

Laboratory Envirochem Research & Test Labs Pvt. Ltd., HIG-79, Sector-E,
Aliganj, Lucknow, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7516 (in lieu of T-4044)

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Validity 25.07.2018 to 24.07.2020

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.	ATMOSPHERIC POLLUTION			
1.	Ambient Air Quality	PM ₁₀	IS 5182 (Part 23)	10 µg/m ³ to 1000 µg/m ³
		PM _{2.5}	Lab SOP No:ERTL/WI/Air/01, Issue No.01, Issue Date:05.08.2015)	10 µg/m ³ to 1000 µg/m ³
		Sulphur Dioxide (SO ₂)	IS 5182 (Part 2)	8 µg/m ³ to 1050 µg/m ³
		Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6)	9 µg/m ³ to 750 µg/m ³
		Ammonia (NH ₃)	Lab SOP:ERTL/WI/Air/10, Issue No.01, Issue Date:07.03.2018 (Colorimetric/Indophenols Blue Method/)	10.0 µg/m ³ to 400 µg/m ³
		Lead (Pb)	APHA, 23 rd Ed. 3111A Pg.No.-3-16/AAS Method	0.02 µg/m ³ to 5.0 µg/m ³
		Arsenic (As)	APHA, 23 rd Ed. 3114C Pg.No.-3-40/AAS Method	0.02 µg/m ³ to 5.0 µg/m ³
		Nickel (Ni)	APHA, 23 rd Ed. 3111A Pg.No.-3-16/AAS Method	0.02 µg/m ³ to 10.0 µg/m ³
2.	Fugitive Emission/Indoor Air Pollution Monitoring	SPM	Method IS 5182 (Part 4) Gravimetric	25 µg/m ³ to 15000 µg/m ³
		Sulphur Dioxide (SO ₂)	IS 5182 (Part 2)	10 µg/m ³ to 1050µg/m ³
		Nitrogen Dioxide (NO ₂)	IS 5182 (Part 6)	10 µg/m ³ to 750 µg/m ³
3.	Ambient Noise Level Excluding Vibration	Noise Level Leq	IS 9989 Lab (SOP:ERTL/WI/Air/15 (A)& (B), Issue No.01, Issue Date:09.03.2018)	30 dBA to 110 dBA
4.	Stationery Source/Stack Emissions	PM in Stack	IS 11255 (Part 1)	10.0 mg/Nm ³ to 2000 mg/Nm ³
		Sulphur Dioxide (SO ₂)	IS 11255 (Part 2)	15.0 mg/Nm ³ to 1000 mg/Nm ³

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		Nitrogen Dioxide (NO ₂)	IS 11255 (Part 7)/ Flue Gas Analyzer	15.0 mg/Nm ³ to 1000 mg/Nm ³
		Ammonia (NH ₃)	IS:41515/Colorimetric	1.0 mg/Nm ³ to 50.0 mg/Nm ³
		Carbon Monoxide (CO)	IS 13270/ Flue Gas Analyzer	5 mg/Nm ³ to 1200 mg/Nm ³
II.	POLLUTION AND ENVIRONMENT			
1.	Waste Water	pH	APHA, 23 rd Ed. 4500-H ⁺ -B	2.0 to 12.0
		Total Solids	APHA, 23 rd Ed. 2540-B	2.0 mg/l to 10,000 mg/l
		Total Dissolved Solids	APHA, 23 rd Ed. 2540-C	2.0 mg/l to 10,000 mg/l
		Suspended Solids	APHA, 23 rd Ed. 2540-D	2.0 mg/l to 10,000 mg/l
		Oil & Grease	APHA, 23 rd Ed. 5520-C& D	5.0 mg/l to 100 mg/l
		Biochemical Oxygen Demand (BOD)	APHA, 23 rd Ed. 5210-B &CPCB Method	2.0 mg/l to 50,000 mg/l
		Chemical Oxygen Demand (COD)	APHA, 23 rd Ed. 5220-B	5.0 mg/l to 1,00,000 mg/l
		Dissolved Oxygen (DO) in field	APHA, 23 rd Ed. 5210-B	0.2 mg/l to 9.0 mg/l
		Fluoride (F)	APHA, 23 rd Ed. 4500-F D	0.1 mg/l to 10 mg/l
		Nitrate (N)	APHA, 23 rd Ed. 4500-NO ₃ -F	0.5 mg/l to 10.0 mg/l
		Total Nitrogen	APHA, 23 rd Ed. 4500-N _{org} -B	1.0 mg/l to 20.0 mg/l
		Ammonical Nitrogen	APHA, 23 rd Ed. 4500-NH ₃ -C	0.1 mg/l to 5.0 mg/l
		Phosphate	APHA, 23 rd Ed. 4500-P D	0.05 mg/l to 10.0 mg/l
		Total Chromium	APHA, 23 rd Ed. 3111-A	0.10 mg/l to 15.0 mg/l
		Copper	APHA, 23 rd Ed. 3111-A	0.04 mg/l to 10.0 mg/l
		Lead	APHA, 23 rd Ed. 3111-A	0.2 mg/l to 30.0 mg/l
		Cadmium	APHA, 23 rd Ed. 3111-A	0.04 mg/l to 10.0 mg/l
		Nickel	APHA, 23 rd Ed. 3111-A	0.06 mg/l to 20.0 mg/l
		Zinc	APHA, 23 rd Ed. 3111-A	0.02 mg/l to 10.0 mg/l
		Iron	APHA, 23 rd Ed. 3111-A	0.05 mg/l to 10.0 mg/l
		Manganese	APHA, 23 rd Ed. 3111-A	0.01 mg/l to 5.0 mg/l
		Arsenic	APHA, 23 rd Ed., 3114-C	0.01 mg/l to 2.0 mg/l

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2.	Soil	pH	ERL/SOP/S/I, Issue No. 01, Issue Date:06.02.2018	1.0 to 14.0
		Calcium	ERL/SOP/S/II, Issue No. 01, Issue Date:06.02.2018	10.0 mg/kg to 500.0 mg/kg
		Magnesium	ERL/SOP/S/II, Issue No. 01, Issue Date:06.02.2018	10.0 mg/kg to 300.0 mg/kg
		Chloride	ERL/SOP/S/III, Issue No. 01, Issue Date:07.02.2018	2.0 mg/kg to 1,000 mg/kg
		Sulphate	ERL/SOP/S/IV, Issue No. 01, Issue Date:07.02.2018	2.0 mg/kg to 1000 mg/kg
		Fluoride (F)	ERL/SOP/S/V, Issue No. 01, Issue Date:08.02.2018	1.0 mg/kg to 50.0 mg/kg
		Nitrate	ERL/SOP/S/VI, Issue No. 01, Issue Date:08.02.2018	1.0 mg/kg to 100 mg/kg
		Total Nitrogen	ERL/SOP/S/VII, Issue No. 01, Issue Date:09.02.2018	5.0 mg/kg to 100.0 mg/kg
		Available Phosphorus	ERL/SOP/S/VIII, Issue No. 01, Issue Date:09.02.2018 Method Manual, Ministry of Agriculture, GOI:4.6.3, Part-12	2.0 mg/kg to 200.0 mg/kg
		Available Potassium	ERL/SOP/S/IX, Issue No. 01, Issue Date:09.02.2018 Method Manual Ministry of Agriculture, GOI:4.6.3, Part-14,	2.0 mg/kg to 200.0 mg/kg
		Total Chromium	ERL/SOP/S/X, Issue No. 01, Issue Date:10.02.2018	0.10 mg/kg to 15.0 mg/kg
		Lead	ERL/SOP/S/XI, Issue No. 01, Issue Date:10.02.2018	0.2 mg/kg to 30.0 mg/kg
		Cadmium	ERL/SOP/S/XII, Issue No. 01, Issue Date:10.02.2018	0.04 mg/kg to 10.0 mg/kg
		Nickel	ERL/SOP/S/XIII, Issue No. 01, Issue Date:10.02.2018	0.06 mg/kg to 20.0 mg/kg

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		Zinc	ERL/SOP/S/XIV, Issue No. 01, Issue Date:10.02.2018	0.02 mg/kg to 10.0 mg/kg
		Manganese	ERL/SOP/S/XV, Issue No. 01, Issue Date:10.02.2018	0.01 mg/kg to 5.0 mg/kg
III.	WATER			
1.	Drinking Water	pH	APHA, 23 rd Ed. 4500-H ⁺ -B	2.0 to 12.0
		Conductivity	APHA, 23 rd Ed. 2510-B	1.0 µmho/cm to 10,000 µmho/cm
		Turbidity	APHA, 23 rd Ed. 2130-B	0.1 NTU to 100 NTU
		Total Solids	APHA, 23 rd Ed. 2540-B	2.0 mg/l to 10,000 mg/l
		Total Dissolved Solids	APHA, 23 rd Ed. 2540-C	2.0 mg/l to 10,000 mg/l
		Suspended Solids	APHA, 23 rd Ed. 2540-D	2.0 mg/l to 10,000 mg/l
		Total Hardness as CaCO ₃	APHA, 23 rd Ed. 2340-C	4.0 mg/l to 1,500 mg/l
		Calcium Hardness as CaCO ₃	APHA, 23 rd Ed. 2340-C	4.0 mg/l to 1,000 mg/l
		Magnesium Hardness as CaCO ₃	APHA, 23 rd Ed. 2340-C	4.0 mg/l to 1,000 mg/l
		Total Alkalinity as CaCO ₃	APHA, 23 rd Ed. 2320-B	4.0 mg/l to 1,000 mg/l
		Chloride	APHA, 23 rd Ed. 4500-Cl ⁻ B	2.0 mg/l to 1,000 mg/l
		Sulphate	APHA, 23 rd Ed. 4500-SO ₄ ⁻² E	2.0 mg/l to 200 mg/l
		Phosphate	APHA, 23 rd Ed. 4500-PD	1.0 mg/l to 50 mg/l
		Calcium	APHA, 23 rd Ed. 3500-Ca B	1.0 mg/l to 20.0 mg/l
		Magnesium	APHA, 23 rd Ed. 3500-Mg B	1.0 mg/l to 10.0 mg/l
		Nitrate	APHA, 23 rd Ed. 4500-NO ₃ ⁻ B	0.5 mg/l to 100 mg/l
		Residual Chlorine	APHA, 23 rd Ed. 4500-ClO ₂ B	0.2 mg/l to 10 mg/l
		Fluoride	APHA, 23 rd Ed. 4500-F ⁻ D	0.1 mg/l to 5.0 mg/l
		Silica	APHA, 23 rd Ed. 4500-SiO ₂ C	0.1 mg/l to 10.0mg/l
		Color	APHA, 23 rd Ed. 2120-B	0.1 Hazen to 5.0 Hazen

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		Ammonical Nitrogen	APHA, 23 rd Ed. 4500-NH ₃ F	0.2 mg/l to 5.0 mg/l
		Boron	APHA, 23 rd Ed. 4500-B C	1.0 mg/l to 50.0 mg/l
		Sodium	APHA, 23 rd Ed. 3500 Na	2.0 mg/l to 1, 000 mg/l
		Potassium	APHA, 23 rd Ed. 3500 K B	2.0 mg/l to 1, 000 mg/l
IV.	RESIDUES IN WATER			
1.	Trace Metal Elements in Drinking Water	Total Chromium	APHA, 23 rd Ed. 3111-A	0.10 mg/l to 15.0 mg/l
		Copper	APHA, 23 rd Ed. 3111-A	0.04 mg/l to 10.0 mg/l
		Lead	APHA, 23 rd Ed. 3111-A	0.2 mg/l to 30.0 mg/l
		Cadmium	APHA, 23 rd Ed. 3111-A	0.04 mg/l to 10.0 mg/l
		Nickel	APHA, 23 rd Ed. 3111-A	0.06 mg/l to 20.0 mg/l
		Zinc	APHA, 23 rd Ed. 3111-A	0.02 mg/l to 10.0 mg/l
		Iron	APHA, 23 rd Ed. 3111-A	0.05 mg/l to 10.0 mg/l
		Manganese	APHA, 23 rd Ed. 3111-A	0.01 mg/l to 5.0 mg/l
		Arsenic	APHA, 23 rd Ed. 3114-C	0.01 mg/l to 2.0 mg/l