



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

(A Govt. of India Autonomous Body)
Environmental Chemical Laboratory
Bhubaneswar, Odisha



TEST REPORT

Issued to : Customer name to be decoded	Date :08.06.2022
Test report No -NABL/ECL/0581	
Source of Sample : Borewell 1	Sample receiving Date : 18.05.2022
Type of Sample : Drinking water	Sample Analysis Date : 18.05.2022

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	0.1
2.	pH@Temp° C	Part 11	6.5-8.5	No relaxation	5.59@25.0
3.	Total Dissolved Solids mg/L	Part 16	500	2000	86.0
4.	Total Hardness (as CaCO ₃),mg/L	Part 21	200	600	28.0
5.	Calcium as Ca, mg/L	Part 40	75	200	8.0
6.	Magnesium as Mg, mg/L	Part 46	30	100	1.94
7.	Alkalinity as CaCO ₃ , mg/L	Part 23	200	600	10.0
8.	Chloride as Cl, mg/L	Part 32	250	1000	14.0
9.	Sulfate as SO ₄ , mg/L	Part 24	200	400	2.9
10.	Fluoride as F, mg/L	Part 60	1.0	1.5	0.17
11.	Iron as Fe, mg/L	Part 53	0.3	No relaxation	0.078
12.	Copper as Cu, mg/L	Part 42	0.05	1.5	0.001
13.	Manganese as Mn, mg/L	APHA(PART 31118)	0.1	0.3	0.018
14.	Zinc as Zn, mg/L	Part 49	5.0	15.0	0.026
15.	Lead as Pb, mg/L	Part 47	0.01	No relaxation	0.010
16.	Cadmium as Cd, mg/L	Part 41	0.003	No relaxation	0.003
17.	Chromium as Cr, mg/L	Part 52	0.05	No relaxation	0.023
18.	Nickel as Ni, mg/l	Part 54	0.02	No relaxation	0.018

Authorized Signatory

Dr. Arakshita Majhi
Principal Scientist

Phone : 0674-2379236,

E mail - arakshita@immt.res.in

(Signature)
डॉ. अरक्षिता माझि/Dr. Arakshita Majhi
प्रधान वैज्ञानिक/Principal Scientist
पर्यावरण एवं सततता विभाग
Environment & Sustainability Dept.
सीआरआईआर-इंस्टीट्यूट ऑफ मिनेरल्स एंड मटेरियल्स टेक्नॉलॉजी
CSIR-Institute of Minerals & Materials Technology
भुवनेश्वर/Bhubaneswar, Odisha-751013

NOTES :

- The sample is drawn by the client & result relates to the sample tested.
- This certificate shall not be reproduced wholly or in part without prior written consent of the laboratory.
- This certificate shall not be used in any advertising media or as evidence in the court of Law without prior written consent of laboratory.
- Latest version of test methods used as per latest specification.
- 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.



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Type of Sample : Drinking water			Sample Analysis Date : 18.05.2022		
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	-	-	125.0
22.	Total Suspended Solid, mg/l	Part 17	-	-	0.8
23.	Nitrite as NO_2 , mg/L	Part 34	-	-	0.056
24.	Nitrate as NO_3 , mg/L	Part 34	45	No relaxation	9.86
25.	Sodium, mg/l	Part 45	-	-	8.75
26.	Residual Free Chlorine, mg/l	Part 26	0.2	1.0	<0.01
27.	Potassium, mg/l	Part 45	-	-	0.96
28.	Arsenic as As, mg/l	Part 37	0.01	No relaxation	0.009
29.	Dissolved Oxygen, mg/l	Part 38	-	-	7.10
30.	Biological Oxygen Demand, mg/l	Part 44	-	-	0.10
31.	Chemical Oxygen Demand, mg/l	Part 58	-	-	2.0
32.	Oil and Grease, mg/l	Part 39	0.5	No relaxation	< 0.1

Authorized Signatory

Dr. Arakshita Majhi
8/6/2022

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Principal Scientist

Phone : 0674-2379236.

E mail - arakshita@immt.res.in

डॉ. अरक्षिता माझि/Dr. Arakshita Majhi
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पर्यावरण एवं सततता विभाग

Environment & Sustainability Dept.

सीएसआईआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान

CSIR-Institute of Minerals & Materials Technology

भुवनेश्वर/Bhubaneswar-751013

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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 set limitation has marked as "-".



CSIR - Institute of Minerals and Materials Technology
 (Council of Scientific and Industrial Research)
 Bhubaneswar-751013, Odisha, India
 Environmental Biology Laboratory (EBL)
 Environment & Sustainability Department



NABL
 Accreditation certificate no. TC-8195

Test Report

Sample code: NABL/EBL0581	Test report Date: 3.6.2022
Test Report No.: ULR-TC8195210000000073/EBL6/22-2	
Source of Sample: Borewell 1	Sample condition: Satisfactory
Date of Sampling (provided by the customer): 18.5.2022	Sample Received on: 18.5.2022
Type of Sample: Drinking water	Sample started on: 25.5.2022

Sl. No.	Test/Parameter	Test Method	Requirements as per IS 10500:2012 (RA 2018)		Test Result with units of measurement	Statement of Conformity
			Acceptable limit	Permissible Limit		
1.	<i>E.coli</i> by Membrane filtration	IS 15185 RA 2018	Shall not be detect in 100ml sample	No relaxation	Present per 100 ml	Non-Conformance
2.	Total coliform by MPN	IS 1622 RA 2019	Shall not be detect in 100ml sample	No relaxation	23 MPN/100 mL	Conformance
3.	Fecal coliform by MPN	IS 1622 RA 2019	Shall not be detect in 100ml sample	No relaxation	<2 MPN/100 mL	Conformance

End of test report

Authorized Signatory

Dr. Sony Pandey

Dr. Sony Pandey
 (Principal Scientist, E&S Department) **Quality Manager**
 Biology Lab
 Lab, E&S Deptt

Notes:

1. The test report relates only to the items tested.
2. The sample is drawn by the customer, hence EBL is not responsible for any errors arising out of faulty sample withdrawal, handling or container.
3. Sterile containers and aseptic handling of samples during collection and transport is necessary for correct results. EBL is not responsible for mistakes on the part of customers.
4. The decision rule is inherent in the standard as the acceptable and permissible limits are pre-defined.
5. The report should not be interpreted in part, or reproduced wholly, or in part without prior consent of the laboratory.