

Laboratory **Greenlink Analytical and Research Laboratory (India) Private Limited,**
S.F.No: 414/1, Tex Park Road, Civil Aerodrome Post, Coimbatore,
Tamil Nadu

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-6144**

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Validity **19.05.2018 to 18.05.2020**

Last Amended on --

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.	WATER			
1.	Surface water, ground water, drinking water, water from purifiers, industrial water	pH Value @ 25°C	IS : 3025 (Part 11), APHA 23 rd Edn - 4500 -H ⁺	2 Unit to 12 Unit
		Conductivity @ 25°C	IS : 3025 (Part 14), APHA 23 rd Edn- 2510 -B	5 µmhos/cm to 25,000 µmhos/cm
		Color	IS : 3025 (Part 4), APHA 23 rd Edn - 2120 -B	1 Hazen to 100 Hazen
		Odour	IS : 3025 (Part 5)	Agreeable/ Disagreeable
		Taste	IS : 3025 (Part 8)	Agreeable/ Disagreeable
		Turbidity	IS : 3025 (Part 10), APHA 23 rd Edn -2130 -B	1 NTU to 100 NTU
		Total Solids	IS : 3025 (Part 15), APHA 23 rd Edn- 2540-B,	4 mg/L to 15,000 mg/L
		Total Dissolved solids @ 180°C	IS : 3025 (Part 16), APHA 23 rd Edn - 2540 - C,	4 mg/L to 15,000 mg/L
		Chloride as Cl	IS : 3025 (Part 32), (Argentometric method), APHA 23 rd Edn -4500 Cl-B	2 mg/L to 10,000 mg/L
		Sulphate as SO ₄	IS : 3025 (Part 24) - (Turbidity Method), APHA 23 rd Edn -4500 SO ₄ -E	5 mg/L to 2,000 mg/L
	Nitrite nitrogen as NO ₂ -N	IS : 3025 (Part 34), APHA 23 rd Edn - 4500 NO ₂ -B,	0.01 mg/L to 20 mg/L	
	Nitrate nitrogen as NO ₃ -N	APHA 23 rd Edn - 4500 NO ₃ -B (Ultraviolet Spectrophotometric Screening Method)	1.0 mg/L to 100 mg/L	

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		Total Alkalinity as CaCO ₃	IS : 3025 (Part 23), APHA 23 rd Edn - 2320-B	2 mg/L to 2,000 mg/L
		Phenolphthalein Alkalinity as CaCO ₃	IS : 3025 (Part 23) (Indicator Method)	2 mg/L to 2,000 mg/L
		Total Hardness as CaCO ₃	IS : 3025 (Part 21) (EDTA Method), APHA 23 rd Edn - 2340- C	2 mg/L to 5,000 mg/L
		Calcium hardness as CaCO ₃	APHA 23 rd Edn - 3500 Ca-B	4 mg/L to 3,500 mg/L
		Magnesium hardness as CaCO ₃	APHA 23 rd Edn - 3500 Mg -B	4 mg/L to 2,000 mg/L
		Calcium as Ca	APHA 23 rd Edn – 3500 Ca-B, IS : 3025 (Part 40)	4 mg/L to 1,000 mg/L
		Magnesium as Mg	IS : 3025 (Part 46), APHA 23 rd Edn - 3500 Mg-B	4 mg/L to 1,000 mg/L
		Sodium as Na	IS : 3025 (Part 45) (Flame emission photometric method), APHA 23 rd Edn -3500 Na -B	5 mg/L to 5,000 mg/L
		Potassium as K	IS : 3025 (Part 45) (Flame emission photometric method), APHA 23 rd Edn -3500 K-B	5 mg/L to 1,000 mg/L
		Phosphorus as P	IS : 3025 (Part 31) (Stannous chloride method), APHA 23 rd Edn -4500-P-D	0.2 mg/L to 100 mg/L
		Total Iron as Fe	IS : 3025 (Part 53) (1,10-Phenanthroline method), APHA 23 rd Edn - 3500 Fe-B	0.1 mg/L to 100 mg/L

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		Dissolved Oxygen	IS : 3025 (Part 38) (Winkler azide modification method), APHA 23 rd Edn - 4500 O-C	0.2 mg/L to 10 mg/L
		Total Residual Chlorine	IS : 3025 (Part 26) (Iodometric Method), APHA 23 rd Edn - 4500 - Cl- B	1.0 mg/L to 100 mg/L
		Fluoride as F	IS 3025 (Part 60), APHA 23 rd Edn- 4500 – F-D, (Spadns Method)	0.1 mg/L to 10 mg/L
		Silica as SiO ₂	IS 3025 (Part 35), APHA 23 rd Edn - 4500 - SiO ₂ - C, (Molybdosilicate Method)	0.5 mg/L to 10 mg/L
II.	POLLUTION & ENVIRONMENT			
1.	Waste water (Effluents & Sewage)	pH Value @ 25°C	IS : 3025 (Part 11) Electrometric method, APHA 23 rd Edn -4500-H ⁺	2 Unit to 12 Unit
		Conductivity @ 25 °C	IS : 3025 (Part 14), APHA 23 rd Edn - 2510 -B	5 µmhos/cm to 1,00,000 µmhos/cm
		Turbidity	IS : 3025 (Part 10), APHA 23 rd Edn - 2130 -B	1 NTU to 100 NTU
		Total Solids	IS : 3025 (Part 15), APHA 23 rd Edn - 2540-B	4 mg/L to 25,000 mg/L
		Total Suspended Solids @ 105 °C	IS : 3025 (Part 17), APHA 23 rd Edn - 2540-D	4 mg/L to 15,000 mg/L
		Total Dissolved solids @ 180 °C	IS : 3025 (Part 16), APHA 23 rd Edn - 2540 –C	4 mg/L to 1,00,000 mg/L

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		Chloride as Cl	IS : 3025 (Part 32) (Argentometric method), APHA 23 rd Edn - 4500 Cl-B	2 mg/L to 30,000 mg/L
		Sulphate as SO ₄	IS : 3025 (Part 24) (Turbidity Method), APHA 23 rd Edn -4500 SO ₄ -E	5 mg/L to 2,000 mg/L
		Total Residual chlorine as Cl	IS : 3025 (Part 26) (Iodometric Method), APHA 23 rd Edn - 4500 Cl (Residual)-Cl-B,	1 mg/L to 100 mg/L
		Phosphorous as P	IS : 3025 (Part 31) (Stannous chloride method), APHA 23 rd Edn - 4500-P-D	0.5 mg/L to 500 mg/L
		Oil & grease	IS : 3025 (Part 39), Partition Gravimetric method, APHA 23 rd Edn- 5520 - B	4 mg/L to 2000 mg/L
		Bio Chemical Oxygen demand (3 days @ 27 °C)	IS 3025 (Part 44)	2 mg/L to 20,000 mg/L
		Chemical Oxygen Demand	IS : 3025 (Part 58), APHA 23 rd Edn - 5220- B	8 mg/L to 40,000 mg/L
		Total Kjeldahl Nitrogen	IS 3025 (Part 34), Macro Kjeldhal method, APHA 23 rd Edn - 4500 -N-B	2 mg/L to 500 mg/L
		Nitrate nitrogen as NO ₃ -N	APHA 23 rd Edn -4500 NO ₃ - B (Devard a's Alloy Reduction Method)	1.0 mg/L to 400 mg/L
		Total Alkalinity as CaCO ₃	IS : 3025 (Part 23) , Indicator method, APHA 23 rd Edn - 2320- B	2 mg/L to 5,000 mg/L
		Total Hardness as CaCO ₃	IS : 3025 (Part 21) EDTA method,	5 mg/L to 10,000 mg/L

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		Calcium hardness as CaCO ₃	APHA 23 rd Edn- 2340- C, APHA 23 rd Edn -3500 Ca-B	5 mg/L to 5,000 mg/L
		Magnesium hardness as CaCO ₃	APHA 23 rd Edn -3500 Mg-B	5 mg/L to 5,000 mg/L
		Calcium as Ca	APHA 23 rd Edn – 3500 Ca-B, IS : 3025 (Part 40)	5 mg/L to 3,000 mg/L
		Magnesium as Mg	IS : 3025 (Part 46), APHA 23 rd Edn - 3500 Mg-B,	5 mg/L to 3,000 mg/L
		Sodium as Na	IS : 3025 (Part 45) Flame Emission Photometric method), APHA 23 rd Edn -3500 Na-B	5 mg/L to 10,000 mg/L
		Potassium as K	IS : 3025 (Part 45) (Flame emission photometric method), APHA 23 rd Edn - 3500 K-B	5 mg/L to 1,000 mg/L
		% Sodium	GLARL/SOP/22 ISSUE No: 01 & date 15.07.2015	1% to 95 %
		Total Iron as Fe	IS : 3025 (Part 53), APHA 23 rd Edn - 3500 Fe-B	1 mg/L to 500 mg/L
		Total and Free Carbon Dioxide	IS 3025 (Part 61)	5 mg/L to 1000 mg/L
		Oxygen absorbed in 4 hours at 37°C	IS 3025 (Part 63)	0.5 mg/L to 5 mg/L
		Ammonical Nitrogen as NH ₃ -N	APHA 23 rd Edn - 4500 - NH ₃ , (Titrimetric Method)	1 mg/L to 100 mg/L
		Fluoride as F	IS 3025 (Part 60) APHA 23 rd Edn – 4500-F'D, (Spadns Method)	0.1 mg/L to 10 mg/L

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		Silica as SiO ₂	IS 3025 (Part 35), APHA 23 rd Edn 4500 - SiO ₂ - C, (Molybdosilicate Method)	0.5 mg/L to 10 mg/L
2.	Soil, Sludge	pH @ 25 °C	IS:2720, (Part -26)	2 to 12
		Moisture	IS 15106	1% to 30%
		Conductivity	IS:14767	5.0 µS/cm to 10000 µS/cm
		Organic matter	IS:2720, (Part-22)	0.01% to 10%
		Organic Carbon	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.83-85	0.01% to 10%
		Available Nitrogen	GLARL/SOP/03/SW/08 Issue No.01/16.03.2017	5 kg/ha to 500 kg/ha
		Available Sodium as Na	GLARL/SOP/03/SW/06 Issue No.01/16.03.2017	10 kg/ha to 1000 kg/ha
		Available Potassium as K	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.99-100	10 kg/ha to 1000 kg/ha
		Chloride as Cl	GLARL/SOP/03/SW/08 Issue No.01/16.03.2017	2 mg/100g to 100 mg/100g
		Available Sulphur	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.100-102	10 kg/ha to 1000 kg/ha
		Available Calcium as Ca	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.102-105	50 mg/kg to 10000 mg/kg

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		Available Magnesium as Mg	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.102-105	50 mg/kg to 5000 mg/kg
		Available Phosphorus as P	Methods Manual Soil Testing in India, Ministry of Agriculture, January 2011 Page No.95-98	10 mg/kg to 500 mg/kg
III.	ATMOSPHERIC POLLUTION			
1.	Ambient Air	Respirable Particulate Matter (PM ₁₀)	IS 5182 (Part -23)	5.0 µg/m ³ to 250 µg/m ³
		Fine Particulate Matter (as PM _{2.5})	GLARL /SOP/AAQM/05 Issue No.01/ Date.03.01.2018	10 µg/m ³ to 100 µg/m ³
		Sulphur Dioxide (as SO ₂)	IS: 5182 (Part 2)	3.0 µg/m ³ to 100 µg/m ³
		Nitrogen Dioxide (as NO ₂)	IS 5182 (Part -6)	9.0 µg/m ³ to 100 µg/m ³
2.	Stack Emission	Particulate Matter	IS:11255 (Part 1)	5.0 mg/Nm ³ to 5000 mg/Nm ³
		Sulphur Dioxide (as SO ₂)	IS:11255 (Part 2)	3.0 mg/Nm ³ to 200 mg/Nm ³
		Nitrogen Dioxide (as NO ₂)	IS:11255 (Part 7)	3.0 mg/Nm ³ to 200 mg/Nm ³
3.	Ambient Noise Level	Equivalent noise level (Leq, Lmin, Lmax, dB(A))	IS : 9989	30 Leq dB(A) to 130 Leq dB(A)