



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)

Environmental Chemical Laboratory

Bhubaneswar, Odisha

TEST REPORT

Issued to : NISER, Bhubaneswar	Date : 29.09.2023
Test report No -23/NABL/ECL/09189	
Source of Sample : Water Works	Sample receiving Date : 13.09.2023
Type of Sample : Raw water	Sample Analysis Date : 13.09.2023

Sl No	Characteristics	Test Method (P) of IS:3025	Requirements as per IS 10500:2012(Latest Version)		Test Result
			Acceptable limit	Permissible Limit	
1.	Turbidity, NTU	Part 10	1	5	0.15
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	6.84@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	57.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	16.0
5.	Calcium as Ca, mg/L	Part 40	75	200	4.80
6.	Magnesium as Mg, mg/L	Part 46	30	100	0.97
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	12.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	19.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	1.45
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.05
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.180
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.003
13.	Manganese as Mn, mg/L	APHA(PART 3111B)	0.1	0.3	0.007
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.010
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	<0.001
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	<0.001
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	0.013
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	<0.001

Authorized Signatory

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Environment & Sustainability Dept.

सीएसआईआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान

CSIR-Institute of Minerals & Materials Technology

भुवनेश्वर/Bhubaneswar-751013

NOTES :

1. The sample is drawn by the client & 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.

'End of Test Report'



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19.	*Color, Hazen units	Part 4	5	15	<5
20.	*Odour	Part 5	Agreeable	Agreeable	Agreeable
21.	*Conductivity, $\mu\text{s}/\text{cm}$	Part 14	-	-	84
22.	*Total Suspended Solid, mg/l	Part 17	-	-	1.0
23.	*Nitrite as NO_2 , mg/L	Part 34	-	-	0.045
24.	*Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	1.69
25.	Sodium, mg/l	Part 45	-	-	7.46
26.	Potassium, mg/l	Part 45	-	-	0.58
27.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.1
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	<0.001
29.	Dissolved Oxygen, mg/l	Part 38	-	-	6.90
30.	Biological Oxygen Demand, mg/l	Part 44	-	-	BDL
31.	Chemical Oxygen Demand, mg/l	Part 58	-	-	BDL
32.	Oil and Grease, mg/l	Part 39	0.5	No relaxation	<0.1
33.	Free CO_2 , mg/l	Part 61	-	-	6.0

BDL – Below Detection Limit

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6. Testing parameters which are not set limitation has marked as "-".

'End of Test Report'

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