

Laboratory Central Pollution Control Board, Regional Laboratory, Regional Directorate (South), Nisarga Bhawan, I & II Floor, 7th D Main, Thimmaiah Road, Shiva Nagar, Bengaluru, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7739

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Validity 16.08.2018 to 15.08.2020

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I. ATMOSPHERIC POLLUTION						
1.	Ambient Air	Particulate Matter (size less than 10 µm) or PM ₁₀	IS 5182 (Part 23): 2012	5 µg/m ³ to 1000 µg/m ³		
		Sulphur Dioxide	IS 5182 (Part 2): 2001	4 µg/m ³ to 1050 µg/m ³		
		Nitrogen Dioxide	IS 5182 (Part 6): 2006	9 µg/m ³ to 750 µg/m ³		
		Ammonia	ISC Method 401, Methods of Air Sampling and Analysis, 3 rd Edition, Lewis Publishers, 1988	20 µg/m ³ to 700 µg/m ³		
		Arsenic	EPA-IO 3.2	2 ng/m ³ to 1000 ng/m ³		
		Cadmium	EPA-IO 3.2	0.2 µg/m ³ to 100 µg/m ³		
		Nickel	EPA-IO 3.2	2 ng/m ³ to 1000 ng/m ³		
		Lead	EPA-IO 3.2	0.2 µg/m ³ to 100 µg/m ³		
		2.	Stack Emission	Particulate Matter or PM	IS 11255 (Part 1): 1985 IS 11255 (Part 3): 1985 for Flow rate	1 mg/Nm ³ to 5000 mg/Nm ³
				Sulphur Dioxide	Sampling by IS 11255 (Part 2): 1985 and Analysis by ISC Method 711, Methods of Air Sampling and Analysis, 3 rd Edition, Lewis Publishers, 1988	4 mg/Nm ³ to 8000 mg/Nm ³
II. WATER						
1.	Stream Water/ River Water/Lake Water/ Well Water/ Ground Water	pH	APHA (23 rd Edition): 2017 4500 H ⁺ B, 4-95 to 4-99	1 to 14		
		Total Suspended Solids	APHA (23 rd Edition): 2017 2540 D, 2-70 to 2-71	5 mg/L to 2000 mg/L		

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		Total Dissolved Solids	APHA (23 rd Edition): 2017 2540 C, 2-69 to 2-70	2 mg/L to 5000 mg/L
		Total Solids	APHA (23 rd Edition): 2017 2540 B, 2-68 to 2-69	10 mg/L to 10000 mg/L
		Turbidity	APHA (23 rd Edition): 2017 2130 B, 2-13 to 2-15	4 NTU to 400 NTU
		Conductivity	APHA (23 rd Edition): 2017 2510 B, 2-56 to 2-59	5 µS/cm to 20000 µS/cm
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006 (RA 2017)	4 mg/L to 5000 mg/L
		Biochemical Oxygen Demand (BOD) for 3 days at 27 °C	IS 3025 (Part 44): 1993 (RA 2014)	2 mg/L to 1000 mg/L
		Dissolved Oxygen	APHA (23 rd Edition): 2017 4500 O, 4-146 to 4-148	1 mg/L to 10 mg/L
		Nitrate as N	APHA (23 rd Edition): 2017 4500 NO ₃ E, 4-131 to 4-133	0.02 mg/L to 100 mg/L
		Nitrite as N	APHA (23 rd Edition): 2017 4500 NO ₂ B, 4-124 to 4-125	0.02 mg/L to 10 mg/L
		Ammoniacal Nitrogen as N	APHA (23 rd Edition): 2017 4500 NH ₃ B, 4-114 to 4-115	1 mg/L to 500 mg/L
		Total Kjeldahl Nitrogen (TKN) as N	APHA (23 rd Edition): 2017 4500 Norg B, 4-139 to 4-140	2 mg/L to 1000 mg/L
		Phosphate as P	APHA (23 rd Edition): 2017 4500 P D, 4-163 to 4-164	0.01 mg/L to 200 mg/L
		Sulphate as SO ₄	APHA (23 rd Edition): 2017 4500 SO ₄ E, 4-199 to 4-200	4 mg/L to 500 mg/L
		Total Alkalinity as CaCO ₃	APHA (23 rd Edition): 2017 2320 B, 2-37 to 2-39	2 mg/L to 1000 mg /L
		Fluoride as F	APHA (23 rd Edition): 2017 4500 F D, 4-90 to 4-91	0.1 mg/L to 100 mg/L
		Chloride as Cl	APHA (23 rd Edition): 2017 4500 Cl B, 4-75 to 4-76	2 mg/L to 4000 mg/L

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		Calcium as Ca	APHA (23 rd Edition): 2017 3500 Ca B, 3-69 to 3-70	4 mg/L to 1000mg /L
		Sodium	APHA (23 rd Edition): 2017 3500 Na B, 3-99 to 3-100	1 mg/L to 2000 mg/L
		Potassium	APHA (23 rd Edition): 2017 3500 K B, 3-89 to 3-90	1 mg/L to 500 mg/L
		Magnesium as Mg	APHA (23 rd Edition): 2017 3500 Mg B, 3-86	2 mg/L to 1000 mg /L
		Total Hardness as CaCO ₃	APHA (23 rd Edition): 2017 2340 C, 2-48 to 2-50	5 mg/L to 4000 mg /L
		Sodium Absorption Ratio (SAR)	IS 11624: 1986 (RA 2009)	0.1 to 30
		Percent Sodium	CPCB/RLB/TM/5.4/W-34	0.5 % to 100 %
		Hexavalent Chromium as Cr ⁺⁶	APHA (23 rd Edition): 2017 3500 Cr B, 3-71 to 3-73	0.1 mg/L to 100 mg/L
		Boron	APHA (23 rd Edition): 2017 4500 B B, 4-27 to 4-28	0.5 mg/L to 100 mg/L
III.	RESIDUES IN WATER			
1.	Trace Metal Elements	Chromium (Total)	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Copper	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Nickel	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Lead	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Iron	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Cadmium	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Zinc	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L

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		Manganese	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
		Cobalt	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.05 mg/L to 100 mg/L
IV.	POLLUTION & ENVIRONMENT			
1.	Waste Water (Effluents & Sewage)	pH	APHA (23 rd Edition): 2017 4500 H ⁺ B, 4-95 to 4-99	1 to 14
		Total Suspended Solids	APHA (23 rd Edition): 2017 2540 D, 2-70 to 2-71	5 mg/L to 2000 mg/L
		Total Dissolved Solids	APHA (23 rd Edition): 2017 2540 C, 2-69 to 2-70	5 mg/L to 100000 mg/L
		Total solids	APHA (23 rd Edition): 2017 2540 B, 2-68 to 2-69	10 mg/L to 100000 mg/L
		Conductivity	APHA (22 nd Edition): 2012 2510 B, 2-54 to 2-55	5 μ S/cm to 20000 μ S/cm
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006 (RA 2017)	4 mg/L to 150000 mg/L
		Biochemical Oxygen Demand (BOD) for 3 days at 27 °C	IS 3025 (Part 44): 1993 (RA 2014)	2 mg/L to 75000 mg/L
		Dissolved Oxygen	APHA (23 rd Edition): 2017 4500 O, 4-146 to 4-148	1 mg/L to 10 mg/L
		Nitrate as N	APHA (22 nd Edition): 2012 4500 NO ₃ E, 4-125 to 4-127	0.02 mg/L to 100 mg/L
		Nitrite as N	APHA (22 nd Edition): 2012 4500 NO ₂ , 4-120 to 4-121	0.02 mg/L to 10 mg/L
		Ammoniacal Nitrogen as N	APHA (23 rd Edition): 2017 4500 NH ₃ B, 4-114 to 4-115	1 mg/L to 500 mg/L
	Total Kjeldahl Nitrogen (TKN) as N	APHA (23 rd Edition): 2017 4500 Norg B, 4-139 to 4-140	2 mg/L to 1000 mg/L	
	Oil and Grease	APHA (23 rd Edition): 2017 5520 B, 5-42 to 5-44	4 mg/L to 5000 mg/L	

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		Sulphate as SO ₄	APHA (23 rd Edition): 2017 4500 SO ₄ E, 4-199 -4-200	4 mg/L to 1000 mg/L
		Total Alkalinity as CaCO ₃	APHA (23 rd Edition): 2017 2320 B, 2-37 to 2-39	2 mg/L to 2000 mg/L
		Fluoride as F	APHA (23 rd Edition): 2017 4500 F D, 4-90 to 4-91	0.1 mg/L to 100 mg/L
		Chloride as Cl	APHA (23 rd Edition): 2017 4500 Cl B, 4-75 to 4-76	2 mg/L to 10000 mg/L
		Calcium as Ca	APHA (23 rd Edition): 2017 3500 Ca B, 3-69 to 3-70	4 mg/L to 1000 mg/L
		Sodium	APHA (23 rd Edition): 2017 3500 Na B, 3-99 to 3-100	1 mg/L to 10000 mg/L
		Potassium	APHA (23 rd Edition): 2017 3500 K B, 3-89 to 3-90	1 mg/L to 500 mg/L
		Magnesium as Mg	APHA (23 rd Edition): 2017 3500 Mg B, 3-86	2 mg/L to 1000 mg /L
		Total Hardness as CaCO ₃	APHA (23 rd Edition): 2017 2340 C, 2-48 to 2-50	5 mg/L to 4000 mg /L
		Sodium Absorption Ratio (SAR)	IS 11624: 1986 (RA 2009)	0.1 to 30
		Percent Sodium	CPCB/RLB/TM/5.4/W-34	0.5 % to 100 %
		Hexavalent Chromium as Cr ⁺⁶	APHA (23 rd Edition): 2017 3500 Cr B, 3-71 to 3-73	0.1 mg/L to 500 mg/L
		Boron	APHA (23 rd Edition): 2017 4500 B B, 4-27 to 4-28	0.1 mg/L to 100 mg/L
		Cobalt	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Copper	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Nickel	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L

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		Lead	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Iron	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Cadmium	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Zinc	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Chromium (Total)	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
		Manganese	APHA (23 rd Edition): 2017 3120 B, 3-42 to 3-48	0.1 mg/L to 100 mg/L
2.	Wastes (Liquid / Slurry / Sludge / Solid / Semi Solid)	pH Value	US EPA 9045D	1 to 14
		Flash Point	ASTM D7094/ D6450	30 °C to 150 °C
		Gross Calorific Value	IS 1350 (Part 2): 1970 (RA 2000)	1000 cal/g to 15000 cal/g