

Laboratory Air Aqua Labs India Private Limited, No. 22, 2nd Floor, 7th Street,
 Balaji Nagar, Nanganallur, Chennai, Tamil Nadu
Accreditation Standard ISO/IEC 17025: 2005
Certificate Number TC-6203 **Page 1 of 7**
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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

AT LABORATORY				
I.	WATER			
1.	Surface water / Drinking water / Ground water / Swimming Pool Water / Construction water/ Irrigation water/ Industrial water	Colour	IS:3025(Part 4)	5 to 500Hazen Units
		Odour	IS:3025(Part 5)	Qualitative (Agreeable/ Disagreeable)
		pH	IS:3025(Part 11)	3 to 12
		Temperature	IS:3025(Part 09)	20°C to 50°C
		Taste	IS:3025(Part 8)	Qualitative (Agreeable/ Disagreeable)
		Turbidity	IS:3025(Part 10)	1 NTU to 500 NTU
		Total dissolved solids	APHA 22 nd Edition: 2540 C	2 mg/L to 10,000 mg/L
		Conductivity at 25°C	APHA 22 nd Edition: 2510 B	1 µS/cm to 1,00,000 µS/cm
		Alkalinity as CaCO ₃	IS: 3025 (Part 23)	2 mg/L to 5,000 mg/L
		Phenolphthalein Alkalinity as CaCO ₃		2 mg/L to 1,000 mg/L
		Carbonate Alkalinity	IS : 3025 (Part 51)	2 mg/L to 1,000 mg/L
		Bicarbonate Alkalinity		2 mg/L to 1,000 mg/L
		Total Hardness as CaCO ₃	APHA 22 nd Edition: 2340 C	2 mg/L to 5,000 mg/L
		Carbonate Hardness	IS 3025 (Part 21)	1 mg/L to 1,000 mg/L
		Non carbonate Hardness	IS 3025 (Part 21)	1 mg/L to 1,000 mg/L
		Calcium as Ca	APHA 22 nd Edition: 3500 Ca B/3111B	0.8 mg/L to 2,000 mg/L
		Magnesium as Mg	APHA 22 nd Edition: 3500 Mg B, 3111 B	0.3 mg/L to 2000 mg/L,
		Chlorides as Cl	IS:3025 (Part 32)	0.1 mg/L to 4,000 mg/L
		Sulphate as SO ₄	IS:3025 (Part 24) (Turbidity Method)	1 mg/L to 2,000 mg/L

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		Nitrate as NO ₃	IS:3025 (Part 34)	0.5 mg/L to 400 mg/L
		Nitrite as NO ₂	IS:3025 (Part 34)	0.01 mg/L to 50 mg/L
		Boron as B	APHA 22 nd Edition:4500B-B	0.1 mg/L to 1 mg/L
		Aluminium as Al	IS : 3025 (Part 55)	0.03 mg/L to 10 mg/L
		Manganese as Mg	IS : 3025 (Part 59)	0.1 mg/L to 10 mg/L
		Free Residual Chlorine	IS: 3025 (Part 26)- Iodometric Method	1 mg/L to 50 mg/L
		Fluorides as F	APHA 22 nd Edition:4500F, D	0.1 mg/L to 10 mg/L
		Acidity as CaCO ₃	IS: 3025 (Part 22)	2 mg/L to 100 mg/L
		Iron as Fe	IS:3025 (Part 53)-1,10 Phenanthroline Method	0.05 mg/L to 10 mg/L
		Ammonia as N	APHA 22 nd Edition: 4500 NH ₃ B,C	0.1 mg/L to 10 mg/L
		Total solids	APHA 22 nd Edition: 2540 B	2 mg/L to 10,000 mg/L
		Hexavalent Chromium as Cr ₆₊	IS: 3025 (Part 52)	0.04 mg/L to 5 mg/L
		Phosphate as PO ₄	APHA 22 nd Edition:4500P,D	0.05 mg/L to 20 mg/L
		Oxygen absorbed in 4 hrs	IS: 3025 (Part 63)	0.1 mg/L to 5 mg/L
		Volatile Solid	APHA 22 nd Edition: 2540 E	2 mg/L to 1,000 mg/L
		Fixed Solid	APHA 22 nd Edition: 2540 E	2 mg/L to 1,000 mg/L
		Carbon-di-oxide	IS: 3025 (Part 61)	1 mg/L to 100 mg/L
		Silica as SiO ₂	IS: 3025 (Part 35)	0.1 mg/L to 500 mg/L
		Potassium as K	IS: 3025 (Part 45)-Flame	1 mg/L to 1,000 mg/L
		Sodium as Na	Photometric Method	0.1 mg/L to 1,000 mg/L
		Total Suspended Solid	APHA 22 nd Edition: 2540 D	2 mg/L to 500 mg/L
		Colour retention of KMnO ₄ at 27°C	IS:1070- Annex-A	Passes/Fails the Test
		Water Neutralization: a)To neutralize 100ml of sample water using phenolphthalein as an indicator using 0.02N NaOH	IS:3025 (Part 22)	0.1 mL to 25 mL

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		b) To neutralize 100ml of sample water using Mixed indicator using 0.02 N H ₂ SO ₄	IS: 3025 (Part 23)	0.1 mL to 75 mL
		Percent Sodium	AAL/SOP/41	1% to 75%
		Residual Sodium Carbonate	IS:11624	0.1 m.eq/L to 20 m.eq/L
		Sodium Adsorption ratio		1 m.eq/L 500 m.eq/L
II.	POLLUTION & ENVIRONMENT			
1.	Industrial Effluents - Raw water/Treated water Sewage Treatment Plant – Raw water/Treated water/ Other Wastewater	Colour	IS:3025(Part 4)	400nm to 800 nm
		pH value	IS:3025(Part 11)	1 to14
		Temperature	IS:3025(Part 09)	20°C to 60°C
		Turbidity	IS:3025(Part 10)	1NTU to 500 NTU
		Electrical Conductivity	APHA 22 nd Edn.2012:2510B	1 µS/cm to1,00,000 µS/cm
		Total suspended solids	APHA 22 nd Edn.2012-2540D	2 mg/L to 10,000 mg/L
		Total dissolved solids	APHA 22 nd Edn.2012-2540C	2 mg/L to 50,000 mg/L
		Total solids	APHA 22 nd Edn.2012-2540B	2 mg/L to 5,000 mg/L
		Volatile solid	APHA 22 nd Edn.2540 E	2 mg/L to 10,000 mg/L
		Fixed solid	APHA 22 nd Edn.2540 E	2 mg/L to 1,000 mg/L
		Total Hardness as CaCO ₃	APHA 22 nd Edn.2012-2340C,B	2 mg/L to 5,000 mg/L
		Carbonate Hardness	IS 3025 Part 21	1 mg/L to 1,000 mg/L
		Non carbonate Hardness		1 mg/L to 1,000 mg/L
		Calcium as Ca	APHA 22 nd Edn.2012-3500 Ca B	0.8 mg/L to 1000 mg/L
		Magnesium as CaCO ₃	APHA 22 nd Edn.2012-3500 Mg B	0.3 mg/L to 2000 mg/L
		Acidity as CaCO ₃	IS: 3025 (Part 22) (Indicator Method)	2 mg/L to 500 mg/L

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		Alkalinity as CaCO ₃	IS: 3025 (Part 23) (Indicator Method)	2 mg/L to 2,000 mg/L
		Phenolphthalein Alkalinity as CaCO ₃	IS : 3025 (Part 23)	2 mg/L to 1,000 mg/L
		Carbonate Alkalinity	IS : 3025 (Part 51)	1 mg/L to 1,000 mg/L
		Bicarbonate Alkalinity		1 mg/L to 1,000 mg/L
		Chemical Oxygen Demand (COD)	IS : 3025 (Part 58):2006 (Open reflux Method)	5 mg/L to 20,000 mg/L
		Bio-Chemical Oxygen Demand (BOD) 3 days at 27°C	IS:3025 (Part44)	1 mg/L to 500 mg/L
		Dissolved Oxygen	IS:3025 (Part38)	0.2 mg/L to 10 mg/L
		Chloride as Cl	IS:3025 (Part 32) (Argentometric Method)	0.1 mg/L to 2,0000 mg/L
		Free Residual Chlorine	IS: 3025 (Part 26) (Iodometric Method)	1 mg/L to 100 mg/L
		Fluorides as F	APHA 22 nd Edn. 4500F B, D	0.1 mg/L to 20 mg/L
		Total Kjeldahl Nitrogen	APHA 22 nd Edn.4500N (org) B	1.0 mg/L to 500 mg/L
		Ammonical Nitrogen	APHA 22 nd Edn.2012-4500 NH ₃ B,C	1.0 mg/L to 500 mg/L
		Free ammonia	APHA 22 nd Edn.2012-4500 NH ₃ B,C	0.1 mg/L to 10 mg/L
		Nitrate as NO ₃	IS:3025 (Part 34):1988 (Chromotropic acid method)	1 mg/L to 400 mg/L
		Nitrite as NO ₂	IS:3025 (Part 34) ((NEDA method)	0.1 mg/L to 50 mg/L
		Hexavalent Chromium as Cr6+	IS : 3025 (Part 52)	0.04 mg/L to 100 mg/L
		Boron as B	APHA 22 nd Edn.4500 B -B	0.1 mg/L to 10 mg/L
		Iron	IS: 3025 (Part 2) (1,10 - Phenanthroline method)	0.01 mg/L to 50 mg/L
		Sodium	IS : 3025 (Part 45) : 1993	1 mg/L to 5000 mg/L
		Potassium	IS : 3025 (Part 45) : 1993	1 mg/L to 2000 mg/L

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		Aluminium as Al	IS : 3025 (Part 55) (Eriochrome cynine R dye method)	0.5 mg/L to 100 mg/L
		Manganese as Mg	IS : 3025 (Part 59) (Formaldehyde photometric method)	0.1 mg/L to 100 mg/L
		Oil and grease	IS : 3025 (Part 39)	2 mg/L to 2000 mg/L
		Sulphate as SO ₄	IS:3025 (Part 24) (Turbidity Method)	1 mg/L to 12000 mg/L
		Silica as SiO ₂	IS: 3025 (Part 35)	0.1 mg/L to 100 mg/L
		Phosphate as PO ₄	APHA 22 nd Edn.2012-4500 P B,D	0.05 mg/L to 100 mg/L
		Percent Sodium Residual Sodium Carbonate	AAL/SOP/41 IS:11624	1% to 75% 0.1 m.eq/L to 20 m.eq/L
		Sodium Adsorption Ratio		1 m.eq/L to 500 m.eq/L
III.	ATMOSPHERIC POLLUTION			
1.	Ambient Air	Total Suspended Particulate Matter (TSPM)	IS : 5182(Part 4)	5 µg/m ³ to 5,000µg/m ³
		Particulate matter (Size less than 2.5 µm)	EPA- 40 CFR Part 50 (Appendix L)	5µg/m ³ to 200 µg/m ³
		Particulate matter (Size less than 10 µm)	IS : 5182(Part 23)	5µg/m ³ to 1000 µg/m ³
		Sulphur dioxide as SO ₂	IS : 5182 (Part 2)	5µg/m ³ to 1050 µg/m ³
		Nitrogen dioxides as NO ₂	IS : 5182 (Part 6)	5µg/m ³ to 740 µg/m ³
		Ammonia	AAL/SOP/51	10µg/m ³ to 700 µg/m ³
		Ozone as O ₃	IS : 5182 (Part 09)	2µg/m ³ to 500 µg/m ³
2.	Stack Emission	Carbon Monoxide	AAL/SOP/53	1 mg/m ³ to 500 mg/m ³
		Particulate matter	IS : 11255(Part 1)/ EPA Method 5	5 mg/m ³ to 1000 mg/Nm ³
		Carbon Monoxide	AAL/SOP/57	1 mg/m ³ to 4000mg/Nm ³
		Carbon di oxide	AAL/SOP/58	0.2% to 16 %
		Oxygen	AAL/SOP/59	0.2% to 21 %

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		Sulphur dioxide as SO ₂	AAL/SOP/60	1mg/Nm ³ to 5000mg/Nm ³
		Nitrogen di Oxide	AAL/SOP/61	1 mg/Nm ³ to 4000mg/Nm ³
		Moisture Content	IS:11255(Part 3)	0. 1% to 10%

