulphate as SO4	mg/l, Max	400	14	APHA 23rd Edition (4500-SO42 - E), 2017
ii Nitrate as NO3	mg/l, Max	50	1.0	APHA 23rd Edition (4500-NO3 - E), 2017
iii Electrical Conductivity	µs/cm		157	APHA 23rd Edition (2510 B) 2017
iv Fluoride as F	mg/l, Max	1.5	<0.05	APHA 23rd Edition (4500-F - B, C), 2017
v Total Dissolved Solid	mg/l, Max	1500	126	APHA 23rd Edition (2540 C), 2017
vi Calcium as Ca	mg/l, Max		19.2	APHA 23rd Edition (3500-Ca-B), 2017
vii Magnesium as Mg	mg/l, Max		5.83	APHA 23rd Edition (3500-Mg-B), 2017
viii Boron as B	mg/l, Max		<0.1	APHA 23rd Edition (4500-B), 2017
ix Dissolved Oxygen	mg/l, Max	4.0	4.5	APHA 23rd Edition (4500-O-C), 2017
x Biochemical Oxygen Demand (For 3 days at 20deg C)	mg/l, Max		1.5	APHA 23rd Edition 2017 (5210 B), 2017
xi Total Hardness as CaCO3	mg/l, Max		72	APHA 23rd Edition (2340 C), 2017
xii Chloride (as Cl)	mg/l, Max	500	5.7	IS 3025 (Part 32):1986, RA 2009
xiii Copper (as Cu)	mg/l, Max	1.5	<0.01	IS 3025 (Part 42):1992 RA 2009
xiv Iron (as Fe)	mg/l, Max	50	1.2	APHA 23rd Edition (3500-Fe-B, 3111 B) 2017
xv Manganese (as Mn)	mg/l, Max		<0.1	IS 3025 (Part 59):2006 RA 2012
xvi Selenium (as Se)	mg/l, Max	0.01	<0.01	IS 3025 (Part 56):2003 RA 2009
xvii Zinc (as Zn)	mg/l, Max	15	<0.01	IS 3025 (Part 49):1994 RA 2009
xviii Free Ammonia (as NH3)	mg/l, Max		<0.01	APHA 23rd Edition (4500-NH3-B) 2017
xix Oil & Grease	mg/l, Max		<0.025	APHA 23rd Edition (5520 B) 2017
xx Total Chromium	mg/l, Max	0.05	<0.01	IS 3025 (Part 52):2003 RA 2009
xxi Anionic Surface Active Agents (as MBAS)	mg/l		<0.1	Annex K of IS 13428:2004

2758 | 54751300

KLPL-342059 A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

SOL. PATHA V. BHARANUSWAR, CHENNAI, INDIA

Test Report No : **2758 | 5475130(KLPL/09/20/WATER/03123**



Parameter	Unit	Requirement	Result	Test Method
xiii Polynuclear Aromatic Hydrocarbon	mg/l, Max		<0.0001	APHA 8440
xvii Silver (as Ag)	mg/l		<0.01	Annex I of IS 13128:2005
xviii Pterins	mg/l	0.005	<0.001	IS 1075 (Part 43):1992 RA 2006
xix PERCENT SODIUM (%)	%		0.0009	IS 6047 IS 3025 (Part 45):1993
xxvi SODIUM ABSORPTION RATIO			0.45	
xxviii Barium	mg/l		<0.2	Annex F of IS 13128:2005
xxviii TOTAL PESTICIDE	µg/l		<0.0001	USEPA

**PHYSICAL PARAMETER**

i Color	--	300	<1.0	APHA 23rd Edition (2120 B), 2017
ii pH Value	--	6.5-8.5	7.2	APHA 23rd Edition (4500-H <sub>+</sub> -B), 2017
iii Odour	--	Unobjectionable	AGREEABLE	APHA 23rd Edition (2120 B), 2017
iv Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6): 1984, RA 2006

**RADIOACTIVITY SUBSTANCES**

i Gross Alpha-activity	µCi/mL	0.001	BDL	IS 34194 (PART-2):2013
ii Gross Beta-activity	µCi/mL	0.01	BDL	IS 14194 (PART-1):2013

**TOXIC SUBSTANCES**

i Cadmium (as Cd)	mg/l, Max	0.01	<0.001	IS 3025 (Part 41):1992 RA 2006
ii Cyanide (as CN)	mg/l, Max	0.05	<0.02	IS 3025 (Part 27):1986 RA 2003
iii Lead (as Pb)	mg/l, Max	0.1	<0.01	IS 3025 (Part 47):1994 RA 2006
iv Mercury (as Hg)	mg/l, Max	0.001	<0.001	IS 3025 (Part 40):1994 RA 2009
v Nickel (as Ni)	mg/l, Max		<0.01	IS 3025 (Part 54):2003 RA 2009
vi Arsenic (as As)	mg/l, Max	0.05	<0.01	IS 3025 (Part 37):1986 RA 2009

Remarks : NIL

Any unusual feature observed during determination : NIL

----- End of Test Report -----

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd





# KALYANI LABORATORIES PVT. LTD.

ISO 9001:2015 CERTIFIED COMPANY

## TEST REPORT



**NABL ULR NO** : TC70432000004845r  
**Test Report No** : BSR | 551712ED KLPL/09/20/ENVR/00696A  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 D1-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-765027  
**Date of receipt** : 07-Sep-2020 **Commenced On** : 07-Sep-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : -  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : QSP-07

**Issue Date** : 08-Oct-2020  
**Amendment Date** : -

**Completion On** : 10-Sep-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER - II, 05.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	712.5	IS 11755(part-2)-1995(A 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	19.3	KLPL/SOP/ABR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	13.1	KLPL/SOP/ABR-06
Velocity	m/sec	-	23.20	KLPL/SOP/ABR-06
Oxygen	%	-	4.45	KLPL/SOP/ABR-06
Stack Temperature in Deg kelvin	--	--	445	KLPL/SOP/ABR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	308.2	IS 11355 (part-7)-2005
Quantity of Gas flow	Nm <sup>3</sup> / hr	-	3835.806	KLPL/SOP/ABR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/ABR-06
Pressure	mm.H <sub>2</sub> O	--	31.78	KLPL/SOP/ABR-06

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report

**D. Anilcho**  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



**D. Anilcho**  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342257 A



# KALYANI LABORATORIES PVT. LTD.

Kalyani Laboratories

TEST REPORT

**NABL ULR NO :** TC704320000004845P  
**Test Report No :** 58K | 551719KH KLPL/09/20/ENVN/8069G  
**Amendment No :** -  
**Reference :** ORDER NO-6600013406 DF-15 12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO- LANJIGARH, DIST- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 07-Sep-2020 **Commenced On :** 07-Sep-2020  
**Sample Name :** FLUE GAS | STACK MONITORING  
**Sample Condition :** -  
**Quantity :** 1 NOS  
**Ref. To Sampling Procedure :** QSP-07



**Issue Date :** 06-Oct-2020  
**Amendment Date :** -


**Completion On:** 10-Sep-2020

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date : POWER PLANT UNIT-II, 04.09.2020</b>				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	715.8	IS 11759(part-2):1985(RA 2014)
Particulate Matter	mg/m <sup>3</sup>	-	28.5	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.1	KLPL/SOP/AIR-06
Velocity	m/sec	-	7.38	KLPL/SOP/AIR-06
Oxygen	%	-	5.35	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	409	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	345.8	IS 11255 (part-2):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1498361	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	9.5	KLPL/SOP/AIR-06

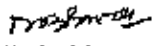
**Remarks :** NIL

**Any unusual feature observed during determination :** NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342158 A

Page 1/1



# KALYANI LABORATORIES PVT. LTD.

TRADE MARK & REGISTERED SERVICE MARK IN INDIA

## TEST REPORT



**NABL CLR NO** : TC704120000004B45P  
**Test Report No** : 558 | 551717RD KLPL/09/20/ENVN/00695C  
**Amendment No** :  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANX LIMITED, LANHGARH  
**Address** : PO.- LANHGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 12-Sep-2020 **Commenced On** : 12-Sep-2020  
**Sample Name** : FLUE GAS & STACK MONITORING  
**Sample Condition** :  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : QSP-07  
**Parameters** :

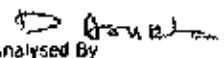
**Issue Date** : 06-Oct-2020  
**Amendment Date** :  
**Completion On** : 15-Sep-2020

Location & Date	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -11 , 10.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	735.8	IS 11725 (part-2):1999(IPA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	25.7	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	13.68	KLPL/SOP/AIR-06
Velocity	m/sec	-	22.91	KLPL/SOP/AIR-06
Oxygen	%	-	4.5	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	447	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	330.3	IS 11255 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3478.624	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	30.87	KLPL/SOP/AIR-06

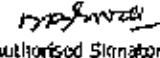
Remarks : NIL

Any unusual feature observed during determination : N/A

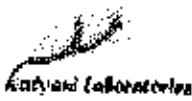
End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342255 A



# KALYANI LABORATORIES PVT. LTD.

3074, PATEL A, BIR BASTI, VARANASI, UTTAR PRADESH, INDIA

## TEST REPORT



**NABL IIR NO** : TC70432000004045P  
**Test Report No** : 558 | 55171280 KLP/09/20/ENVN/00696B  
**Amendment No** : -  
**Reference** : ORDER NO-6600013468 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 09 Sep-2020 **Commenced On** : 09-Sep-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : -  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

**Issue Date** : 06-Oct-2020  
**Amendment Date** : -

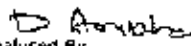
**Completion On** : 12-Sep-2020

Parameters	Unit	Standard Value	Result	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-1, 07.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	775.2	IS 11255 (Part-2):1995(MS 2004)
Particulate Matter	mg/Nm <sup>3</sup>	-	37.5	KLP/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.16	KLP/SOP/AIR-06
Velocity	m/sec	-	6.24	KLP/SOP/AIR-00
Oxygen	%	-	5.18	KLP/SOP/AIR-06
Stack Temperature in Deg kelvin	°C	-	401	KLP/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	370.6	IS 11255 (Part-1):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1263070	KLP/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLP/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	2.47	KLP/SOP/AIR-06

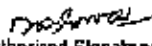
**Remarks** : nil

**Any unusual feature observed during determination** : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.



# KALYANI LABORATORIES PVT. LTD.

INDUSTRIAL AREA, BILASPUR, JHARKHAND - 826001, INDIA

## TEST REPORT



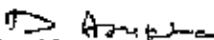
**NABL CLR NO** : TC704320000004845P  
**Test Report No** : 558 | 551712ED KLPL/09/20/ENVN/00696D **Issue Date** : 05-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-660001348 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 28-Sep-2020 **Completion On** : 30-Sep-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : -  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure** : QSP-07

Parameter	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II, 29.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	720.1	IS 11255 (part-2):1995 (RA-2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	21.3	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	19.19	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.91	KLPL/SOP/AIR-06
Oxygen	%	-	4.49	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	°C	-	439	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	315.5	IS 11255 (part-2):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	3377201	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/EDP/AIR-06
Pressure	mmH <sub>2</sub> O	-	28.74	KLPL/SOP/AIR-06

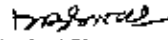
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342254 A



# KALYANI LABORATORIES PVT. LTD.

TRADE PAVIL A, BILUPANIMAR, WEST MIDLANDS, ENGLAND

## TEST REPORT



**NABL ULR NO** : TC70432000004845P  
**Test Report No** : 558 | 5517126B KLPL/09/20/ENVN/00696E  
**Amendment No** :  
**Reference** : ORDER NO: 6800013486 DT 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST. KALAHANDI, ODISHA-766027.  
**Date of receipt** : 28-Sep-2020 **Commenced On** : 28-Sep-2020 **Completion On** : 30-Sep-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** :  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : QSP-07

**Issue Date** : 06-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-II, 20.09.2020				
Sulphur Dioxide	mg/m <sup>3</sup>	-	732.8	IS 11755(part-2):1995(IA-2014)
Particulate Matter	mg/m <sup>3</sup>	-	26.9	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	9.95	KLPL/SOP/AIR-06
Velocity	m/sec	-	20.7	KLPL/SOP/AIR-06
Oxygen	%	-	5.31	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	411	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/m <sup>3</sup>	--	339.1	IS 11755 (part-7):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	2140402	KLPL/SOP/AIR-05
Mercury	mg/m <sup>3</sup>	--	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	--	7.31	KLPL/SOP/AIR-06

Remarks : nil

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-34253 A



# KALYANI LABORATORIES PVT. LTD.

100/14, PYNHUA, JHILIKANISWAR, 752102, ODISHA

## TEST REPORT



**NABL CLR NO** : TC70432000004045P  
**Test Report No** : 558 | 551712FD KLPL/09/20/ENVN/00696F  
**Amendment No** :  
**Reference** : ORDER NO 600011428 DT 16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020      Commenced On : 30-Sep-2020      **Completion On:** 03-Oct-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : -  
**Quantity** : 1 NOS  
**Ref. To Sampling Procedure:** QSP-07


**Issue Date** : 06-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : CALCINER -II, 28.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	724.6	IS 11255(part-2):1983(PA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	24.3	KLPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	13.62	KLPL/SOP/AIR-06
Velocity	m/sec	-	21.79	KLPL/SOP/AIR-06
Oxygen	%	-	4.47	KLPL/SOP/AIR-06
Stack Temperature in Deg kelvin	°C	-	447	KLPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	-	325.3	IS 11255 (part-2):2005
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	328767.1	KLPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	-	0.03	KLPL/SOP/AIR-06
Pressure	mmH <sub>2</sub> O	-	27.91	KLPL/SOP/AIR-06

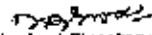
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342252



# KALYANI LABORATORIES PVT. LTD.

INDIAN PATENT & BUREAU SWAR 25306, CHUNDA

## TEST REPORT



**NABL ULR NO** : TC7D4320D0000484SP  
**Test Report No** : 558 | 551722ED KLPL/09/20/ENVN/00696G  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16 12 2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. - LANJIGARH, DIST. - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Commenced On** : 10-Sep-2020 **Completion On** : 03-Oct-2020  
**Sample Name** : FLUE GAS | STACK MONITORING  
**Sample Condition** : -  
**Quantity** : 1 NOS  
**Ref To Sampling Procedure** : QSP-07


**Issue Date** : 06-Oct-2020  
**Amendment Date** : -

Parameters	Unit	Standard Value	Results	Test Method
<b>Location &amp; Date</b> : POWER PLANT UNIT-II, 29.09.2020				
Sulphur Dioxide	mg/Nm <sup>3</sup>	-	785.2	IS 11250 (part-2):1995 (IA 2014)
Particulate Matter	mg/Nm <sup>3</sup>	-	34.5	KPL/SOP/AIR-06
Carbon Dioxide	mg/m <sup>3</sup>	-	10.43	KPL/SOP/AIR-06
Velocity	m/sec	-	7.81	KPL/SOP/AIR-06
Oxygen	%	-	5.58	KPL/SOP/AIR-06
Stack Temperature in Deg kelvin	--	--	410	KPL/SOP/AIR-06
Nitrogen Dioxide	mg/Nm <sup>3</sup>	--	362.3	IS 11255 (part-7):2006
Quantity of Gas Flow	Nm <sup>3</sup> / hr	-	1536206	KPL/SOP/AIR-06
Mercury	mg/Nm <sup>3</sup>	--	0.03	KPL/SOP/AIR-06
Pressure	mmH2O	--	3.72	KPL/SOP/AIR-06

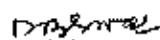
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorised Signatory  
 For Kalyani Laboratories Pvt. Ltd.

12ED484511355  
 KLPL-342251 A



# KALYANI LABORATORIES PVT. LTD.

SHRI. PABAI A. BHUPANTHAR 79 MOI, GIMSEIA

## TEST REPORT




**NABL ULR NO** : TC704320D00004856F  
**Test Report No** : KLPL/9/20/WATER/02999A **Issue Date**: 28-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-66000134BB DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO - LANJIGARH, DIST - KALAHANDI, ODISHA-766027.  
**Date of receipt** : 05-Sep-2020 **Test Commenced On** : 05-Sep-2020 **Test Completion On** : 10-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 04-Sep-2020  
**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-04.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Fecal Coliform	MPN/100ml	< 100	22	IS12:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	50	13	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	2.5	APHA 23rd Edition (5210 B), 2017
Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (9520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	1.0	APHA 23rd Edition (4500-NHorg-B, 4500-NH2-B, 4500-NH3-B), 2017
Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value		6.5-9.0	7.75	APHA 23rd Edition (4500-H+D), 2017

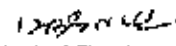
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78-10, PAHARI A, BIR BANJWAR 751011 ODISHA

Kalyani Laboratories

## TEST REPORT



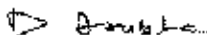
**NABL ULR NO :** TC704320000004855F  
**Test Report No :** 2738 | 843112F7KLP1/9/20/WATER/03086  
**Amendment No :** -  
**Reference :** ORDER NO-6600013486 DT-16.12.2019  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt :** 05-Sep-2020 **Test Commenced On :** 05-Sep-2020 **Test Completion On :** 10-Sep-2020  
**Sample Description :** STP WATER  
**Sample Condition :** SCALED  
**Sample Identification \* :** STP OUTLET **Sampling Date :** 04-Sep-2020  
**Batch No., Lot No :** NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity :** ILTR X 2 **Place of Collection :** TOWNSHIP DT-04.09.2020  
**Sample Collected By :** By KLPL  
**Ref To Sampling Procedure:** QSP-D7

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Fecal Coliform	NPN/100ml.	< 100	34	IS 1622:1961, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	50	30	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 3 days, 20 deg C)	mg/l, Max	10	5	APHA 23rd Edition (5210 B), 2017
Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	6.4	APHA 23rd Edition (4500-Nitrog-B, 4500-NO2-B, 4500-NO3-B), 2017
Ammonium Nitrogen (as NH4-N)	mg/l, Max	3	2.24	APHA 23rd Edition (4800-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value		5.5-9.0	7.2	APHA 23rd Edition (4500-H+ -B), 2017

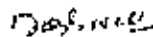
Remarks : NIL

Any unusual feature observed during determination : NIL

..... End of Test Report .....

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

NS-02, PADMALA, BHUBANESWAR-751001, ODISHA

## TEST REPORT



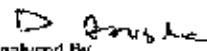
**NABL IIR NO** : TC704320000048367  
**Test Report No** : KLPL/9/20/WATER/03001A  
**Amendment No** :  
**Reference** : ORDER NO 6600DL3488 DT 16.12.2019  
**Customer Name** : VEDANIA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 09-Sep-2020 **Test Commenced On** : 09-Sep-2020 **Test Completion On** : 14-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification #** : STP OUTLET **Sampling Date** : 08-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-08.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Fecal Coliform	MPN/100ml.	< 100	23	IS 1622:1993, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	50	15	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 3 days @ 20deg C)	mg/l, Max	10	3	APHA 23rd Edition (5210 D), 2017
Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	1.1	APHA 23rd Edition (4500-NH3-B, 4500-NO2-B, 4500-NO3-B), 2017
Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value		6.5-9.0	7.8	APHA 23rd Edition (4500-H+ B), 2017

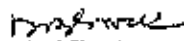
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

10/11, PALLEVA, BILHA MANDAL, DIST. GURUNDA

## TEST REPORT



Issue Date: 28-Sep-2020

Amendment DATA : -

**NABL URL NO** : TC784320000004888F  
**Test Report No** : KLPL/2/20/WATER/03001B  
**Amendment No** :  
**Reference** : ORDER NO-5600013688 (11-16.12.2019)  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO. LANJIGARH, DIST. KALAHANDE, ODISHA 766027.  
**Date of receipt** : 09-Sep-2020 **Test Commenced On** : 09-Sep-2020 **Test Completion On** : 14-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 08-Sep-2020  
**Batch No. / Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1 LTR X 2 **Place of Collection** : TOWNSHIP DT-08.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Faecal Coliform	MPN/100ml.	< 100	40	IS 622-1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	50	33	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	5.5	APHA 23rd Edition (5210 B), 2017
Total Suspended Solids	mg/l, Max	20	8	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	<0.9	APHA 23rd Edition (5520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	6.5	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.24	APHA 23rd Edition (4500-NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value		6.5-9.0	7.25	APHA 23rd Edition (4500-NH-B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

SPITE, PYNIA, BILASPUR, ODISHA

## TEST REPORT



**NABL ULR No** : TC70432000004856P  
**Test Report No** : KLPL/S/20/WATER/D3069A  
**Issue Date** : 20-Sep-2020  
**Amendment No** : -  
**Amendment Date** : -  
**Reference** : ORDER NO-660013488 DT-15.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-760027.  
**Date of receipt** : 19-Sep-2020 **Test Commenced On** : 19-Sep-2020 **Test Completion On** : 24-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification \*** : STP OUTLET **Sampling Date** : 18-Sep-2020  
**Batch No. / Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-18.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QST-U7

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Faecal Coliform	NPR/100ml	< 100	26	IS 1622:1991, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	50	20	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	3.5	APHA 23rd Edition (5210 B), 2017
Total Suspended Solids	mg/l, Max	20	4	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	1.3	APHA 23rd Edition (4500-NHorg-B, 4500-NO2-B, 4500-NO3-B), 2017
Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500 NH4 C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value	---	5.5-9.0	7.85	APHA 23rd Edition (4500-H+ -B), 2017

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

NO. 94, PALLALA, BILIRASWARI, 751001, ODISHA

## TEST REPORT



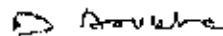
**NABL ULR NO** : TC704320000004855F  
**Test Report No** : KLPL/9/20/WATER/03069B  
**Amendment No** : -  
**Reference** : ORDER NO-5500013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO: LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 19-Sep-2020 **Test Commenced On** : 19-Sep-2020 **Test Completion On** : 24-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEATED  
**Sample Identification** : STP OUTLET **Sampling Date** : 18-Sep-2020  
**Batch No., Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : TOWNSHIP DT-18.09.2020  
**Sample Collected By** : By KLPL  
**Ref To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
1. Faecal Coliform	MPN/100ml	< 100	50	IS 1622:1983, RA 3009
<b>CHEMICAL PARAMETER</b>				
i. Chemical Oxygen Demand	mg/l, Max	50	35	APHA 23rd Edition (5220 B), 2017
ii. Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	7	APHA 23rd Edition (5210 B), 2017
iii. Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2017
v. Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (5520 B), 2017
v. TOTAL Nitrogen	mg/l, Max	10	6.7	APHA 23rd Edition (4500-Nitro-B, 4500-NO2-B, 4500-NO3-B), 2017
vi. Ammonium Nitrogen (as NH4-N)	mg/l, Max	5	2.80	APHA 23rd Edition (4500 NH3-C), 2017
<b>PHYSICAL PARAMETER</b>				
i. pH value		6.5-9.0	7.3	APHA 23rd Edition (4500-H+-B), 2017

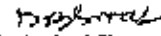
Remarks : NIL

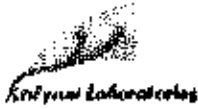
Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

5944, PART-A, BHUBANESWAR 752005, ODISHA

## TEST REPORT



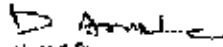
**NAEL CLR NO** : 1C7D4320D00004856E  
**Test Report No** : 2740 | 543012F8KLPL/9/20/WATER/03085 **Issue Date** : 28-Sep-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-15.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 23-Sep-2020 **Test Commenced On** : 23-Sep-2020 **Test Completion On** : 28-Sep-2020  
**Sample Description** : STP WATER  
**Sample Condition** : SEALED  
**Sample Identification** : STP OUTLET **Sampling Date** : 22-Sep-2020  
**Batch No., Lot No** : NA **Mfg Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT DT-22.09.2020  
**Sample Collected By** : By KIRI  
**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
I. Faecal Coliform	MPN/100ml	< 100	27	IS 812:1981, IS 2009
<b>CHEMICAL PARAMETER</b>				
i. Chemical Oxygen Demand	mg/l, Max	50	24	APHA 23rd Edition (5210 B), 2017
ii. Biochemical Oxygen Demand (For 3 days 27deg C)	mg/l, Max	10	4	APHA 23rd Edition (5210 B), 2017
iii. Total Suspended Solids	mg/l, Max	20	6	APHA 23rd Edition (2540 D), 2017
iv. Oil & Grease	mg/l, Max	10	<0.4	APHA 23rd Edition (9520 B), 2017
v. TOTAL Nitrogen	mg/l, Max	10	1.35	APHA 23rd Edition (4500-NH <sub>4</sub> -B, 4500-NO <sub>2</sub> -B, 4500-NO <sub>3</sub> -B), 2017
vi. Ammonium Nitrogen (as NH <sub>4</sub> -N)	mg/l, Max	5	<0.3	APHA 23rd Edition (4500-NH <sub>4</sub> -C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value	--	6.5-9.0	7.0	APHA 23rd Edition (4500-H <sup>+</sup> -B), 2017

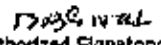
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 for Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

75 NALANDA, WHITE BANGALORE, BHOJ, CHHISIA

## TEST REPORT



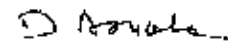
**NABL URN NO :** TC70432000004055T  
**Test Report No :** 2739 | 543112F7KLPL/9/20/WATER/03085  
**Issued Date :** 28-Sep-2020  
**Applicant No :** -  
**Reference :** ORDER NO 6600013400 DT 16.12.2019  
**Arrival Date :** -  
**Customer Name :** VEDANTA LIMITED, LANJIGARH  
**Address :** PO. LANJIGARH, DIST. KALAHANDI, ODISHA-768027.  
**Date of receipt :** 23-Sep-2020    **Test Commenced On :** 23-Sep-2020    **Test Completion On :** 28-Sep-2020  
**Sample Description :** STP WATER  
**Sample Condition :** SEALED  
**Sample Identification # :** STP OUTLET    **Sampling Date :** 22-Sep-2020  
**Batch No. / Lot No :** NA    **MFG Date :** NA    **EXP Date :** NA  
**Received Quantity :** 1LTR X 2    **Place of Collection :** TOWNSHIP DT-22.09.2020  
**Sample Collected By :** By KLPL  
**Ref. To Sampling Procedure :** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
Faecal Coliform	MPN/100ml	< 300	60	IS 222:1981, RA 2009
<b>CHEMICAL PARAMETER</b>				
Chemical Oxygen Demand	mg/l, Max	80	40	APHA 23rd Edition (5220 B), 2017
Biochemical Oxygen Demand (For 5 days @ 20°C)	mg/l, Max	20	8	APHA 23rd Edition (5210 B), 2017
Total Suspended Solids	mg/l, Max	20	10	APHA 23rd Edition (2540 D), 2017
Oil & Grease	mg/l, Max	10	< 0.4	APHA 23rd Edition (8520 B), 2017
TOTAL Nitrogen	mg/l, Max	10	6.9	APHA 23rd Edition (4500-NH <sub>3</sub> -B, 4500-NH <sub>2</sub> -B, 4500-NH <sub>3</sub> -C), 2017
Ammonium Nitrogen (as NH <sub>4</sub> -N)	mg/l, Max	5	3.96	APHA 23rd Edition (4500-NH <sub>4</sub> -C), 2017
<b>PHYSICAL PARAMETER</b>				
pH value		6.5-9.0	7.3	APHA 23rd Edition (4500-NH-B), 2017

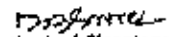
Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

  
 Analysed By  
 For Kalyani Laboratories Pvt. Ltd.



  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/9-24, PAULALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004930P  
**576 | 56461342 KLPL/09/20/ENVN/00720**  
**Amendment No** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Commenced On** : 30-Sep-2020  
**Sample Name** : NOISE  
**Sample Condition** : -  
**Quantity** : 10 NOS  
**Ref.To Sampling Procedure** : QSP-07

**Issue Date** : 12-Oct-2020

**Amendment Date** : -

**Completion On** : 01-Oct-2020

Parameters	Unit	Standard Value	Result	Test Method
------------	------	----------------	--------	-------------

**Location & Date** : **BALABHADRAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	48.8	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	36.9	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **BASANTAPADA , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	47.8	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	33.9	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **CHHATRAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	48.9	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	36.1	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **HAREKRISHANAPUR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	45.8	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	35.8	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **KASIBADI , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	47.8	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	34.8	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **LANJIGARH , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	54.6	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	44.8	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **MASKAPADAR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	54.5	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	42.6	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **NIYAMAGIRI VEDANTA NAGAR , 29.09.2020**

Noise Level Indl. Area (Day)	dB	55	51.2	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------

Noise Level Indl. Area (Night)	dB	45	40.5	IS 9989:1981 (RA 2014)
--------------------------------	----	----	------	------------------------

**Location & Date** : **PLANT SITE , 29.09.2020**

Noise Level Indl. Area (Day)	dB	75	72.5	IS 9989:1981 (RA 2014)
------------------------------	----	----	------	------------------------



1342493011502

KLPL-342493A Page 1 of 2





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



NABL ULR NO : TC704320000004930P

576 | 56461342 KLPL/09/20/ENVN/00720

Issue Date : 12-Oct-2020

Amendment No : -

Amendment Date : -

Reference : ORDER NO-6600013488 DT-16.12.2019

Customer Name : VEDANTA LIMITED, LANJIGARH

Address : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

Date of receipt : 30-Sep-2020

Commenced On : 30-Sep-2020

Completion On: 01-Oct-2020

Sample Name : NOISE

Sample Condition : -

Quantity : 10 NOS

Ref. To Sampling Procedure: QSP-07

Parameters	Unit	Standard Value	Results	Test Method
Noise Level Indl. Area (Night)	dB	70	66.0	IS 9989:1981 (RA 2014)
<b>Location &amp; Date : RENGOPALI , 29.09.2020</b>				
Noise Level Indl. Area (Day)	dB	55	47.0	IS 9989:1981 (RA 2014)
Noise Level Indl. Area (Night)	dB	45	33.4	IS 9989:1981 (RA 2014)

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

*Anil*  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*D Anil*  
Authorised Signatory  
For Kalyani Laboratories Pvt. Ltd.





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



<b>NABL ULR NO</b>	: TC704320000004969P	<b>Issue Date:</b>	14-Oct-2020
<b>Test Report No</b>	: 2822   54821369KLPL/09/20/WATER/03130	<b>Amendment Date</b>	: -
<b>Amendment No</b>	: -		
<b>Reference</b>	: ORDER NO-6600013488 DT-16.12.2019		
<b>Customer Name</b>	: VEDANTA LIMITED, LANJIGARH		
<b>Address</b>	: PO.- LANJIGARH, DIST.- KALAHANDE, ODISHA-766027.		
<b>Date of receipt</b>	: 30-Sep-2020	<b>Test Commenced On</b>	: 30-Sep-2020
<b>Sample Description</b>	: DRINKING WATER (IS 10500:2012)	<b>Test Completion On</b>	: 08-Oct-2020
<b>Sample Condition</b>	: SEALED		
<b>Sample Identification *</b>	: GROUND WATER	<b>Sampling Date</b>	: 29-Sep-2020
<b>Batch No, Lot No</b>	: NA	<b>MFG Date</b>	: NA
<b>Received Quantity</b>	: 1LTR X 2	<b>EXP Date</b>	: NA
<b>Sample Collected By</b>	: By KLPL	<b>Place of Collection</b>	: BOREWELL AT BANDHAGUDA DT-29.09.2020
<b>Ref.To Sampling Procedure:</b>	QSP-07		

Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988,RA 2009
iii	Nitrate as NO3	mg/l, Max	45	3.0	IS 3025 (PART 34): 1988 RA 2003
iv	Calcium (as Ca)	mg/l, Max	75	30.4	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	13.2	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.6	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2003
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	12	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3)	mg/l, Max	200	109	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3)	mg/l, Max	200	104	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l,Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-PO4)

2822 | 54821369





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2822 | 54821369KLPL/09/20/WATER/03130



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 46)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

### PHYSICAL PARAMETER

i Conductivity	ms/cm		0.256	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.8	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts B):1984 RA 2006
vi Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	170	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		24	

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004967P

**Test Report No** : 2821 | 54811367KLPL/09/20/WATER/03129 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** :BORE WELL AT BATERLIMA DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref.To Sampling Procedure:** QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii Nitrate as NO3	mg/l, Max	45	4.5	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	56	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	22.7	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	0.83	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.3	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.68	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	4.86	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	14	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3)	mg/l, Max	200	138	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3)	mg/l, Max	200	160	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (1500-04-01)

2821 | 54811367  
**BBSR**  
 KLPL- 24216A



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA

Test Report No : 2821 | 54811367KLPL/09/20/WATER/03129



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

### PHYSICAL PARAMETER

i Conductivity	ms/cm	---	0.376	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	236	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report

Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/9/4, PAHAL, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004966P  
**Test Report No** : 2820 | 54801366KLPL/09/20/WATER/03128 **Issue Date:** 14-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On:** 08-Oct-2020  
**Sample Description** : **DRINKING WATER (IS 10500:2012 )**

**Sample Condition** : SEALED  
**Sample Identification \* :** **GROUND WATER** **Sampling Date :** 29-Sep-2020  
**Batch No , Lot No** : NA **MFG Date :** NA **EXP Date :** NA  
**Received Quantity** : 1LTR X 2 **Place of Collection :** BORE WELL AT CHANALIMA DT-29.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure:** QSP-07

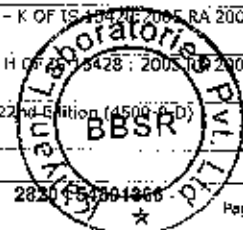
Parameters	Unit	Requirement	Result	Test Method
------------	------	-------------	--------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	0.5	IS 3025 (PART 34): 1988 RA 2009
iv	Calcium (as Ca)	mg/l, Max	75	11.2	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	18.9	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.5	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.7	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	5.83	IS 3025 (Part 46):1994 RA 2009
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	39	IS 3025 (Part 23):1986 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	52	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 3025:2009 RA 2009
xix	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H of IS 3025: 2009 RA 2009
xx	phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-PO4 D)



2820 | 54801366

Page 1 of 2

KLPL- 342118A

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHAL, BHUBANESWAR-752101, ODISHA



**Test Report No** : **2820 | 54801366KLPL/09/20/WATER/03128**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4b)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

i Conductivity	ms/cm		0.146	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.5	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Parts 2):1984 RA 2006
vi Turbidity	NTU, Max	1	0.8	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	112	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		24	

**Remarks** : NIL

*Any unusual feature observed during determination* : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*



Analysed By  
For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd.

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004965P

**Test Report No** : 2819 | 54791365KLPL/09/20/WATER/03127 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \* :** GROUND WATER **Sampling Date** : 29-Sep-2020

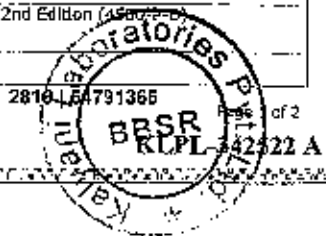
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT CHHATRAPUR DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

Parameters	Unit	Requirement	Result	Test Method
<b>BACTERIOLOGICAL QUALITY</b>				
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Fecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
<b>CHEMICAL PARAMETER</b>				
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii Nitrate as NO3	mg/l, Max	45	4.0	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	62.4	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	9.4	IS 3025 (Part 32):1986 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	0.75	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	6.80	IS 3025 (Part 46):1994 RA 2003
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	13	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3),	mg/l, Max	200	192	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO3),	mg/l, Max	200	184	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (1995)





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : 2819 | 54791365KLPL/09/20/WATER/03127



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4B)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA
<b>PHYSICAL PARAMETER</b>				
i Conductivity	ms/cm		0.509	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour		Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value		6.5-8.5	7.2	IS 3025 (Part-11):1983, RA 2012
v Taste		Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2006
vi Turbidity	NTU, Max	1	0.6	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	302	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C		24	

**Remarks** : NIL

*Any unusual feature observed during determination* : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

**D. Arunkumar**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd



*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004964P  
**Test Report No** : 2818 | 54781364KLPL/09/20/WATER/03126 **Issue Date** : 14-Oct-2020  
**Amendment No** : - **Amendment Date** : -  
**Reference** : ORDER NO-6600013488 DT-16.12.2019  
**Customer Name** : VEDANTA LIMITED, LANJIGARH  
**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.  
**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On** : 08-Oct-2020  
**Sample Description** : **DRINKING WATER (IS 10500:2012 )**  
**Sample Condition** : SEALED  
**Sample Identification \* :** **GROUND WATER** **Sampling Date** : 29-Sep-2020  
**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA  
**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT RENGOPALI DT-29.09.2020  
**Sample Collected By** : By KLPL  
**Ref. To Sampling Procedure** : QSP-07

**Parameters** : **Unit** : **Requirement** : **Result** : **Test Method**

### BACTERIOLOGICAL QUALITY

Parameters	Unit	Requirement	Result	Test Method
i Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

Parameters	Unit	Requirement	Result	Test Method
i Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii Nitrate as NO <sub>3</sub>	mg/l, Max	45	0.32	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	14.4	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	3.8	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	<0.1	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	<0.05	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	3.09	IS 3025 (Part 46):1994 RA 2009
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO <sub>4</sub> )	mg/l, Max	200	<1.0	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO <sub>3</sub> ),	mg/l, Max	200	68	IS 3025 (Part 23):1986 RA 2009
xv Total hardness (as CaCO <sub>3</sub> ),	mg/l, Max	200	52	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminium (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xix Biron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx phosphate as (PO <sub>4</sub> )	mg/l	---	<0.1	APHA 22nd Edition:4500-PO-05



# KALYANI LABORATORIES PVT. LTD.

79/944, PARALA, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : **2818 | 54781364KLPL/09/20/WATER/03126**



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part-18)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

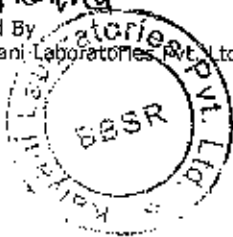
i Conductivity	ms/cm	---	0.143	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hezen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	--	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	6.7	IS 3025 (Part-11):1983, RA 2012
v Taste	--	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
vi Turbidity	NTU, Max	1	0.4	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	80	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	--	24	

Remarks : NIL

Any unusual feature observed during determination : NIL

\*\*\*\*\* End of Test Report \*\*\*\*\*

**D. Arukha**  
Analysed By  
For Kalyani Laboratories Pvt. Ltd.



*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC70432000004963P

**Test Report No** : 2817 | 54771363KLPL/09/20/WATER/03125 **Issue Date** : 14-Oct-2020

**Amendment No** : - **Amendment Date** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On** : 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification \*** : **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No , Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : BORE WELL AT LANJIGARH DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure** : QSP-07

Parameters	Unit	Requirements	Results	Test Method
------------	------	--------------	---------	-------------

### BACTERIOLOGICAL QUALITY

i	Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
ii	Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

### CHEMICAL PARAMETER

i	Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
ii	Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
iii	Nitrate as NO3	mg/l, Max	45	5.0	IS 3025 (PART 34): 1988 RA 2003
iv	Calcium (as Ca)	mg/l, Max	75	52.8	IS 3025 (Part 40):1991 RA 2009
v	Chloride (as Cl)	mg/l, Max	250	35.9	IS 3025 (Part 32):1988 RA 2009
vi	Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii	Fluoride (as F)	mg/l, Max	1	0.25	IS 3025 (Part 60):2008
viii	Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1988 RA 2009
ix	Iron (as Fe)	mg/l, Max	1	0.3	IS 3025 (Part 53):2003 RA 2014
x	Magnesium (as Mg)	mg/l, Max	30	14.58	IS 3025 (Part 46):1994 RA 2003
xi	Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii	Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii	Sulphate (as SO4)	mg/l, Max	200	15	IS 3025 (Part 24):1986 RA 2009
xiv	Total alkalinity (as CaCO3),	mg/l, Max	200	195	IS 3025 (Part 29):1988 RA 2009
xv	Total hardness (as CaCO3),	mg/l, Max	200	192	IS 3025 (Part 21):2009
xvi	Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii	Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii	Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - K OF IS 13428:2005 RA 2009
xlx	Boron (as B)	mg/l, Max	0.5	<0.1	Annex H OF IS 13428 : 2005 RA 2009
xx	phosphate as (PO4)	mg/l	---	<0.1	APHA 22nd Edition (4500-P-09)

# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

Kalyani Laboratories

**Test Report No** : 2817 | 54771363KLPL/09/20/WATER/03125



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (6410)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 4B)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

**PHYSICAL PARAMETER**

i Conductivity	ms/cm	---	0.707	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	---	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.0	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 6):1984 RA 2006
vi Turbidity	NTU, Max	1	0.5	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	270	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

**Remarks** : NIL

**Any unusual feature observed during determination** : NIL

End of Test Report



Analysed For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
 Authorized Signatory  
 For Kalyani Laboratories Pvt. Ltd



# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

## TEST REPORT



**NABL ULR NO** : TC704320000004962P

**Test Report No** : 2816 | 54761362KLPL/09/20/WATER/03124 **Issue Date**: 14-Oct-2020

**Amendment No** : - **Amendment Data** : -

**Reference** : ORDER NO-6600013488 DT-16.12.2019

**Customer Name** : VEDANTA LIMITED, LANJIGARH

**Address** : PO.- LANJIGARH, DIST.- KALAHANDI, ODISHA-766027.

**Date of receipt** : 30-Sep-2020 **Test Commenced On** : 30-Sep-2020 **Test Completion On**: 08-Oct-2020

**Sample Description** : DRINKING WATER (IS 10500:2012 )

**Sample Condition** : SEALED

**Sample Identification** : **GROUND WATER** **Sampling Date** : 29-Sep-2020

**Batch No, Lot No** : NA **MFG Date** : NA **EXP Date** : NA

**Received Quantity** : 1LTR X 2 **Place of Collection** : PLANT SITE DT-29.09.2020

**Sample Collected By** : By KLPL

**Ref. To Sampling Procedure**: QSP-07

### Parameters Unit Requirement Result Test Method

#### BACTERIOLOGICAL QUALITY

Parameter	Unit	Requirement	Result	Test Method
I Total Coliforms	MPN/100 ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009
II Faecal Coliform	MPN/100ml	Shall not be detected in any 100 ml sample	<2	IS 1622:1981 RA 2009

#### CHEMICAL PARAMETER

Parameter	Unit	Requirement	Result	Test Method
I Lead (Pb)	mg/l, max	0.01	<0.005	IS 3025 (Part 47)
II Arsenic (As)	mg/l, max	0.01	<0.001	IS 3025 (Part 37):1988, RA 2009
III Nitrate as NO3	mg/l, Max	45	0.7	IS 3025 (PART 34): 1988 RA 2009
iv Calcium (as Ca)	mg/l, Max	75	25.6	IS 3025 (Part 40):1991 RA 2009
v Chloride (as Cl)	mg/l, Max	250	13.2	IS 3025 (Part 32):1988 RA 2009
vi Copper (as Cu)	mg/l, Max	0.05	<0.02	IS 3025 (Part 42):1992 RA 2009
vii Fluoride (as F)	mg/l, Max	1	<0.05	IS 3025 (Part 60):2008
viii Free residual chlorine	mg/l, Min	0.2	0.2	IS 3025 (Part 26):1986 RA 2009
ix Iron (as Fe)	mg/l, Max	1	0.85	IS 3025 (Part 53):2003 RA 2014
x Magnesium (as Mg)	mg/l, Max	30	4.86	IS 3025 (Part 46):1994 RA 2009
xi Manganese (as Mn)	mg/l, Max	0.1	<0.05	IS 3025 (Part 59):2006 RA 2012
xii Selenium (as Se)	mg/l, Max	0.01	<0.005	IS 3025 (Part 56):2003 RA 2009
xiii Sulphate (as SO4)	mg/l, Max	200	10	IS 3025 (Part 24):1986 RA 2009
xiv Total alkalinity (as CaCO3),	mg/l, Max	300	101	IS 3025 (Part 23): 1986 RA 2009
xv Total hardness (as CaCO3),	mg/l, Max	200	84	IS 3025 (Part 21):2009
xvi Total Chromium	mg/l, Max	0.05	<0.02	IS 3025 (PART 52): 2003 RA 2009
xvii Aluminum (as Al)	mg/l, Max	0.03	<0.02	IS 3025 (part-55)
xviii Anionic Surface Active Agents (as MBAS)	mg/l, Max	0.2	<0.1	Annex - X OF IS 13428:2005 RA 2009
xix Boron (as B)	mg/l, Max	0.5	<0.1	Annex I of IS 13428:2005 RA 2009
xx phosphate as (PO4)	mg/l		<0.1	APHA 22nd Edition (8000-P-D)

2816 | 54761362





# KALYANI LABORATORIES PVT. LTD.

78/944, PAHALA, BHUBANESWAR-752101, ODISHA

Test Report No : 2816 | 54761362KLPL/09/20/WATER/03124



Parameters	Unit	Requirement	Result	Test Method
xxi Polynuclear Aromatic Hydrocarbon	mg/l, Max	0.0001	<0.0001	APHA 22nd Edition (8440)
xxii Mercury	mg/l, max	0.001	<0.0005	IS 3025 (Part 48)
xxiii TOTAL PESTICIDE	mg/l, max	0.0005	<0.0001	USEPA

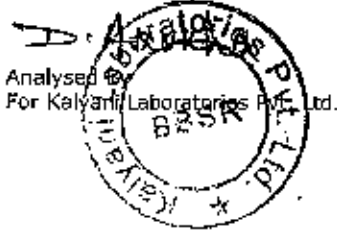
### PHYSICAL PARAMETER

i Conductivity	ms/cm	---	0.216	IS 3025 (Part 11):1983 RA 2012
ii Colour	Hazen, Max	5	<1.0	IS 3025 (Part 4):1983 RA 2012
iii Odour	**	Agreeable	AGREEABLE	IS 3025 (Part 5):1983 RA 2012
iv pH value	---	6.5-8.5	7.4	IS 3025 (Part-11):1983, RA 2012
v Taste	---	Agreeable	AGREEABLE	IS 3025 (Part 8):1984 RA 2005
vi Turbidity	NTU, Max	1	0.7	IS 3025 (Part 10):1984 RA 2006
vii Total dissolved solids	mg/l, Max	500	140	IS 3025 (Part 16):1984 RA 2006
viii Temperature	deg C	---	24	---

Remarks : NIL

Any unusual feature observed during determination : NIL

End of Test Report



Analysed For Kalyani Laboratories Pvt. Ltd.

*[Signature]*  
Authorized Signatory  
For Kalyani Laboratories Pvt. Ltd