

Laboratory	Shiva Test House, 1st Floor, Rajhans Niketan, Rukunpura, Bailey Road, Patna, Bihar		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	28.05.2015
Certificate Number	T-0023	Valid Until	27.05.2017
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I	AIR, GASES & ATMOSPHERE			
1.	Ambient Air Monitoring	Respirable Particulate Matter (PM ₁₀)	IS 5182 (Part 23): 2006	10 µg/m ³ to 600 µg/m ³
		Particulate Matter (PM _{2.5})	Lab SOP No. STH/CD03/SOP/PM/2013 Based on CPCB VOL. I: 2011	5 µg/m ³ to 100 µg/m ³
		Sulphur Dioxide	IS 5182 (Part 2): 2001(RA 2006)	5 µg/m ³ to 200 µg/m ³
		Nitrogen Dioxide	IS 5182 (Part 6): 2000	5 µg/m ³ to 200 µg/m ³
		Ammonia	Lab SOP No. STH/CD-03/SOP/NH ₃ /2013 Based on APHA–Method No. 401& CPCB VOL. I: 2011	5 µg/m ³ to 500 µg/m ³
		Ozone	IS 5182 (Part 9): 1974 (RA 2009)	1 µg/m ³ to 200 µg/m ³
2.	Stack Emission Monitoring	Particulate Matter	IS 11255 (Part 1): 1985 (RA 2003)	6 mg/Nm ³ to 500 mg/Nm ³
		Sulphur Dioxide	IS 11255 (Part 2): 1985 (RA 2003)	5 mg/Nm ³ to 500 mg/Nm ³
		Nitrogen Dioxide	IS 11255 (Part 7): 2005	5 mg/Nm ³ to 800mg/Nm ³
		Carbon dioxide	IS 13270: 1992 (RA 2003)	2 % to 30 %
		Carbon monoxide	IS 13270: 1992 (RA 2003)	2 % to 30 %

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II. POLLUTION & EFFLUENTS				
1.	Liquid Effluent	pH	IS 3025 (Part 11): 1983 (RA 2002)	1 to 14
		Total Solids	APHA (22 nd Edition) 2540-B	10 mg/l to 20000 mg/l
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 2002) APHA (22 nd Edition) 2540-D	5 mg/l to 1000 mg/l
		Salinity	APHA (22 nd Edition) 2520-B	2 mg/l to 300 mg/l
		Acidity	IS 3025 (Part 22): 1986 (RA 1998) APHA (22 nd Edition) 2310-B	5 mg/l to 1000 mg/l
		Ammonical Nitrogen	IS 3025 (Part 34): 1988 (RA 2003)	1 mg/l to 80 mg/l
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 nd Edition) 4500-Cl-B	3 mg/l to 1200 mg/l
		Dissolved Oxygen	IS 3025 (Part 38): 1989 (RA 2003) APHA (22 nd Edition) 4500-O C	0.5 mg/l to 10 mg/l
		Total Kjeldahl Nitrogen	IS 3025 (Part 34): 1988 (RA 2003) APHA (22 nd Edition) 4500-N _{org} B	3 mg/l to 800 mg/l
		Nitrate Nitrogen	IS 3025 (Part 34): 1988 (RA 2003) APHA (22 nd Edition) 4500-NO ₃ B	1 mg/l to 200 mg/l
		Dissolved Phosphate	IS 3025 (Part 31): 1988 (RA 2003) APHA (22 nd Edition) 4500-P D	0.1 mg/l to 100 mg/l
		Sulphate	IS 3025 (Part 24): 1986 (RA 1992) APHA (22 nd Edition) 4500-SO ₄ E APHA (22 nd Edition) 4500-SO ₄ C	1 mg/l to 500 mg/l

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	Liquid Effluent	Sulphide	APHA (22 nd Edition) 4500-S ² F	0.1 mg/l to 100 mg/l
		Chromium	IS 3025 (Part 52): 2003 APHA (22 nd Edition) 3500-Cr B APHA (22 nd Edition) 3111-B	0.2 mg/l to 50 mg/l
		Hexavalent Chromium	IS 3025 (Part 52): 2003	0.2 mg/l to 50 mg/l
		Copper	APHA (22 nd Edition) 3500-Cu B APHA (22 nd Edition) 3111-B	0.1 mg/l to 50 mg/l
		Zinc	APHA (22 nd Edition) 3500-Zn B APHA (22 nd Edition) 311-B	0.5 mg/l to 50 mg/l
		Arsenic	IS 3025 (Part 37): 1988 (RA 2003) APHA (22 nd Edition) 3114-B	0.01 mg/l to 5 mg/l
		Bio Chemical Oxygen Demand	IS 3025 (Part 44): 1993 (RA 2003)	1 mg/l to 5000 mg/l
		Chemical Oxygen Demand	APHA (22 nd Edition) 5220 B	1 mg/l to 2000 mg/l
		Oil & Grease	IS 3025 (Part 39): 1991 (RA 2003) APHA (22 nd Edition) 5520-B	1 mg/l to 80 mg/l
		Lead	IS 3025 (Part 47): 1994 (RA 2003) APHA (22 nd Edition) 3500-Pb B APHA (22 nd Edition) 3111-B	0.1 mg/l to 100 mg/l
		Nickel	APHA (22 nd Edition) 3111-B	0.1 mg/l to 100 mg/l

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III. WATER				
1.	Potable & Domestic Irrigation Industrial /Cooling Bore Water, Processed Food Industry	Colour	IS 3025 (Part 4): 1983	0.50 Hazen to 50 Hazen
		pH	IS 3025 (Part 11): 1983 (RA 2002)	1 unit to 14 unit
		Turbidity	IS 3025 (Part 10) : 1984 (RA 2006) APHA (22 nd Edition) 2130-B	0.25 NTU to 100 NTU
		Conductivity	IS 3025 (Part 14): 1984 (RA 2002)	0.5 mhos/cm. to 100 mhos/cm.
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006) APHA (22 nd Edition) 2540-C	10 mg/l to 5000 mg/l
		Alkalinity	IS 3025 (Part 23): 1986 (RA 2003) APHA (22 nd Edition) 2320-B	4 mg/l to 1500 mg/l
		Chloride	IS 3025 (Part 32): 1988 (RA 2003) APHA (22 nd Edition) 4500-Cl ⁻ B	3 mg/l to 500 mg/l
		Residue Chlorine	IS 3025 (Part 26): 1986 (RA 2003) APHA (21 st Edition) 4500-Cl ⁻ C	0.1 mg/l to 5 mg/l
		Fluoride	APHA (22 nd Edition) 4500-F D	0.1 mg/l to 30 mg/l
		Total Hardness	IS 3025 (Part 21): 2009 APHA (22 nd Edition) 2340-C	3 mg/l to 500 mg/l
Phosphate	IS 3025 (Part 31) (RA 2003) APHA (22 nd Edition) 4500-P D	0.1 mg/l to 100 mg/l		

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	Potable & Domestic Irrigation Industrial /Cooling Bore Water, Processed Food Industry	Sulphate	IS 3025 (Part 24): 1986 (RA 1992) APHA (22 nd Edition) 4500-SO ₄ E APHA (22 nd Edition) 4500-SO ₄ C	1 mg/l to 500 mg/l
		Nitrate Nitrogen	IS 3025 (Part 34): 1988 (RA 2003)	0.05 mg/l to 100 mg/l
		Boron	APHA (22 nd Edition) 4500-B B	0.2 mg/l to 100 mg/l
		Calcium	IS 3025 (Part 40): 1999 (RA 2003) APHA (22 nd Edition) 3500-Ca B	3 mg/l to 100 mg/l
		Chromium	IS 3025 (Part 52): 2003 APHA (22 nd Edition) 3500-Cr B APHA (22 nd Edition) 3111-B	0.05 mg/l to 10 mg/l
		Iron	IS 3025 (Part 53): 2003 APHA (22 nd Edition) 3500 Fe-B	0.1 mg/l to 100 mg/l
		Lead	IS 3025 (Part 47) : 1994 (RA 2003) APHA (22 nd Edition) 3500 Pb-B & APHA (22 nd Edition) 3111-B	0.02 mg/l to 5 mg/l
		Magnesium	IS 3025 (Part 46): 1994 (RA 2003) APHA (22 nd Edition) 3500-MgB	3 mg/l to 100 mg/l
		Potassium	IS 3025 (Part 45): 1993 (RA 2003) APHA (22 nd Edition) 3500-K B	0.1 mg/l to 100 mg/l
		Sodium	IS 3025 (Part 45): 1993 (RA 2003) APHA (22 nd Edition) 3500 Na B	0.1 mg/l to 100 mg/l
		Copper	APHA (22 nd Edition) 3500-Cu B APHA (22 nd Edition) 3111-B	0.1 mg/l to 100 mg/l

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	Potable & Domestic Irrigation Industrial /Cooling Bore Water, Processed Food Industry	Zinc	APHA (22 nd Edition) 3500-Zn B APHA (22 nd Edition) 3111-B	0.5 mg/l to 50 mgot/l
		Arsenic	IS 3025 (Part 37): 1988 (RA 2003) APHA (22 nd Edition) 3114-B	0.01 mg/l to 5 mg/l
		Molybdenum	APHA (22 nd Edition) 3111-D	0.4 mg/l to 75 mg/l
		Cadmium	APHA (22 nd Edition) 3111-B	0.1 mg/l to 3 mg/l
		Mercury	APHA (22 nd Edition) 3112-B	0.0001 mg/l to 1.0 mg/l
		Manganese	APHA (22 nd Edition) 3111-B	0.03 mg/l to 0.6 mg/l

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