

# CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)

## Environmental Chemical Laboratory

Bhubaneswar, Odisha

(An NABL Accredited Laboratory)



Certificate No. : T-8091

### TEST REPORT

Issued to: NISER , BHUBANESWAR

Date: 07.01.2022

Test Report No. NABL/ECL/1249

Source of Sample : SOH-1, NISER

Sample Received on: 09.12.2021

Bottle Seal no if any: 01

Sample Analysed on : 09.12.2021

Type of Sample : Treated Water

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	*Color, Hazen units	Part 4	5	15	<5
2.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
3.	Turbidity, NTU	Part 10	1	5	0.20
4.	pH@Temp ° C	Part 11	6.5-8.5	No relaxation	5.87@25.0
5.	*Conductivity, µs/cm	Part 14	-	-	79.3
6.	*Total Suspended Solid, mg/l	Part 17	-	-	0.4
7.	Total Dissolved Solids mg/L	Part 16	500	2000	58.0
8.	Total Hardness (as CaCO <sub>3</sub> ), mg/L	Part 21	200	600	15.87
9.	Calcium as Ca, mg/L	Part 40	75	200	4.77
10.	Magnesium as Mg, mg/L	Part 46	30	100	0.96
11.	Alkalinity as CaCO <sub>3</sub> , mg/L	Part 23	200	600	9.90
12.	Chloride as Cl, mg/L	Part 32	250	1000	19.41
13.	Sulfate as SO <sub>4</sub> , mg/L	Part 24	200	400	1.10
14.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.02
15.	*Nitrite as NO <sub>2</sub> , mg/L	Part 34	-	-	0.026
16.	*Nitrate as NO <sub>3</sub> , mg/L	Part 34	45	No relaxation	4.589
17.	*Residual free chlorine, mg/L	Part 26	0.02	1.0	BDL
18.	Sodium, mg/l	Part 45	-	-	6.50
19.	Potassium, mg/l	Part 45	-	-	2.70

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Laboratory: Acharya Vihar, Bhubaneswar, Odisha-751013. Tel: 0674-2379236, Mobile: 9760387460.

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NABL Accredited Lab/ISO/IEC 17025:2017.

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20.	Dissolved Oxygen, mg/l	Part 38	-	-	5.60
21.	Biological Oxygen Demand, mg/l	Part 44	-	-	BDL
22.	Chemical Oxygen Demand, mg/l	Part 58	-	-	BDL
23.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.170
24.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.027
25.	Manganese as Mn, mg/L	Part 59	0.1	0.3	<0.001
26.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.234
27.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
28.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	0.001
29.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	<0.001
30.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	0.014
31.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	0.007
32.	Oil and Grease, mg/l	Part 39	0.5	No relaxation	BDL
33.	Free CO <sub>2</sub> , mg/l	Part 61	-	-	10.0

#### ➤ BDL- BELOW DETECTION LIMITS

#### NOTES :

1. The customer draws the sample & result relates to the sample tested.
2. This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
3. This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of laboratory.
4. Latest version of test methods used as per latest specification.
5. It is recommended that the acceptable limit is to be implemented. Values in excess of those mentioned in "acceptable limit" render the water not suitable, but still may be tolerated in the absence of an alternative source but up to the limits indicate under "permissible limit" in the absence of alternative sources, above which the source will have to be rejected.
6. Testing parameters, which are not in NABL Scope, has marked as "-".
7. Testing parameters, which are not set limitation, has marked as "—".

Authorized Signatory

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