

**RECOMMENDED SCOPE OF ACCREDITATION
(For Testing Laboratories)**

| Laboratory: Chemical Analytical-C, ATIRA | | | | Date(s) of Visit:28/07/2012 | |
|---|----------------------------|---------------------------------------|--|---|---|
| Discipline: Chemical (Waste Water) | | | | | |
| SI | Product / Material of test | Specific tests performed | * Test Method / Standard against which tests are performed | Range of Testing/ Limits of detection | Uncertainty of Measurement ⁺ (±) Value |
| 1 | Wastewater | Colour, true colour units, | IS-3025 (Part 4) -1983 (Reaffirmed-2006) APHA 21 st Edition – 2005: 2120 /C | 1–2000 Co. Pt. units | N.A. |
| 2 | | Turbidity, NTU | IS-3025 (Part 10)-1984 (Reaffirmed-2006) APHA 21 st Edition – 2005: 2130/B | 1 –100 NTU (1 NTU) | 2.2± 0.115 (at 2 NTU) |
| 3 | | Total dissolved solids mg/l, | IS-3025 (Part 16)- 1984 (Reaffirmed-2006) APHA 21 st Edition – 2005: 2540 /C | 100-10000 mg/l | 496.6± 2.947 (at 500 mg/L) |
| 4 | | pH | IS-3025 (Part 11) - 1983 (Reaffirmed-2006) APHA 21 st Edition – 2005: 4500 /H ⁺ | 1 to 14 | 7.29± 0.06 (at 7 pH) |
| 5 | | Copper (as Cu), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500 /Cu | 0.04 – 10 mg/l | 50.81± 5.56 (at 50 µg/L) |
| 6 | | Iron (as Fe), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500 Fe / | 0.05 – 25 mg/l | 105.30±15.36 (at 100 µg/l) |
| 7 | | Manganese (as Mn), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500 /Mn | 0.1 – 10 mg/l | 100.74 ±11.44 (at 100 µg/l) |
| 8 | | Nitrate (as NO ₃), mg/L | IS 3025 (Part 34)- 1988(Reaffirmed-1999) APHA 21 st Edition – 2005: 4500 /NO ₃ | 10 – 100 mg/l | 46.65± 1.465 (at 45 mg/L) |
| <p>* When referring to publications like NCCLS, IP, BP, USP, ASTM, AOAC etc. kindly mention the clause / chapter / page number, as appropriate.</p> <p>+ The value at which uncertainty of measurement estimated shall also be specified.</p> <p>Laboratories performing site testing shall clearly identify the Specific tests on products(s) / material performed at permanent laboratory and / or at site. Refer NABL 130 for details.</p> | | | | | |
| Signature, Date & Name of Lab Representative | | Signature, Date & Name of Assessor(s) | | Signature, Date & Name of Lead Assessor | |

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| 9 | Wastewater | Nitrite (as NO ₂), mg/L | IS 3025 (Part 34)-1988(Reaffirmed-1999) APHA 21 st Edition – 2005: 4500 /NO ₂ ⁻ | 0.01 – 5 mg/l | 19.16± 1.713 (at 20 µg/L) |
| 10 | | Fluoride (as F), mg/L, | IS 3025-(Part-60):2008 APHA 21 st Edition – 2005: 4500 /F ⁻ | 0.5 – 50 mg/l | 0.96 ±0.144 (at 1 mg/L) |
| 11 | | Zinc (as Zn), mg/1 | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/Zn | 0.05 – 100 mg/l | 5.1±0.505 (at 5 mg/L) |
| 12 | | Chloride (as Cl), mg/ L | IS 3025 (Part 32)-1988(Reaffirmed-1999) APHA 21 st Edition – 2005: 4500/ Cl ⁻ | 50 to 10000 mg/l | 199.65± 6.659 (at 200mg/L) |
| 13 | | Sulphate (as SO ₄), mg/L, | IS 3025 (Part 24)-1988(Reaffirmed-1998) APHA 21 st Edition – 2005: 4500/SO ₄ ²⁻ | 25 to 5000 mg/l | 202.87± 2.926 (200 mg/L) |
| 14 | | Alkalinity (as HCO ₃), mg/L | IS 3025 (Part 23) - 1986(Reaffirmed-1998) APHA 21 st Edition – 2005: 2320 | 25 to 500 mg/l | 198.85± 4.99 (at 200 mg/L) |
| 15 | | Calcium (as Ca), mg/L | DIN EN ISO 11885-April1998[ICP Technique] APHA 21 st Edition – 2005: 3500/Ca | 10 to 500 mg/l | 75.40± 8.776 (at 75 mg/L) |
| 16 | | Magnesium (as Mg), mg/L | DIN EN ISO 11885 April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/Mg | 10 to 250 mg/l | 33.82± 3.32 (at 30 mg/L) |
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| Discipline: Chemical (Waste Water) | | | | | |
| SI | Product(s) / Material of test | Specific tests performed | * Test Method / Standard against which tests are performed | Range of Testing/ Limits of detection | Uncertainty of Measurement ⁺ (±) Value |
| 17 | Waste Water | Sodium (as Na), mg/L | DIN EN ISO 11885 April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500 /Na | 100 to 1000 mg/l | 211.08±27.65 (at 200 mg/L) |
| 18 | | Residual free chlorine, mg/L | IS-3025 (Part 26)-1986 APHA 21 st Edition 2005 - 4500-Cl/G | 0.1 – 50 mg/l | 0.22±0.0233 (at 0.2mg/L) |
| 19 | | Phenolic compounds (as C ₆ H ₂ OH), mg/L | IS-3025 (Part 43) :1992 (Reaffirmed 1998) APHA 21 st Edition 2005: 5530/D | 1.0 to 100 mg/l | 1.11±0.088 (at 1 mg/L) |
| 20 | | Sulphide (as H ₂ S), mg/L | IS 3025 (Part 29)-1986 (Reaffirmed-1998) APHA 21 st Edition – 2005: 4500/S ²⁻ | 0.5 – 200 mg/l | 0.05±0.01 (at 0.05 mg/L) |
| 21 | | Mercury (as Hg), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/Hg | 0.001 – 10 mg/l | 1.13±0.215 (at 1 µg/l) |
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| 22 | Waste water | Cadmium (as Cd), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/Cd | 0.005 – 10 mg/l | 9.81± 1.172 (at 10 µg/l) |
| 23 | | Arsenic (as As), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/As | 0.002 – 10 mg/l | 48.86±5.063 (at 50 µg/l) |
| 24 | | Cyanide (as CN), mg/L | IS 3025 (Part 27)-1986(Reaffirmed-1998) | 0.001 to 1 mg/l | 19.18±1.902 (at 20 µg/L) |
| 25 | | Lead (as Pb), mg/L | DIN EN ISO 11885-April 1998 [ICP Technique] APHA 21 st Edition – 2005: 3500/Pb | 0.001 – 10 mg/l | 7.67±1.446 (at 10 µg/l) |
| 26 | | Chromium (as Cr) mg/1 | DIN EN ISO 11885-April 1998 [ICP Technique] | 0.02 – 20 mg/l | 51.64± 5.502 (at 50 µg/l) |
| 27 | | Nickel (as Ni) mg/1 | DIN EN ISO 11885-April 1998 [ICP Technique] | 0.01 – 20 mg/l | 18.86±2.695 (at 20 µg/l) |
| 28 | | Conductivity, µS/cm | APHA 21 st Edition 2005: 2510 | <5000 µS/cm | 12.81±0.208 (at 12.88 µg/l) |
| 29 | | Total Suspended Solids, mg/L | IS 3025 (Part 17)-1984(Reaffirmed-2006) APHA 21 st Edition 2005:2540 /D | >25.0 mg/L | 496.20±42.026 (at 500 mg/l) |
| 30 | | Chemical Oxygen Demand (COD), mg/L | IS 3025 (Part -58)- 2006 APHA 21 st Edition – 2005: 2540 /B | <3.25 lacs mg/L | 506.268±10.949 (at 500 mg/l) |
| 31 | | Biological Oxygen Demand (BOD), mg/L | IS 3025 (Part 44)-1993 APHA 21 st Edition – 2005: 5210 /B | <1.0 lacs mg/L | 201.10±16.621 (at 200 mg/l) |
| 32 | | Ammonical Nitrogen, mg/L | IS 3025 (Part 17)-1984(Reaffirmed-2006) APHA 21 st Edition – 2005: 4500 /NH ₃ | 0.0 – 500 mg/L | 4.57±0.363 (at 5 mg/l) |
| 33 | | Dissolved Oxygen (DO), mg/L | IS 3025 (Part 38)-1989(Reaffirmed-2003) APHA 21 st Edition – 2005: 5210 /C | 0.0 – 6.0 mg/L | 206.27±10.504 (at 200 mg/l) |

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