



CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

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



TC-8091

TEST REPORT

| | |
|---|------------------------------------|
| Issued to : Customer name to be decoded | Date :02.05.2022 |
| Test report No – NABL/ECL/0368 | |
| Source of Sample : Borewell | Sample receiving Date : 28.03.2022 |
| Type of Sample : Treated Water | Sample Analysis Date : 28.03.2022 |

| 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 | 0.05 |
| 2. | pH@Temp ° C | Part 11 | 6.5-8.5 | No relaxation | <u>6.78@25.0</u> |
| 3. | Total Dissolved Solids mg/L | Part 16 | 500 | 2000 | 80.0 |
| 4. | Total Hardness (as CaCO ₃),mg/L | Part 21 | 200 | 600 | 36.0 |
| 5. | Calcium as Ca, mg/L | Part 40 | 75 | 200 | 8.0 |
| 6. | Magnesium as Mg, mg/L | Part 46 | 30 | 100 | 3.89 |
| 7. | Alkalinity as CaCO ₃ , mg/L | Part 23 | 200 | 600 | 30.0 |
| 8. | Chloride as Cl, mg/L | Part 32 | 250 | 1000 | 13.0 |
| 9. | Sulfate as SO ₄ , mg/L | Part 24 | 200 | 400 | 3.9 |
| 10. | Fluoride as F, mg/L | Part 60 | 1.0 | 1.5 | 0.04 |
| 11. | Iron as Fe, mg/L | Part 53 | 0.3 | No relaxation | 0.250 |
| 12. | Copper as Cu, mg/L | Part 42 | 0.05 | 1.5 | <0.001 |
| 13. | Manganese as Mn, mg/L | APHA (PART 3111B) | 0.1 | 0.3 | 0.011 |
| 14. | Zinc as Zn, mg/L | Part 49 | 5.0 | 15.0 | 0.088 |
| 15. | Lead as Pb, mg/L | Part 47 | 0.01 | No relaxation | 0.171 |
| 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 | <0.001 |
| 18. | Nickel as Ni, mg/l | Part 54 | 0.02 | No relaxation | <0.001 |

Authorized Signatory

Dr Arakshita Majhi

Principal Scientist

Phone : 0674-2379236,

E mail - arakshita@immt.res.in

AM
02/05/2022

डॉ. अरक्षिता माझि/Dr. Arakshita Majhi
प्रधान वैज्ञानिक/Principal Scientist
पर्यावरण एवं संपोषण विभाग
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.

'End of Test Report'

P.T.O

1 of 1

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

CSIR-INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY.

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



| | |
|---|------------------------------------|
| Issued to : Customer name to be decoded | Date :02.05.2022 |
| Test report No – NABL/ECL/0368 | |
| Source of Sample : Borewell | Sample receiving Date : 28.03.2022 |
| Type of Sample : Treated Water | Sample Analysis Date : 28.03.2022 |

| | | | | | |
|-----|---------------------------------------|---------|-----------|---------------|------------|
| 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 | - | - | 118 |
| 22. | Nitrite as NO_2 , mg/L | Part 34 | - | - | 0.019 |
| 23. | Nitrate as NO_3 , mg/L | Part 34 | 45 | No relaxation | 2.698 |
| 24. | Residual free chlorine, mg/L | Part 26 | 0.02 | 1.0 | BDL |
| 25. | Sodium, mg/l | Part 45 | - | - | 7.96 |
| 26. | Potassium, mg/l | Part 45 | - | - | 2.0 |
| 27. | Dissolved Oxygen, mg/l | Part 38 | - | - | 5.90 |
| 28. | Biological Oxygen Demand, mg/l | Part 44 | - | - | BDL |
| 29. | Chemical Oxygen Demand, mg/l | Part 58 | - | - | 2.0 |
| 30. | Arsenic as As, mg/l | Part 37 | 0.01 | No relaxation | 0.010 |
| 31. | Oil and Grease, mg/l | Part 39 | 0.5 | No relaxation | BDL |

Dr Arakshita Majhi
Principal Scientist

Phone : 0674-2379236,

E mail - arakshita@immt.res.in

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

Arakshita Majhi
04.05.2022
अरक्षिता माझि/Dr. Arakshita Majhi
प्रधान वैज्ञानिक/Principal Scientist
पर्यावरण एवं संपोषण विभाग
Environment & Sustainability Dept.
सीएसआरआर-खनिज एवं पदार्थ प्रौद्योगिकी संस्थान
CSIR-Institute of Minerals & Materials Technology
भुवनेश्वर/Bhubaneswar-751013

'End of Test Report'