

Laboratory CPCB, Zonal Laboratory, First Floor, PICUP Bhawan, Vibhuti Khand,
Gomtinagar, Lucknow, Uttar Pradesh

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7241

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Validity 08.05.2018 to 07.05.2020

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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
<u>BIOLOGICAL TESTING</u>				
I.	WATER			
1.	Fresh water ,Surface water , Ground water	Total Coliform	APHA 23 rd Ed. 2017, 9221- B &C	1.8 MPN/100ml to >1600 MPN/100ml
		Fecal Coliform	APHA 23 rd Ed. 2017, 9221- C & E	1.8 MPN/100ml to >1600 MPN/100ml
II.	ENVIRONMENT AND POLLUTION			
1.	Waste water	Total Coliform	APHA 23 rd Ed. 2017, 9221- B &C	1.8 MPN/100ml to >1600 MPN/100ml
		Fecal Coliform	APHA 23 rd Ed. 2017, 9221- C & E	1.8 MPN/100ml to >1600 MPN/100ml

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CHEMICAL TESTING				
I.	ATMOSPHERIC POLLUTION			
1.	Ambient Air	PM ₁₀	IS 5182 (Part 23), 2006	3.5µg/m ³ to 1000µg/m ³
		Sulphur Dioxide (SO ₂)	IS Method No. 5182, (Part-2), 2001;	4µg/m ³ to 100 µg/m ³
		Oxides of Nitrogen (NO ₂)	IS Method No. 5182, (Part 6), 2006	6µg/m ³ to 250 µg/m ³
2.	Source / Stack Emission	Particulate Matter	IS Method No. 11255 (Part-1), 1985; Reaffirmed in Sep. 2003	1 mg/Nm ³ to 2000 mg/Nm ³
		Sulphur Dioxide (SO ₂)	IS Method No. 11255 (Part-2), 1985, Reaffirmed in Sep. 2003	1 mg/Nm ³ to 2000 mg/Nm ³
II.	WATER			
1.	Fresh water, Surface water, Ground water	Temperature	APHA 2550 A+B, 23 rd Ed. 2017	1°C to 50 °C
		Colour	APHA 2120-B, 23 rd Ed. 2017	5 Hazen to 100 Hazen
		Conductivity	APHA 2510-B, 23 rd Ed. 2017	0.1 µS/cm to 12 mS/cm
		pH	APHA 4500 H ⁺ -B, 23 rd Ed. 2017	2 to 12
		Suspended solids	APHA 2540 D, 23 rd Ed. 2017	2.5 mg/L to 2000 mg/L
		Total solids	APHA 2540 B, 23 rd Ed. 2017	2.5 mg/L to 5000mg/L
		Total Dissolved Solids	APHA 2540 C, 23 rd Ed. 2017	2.5 mg/L to 5000 mg/L

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		Volatile Solids	APHA 2540 E, 23 rd Ed. 2017	2.5 mg/L to 5000 mg/L
		Turbidity	APHA 2130 B, 23 rd Ed. 2017	1 NTU to 100 NTU
		Chemical Oxygen Demand (COD)	APHA 5220 B, 23 rd Ed. 2017	5 mg/L to 500 mg/L
		Biochemical Oxygen demand (BOD)	APHA 5210 B, 23 rd Ed. 2017 4500 OC, 23 rd Ed. 2017 IS-3025 part 44; 1993 Biochemical Oxygen Demand	1.0 mg/L to 50 mg/L
		Dissolved Oxygen	APHA 4500-OC, 4-146 to 4-148, 23 rd Ed. 2017	1 mg/L to 12 mg/L
		Nitrate Nitrogen	APHA 4500-NO ₃ -E, 23 rd Ed. 2017 (Cadmium Reduction Method) APHA 4500 – NO ₃ – B, 23 rd Ed. 2017 (Ultraviolet Spectrophotometric Method) APHA 4500 NO ₃ ⁻ D, 23 rd Ed. 2017 (Nitrate Electrode Method) APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	0.5 mg/L to 60 mg/L

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		Nitrite Nitrogen	APHA 4500-NO ₂ -B, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	0.05 mg/L to 50 mg/L
		Ammonical nitrogen	APHA 4500-NH ₃ -C, 23 rd Ed. 2017 (Titrimetric Method) APHA 4500-NH ₃ -F, 23 rd Ed. 2017 (Phenate Method) APHA 4500 NH ₃ D, 23 rd Ed. 2017 (Ammonium Electrode Method) ISO 14911:1998 (E)	0.5 mg/L to 50 mg/L
		Oil and grease	APHA 5520-B, 23 rd Ed. 2017	5 mg/L to 50 mg/L
		Phosphate	APHA 4500-PD, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	0.02 mg/L to 60 mg/L
		Sulphate	APHA 4500-SO ₄ ²⁻ E, 23 rd Ed. 2017 APHA 4110, 4-7 to 4-9, 23 rd Ed. 2017	2.0 mg/L to 250 mg/L

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		Alkalinity	APHA 2320-B, 23 rd Ed. 2017	2.0 mg/L to 2500mg/L
		Chloride	APHA 4500-Cl B, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017	3.0 mg/L to 2000 mg/L
		Chlorine Residual	APHA 4500-Cl B, 4-63 to 4-65, 23 rd Ed. 2017	1 mg/L to 50 mg/L
		Calcium	APHA 3500-Ca B, 23 rd Ed. 2017 ISO 14911:1998 (E)	2.0 mg/L to 1000mg/L
		Sodium	APHA 3500-Na B, 23 rd Ed. 2017 ISO 14911:1998 (E)	1.0 mg/L to 100 mg/L
		Potassium	APHA 3500-K B, 23 rd Ed. 2017 ISO 14911:1998 (E)	1.0 mg/L to 50 mg/L
		Magnesium	APHA 3500-Mg B, 23 rd Ed. 2017 ISO 14911:1998 (E)	2.0 mg/L to 500 mg/L
		Hardness Total	APHA 2340-C, 23 rd Ed. 2017	5.0 mg/L to 2000mg/L
		Fluoride	APHA 4500-F D, 23 rd Ed. 2017 (SPADNS Method) APHA 4500-F C,	0.5 mg/L to 10 mg/L

Sandeep Singh Tomar
Convenor

Venugopal C
Program Manager

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			23 rd Ed. 2017 (Ion Selective Electrode Method) APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	
		Sulphide	APHA 4500 S ²⁻ F, 23 rd Ed. 2017	1 mg/L to 25 mg/L
		Phenol	APHA 5530-B, 23 rd Ed. 2017	0.1 mg/L to 5.0 mg/L
		TKN	APHA 4500-N _{org} B, 23 rd Ed. 2017	0.2 mg/L to 80 mg/L
		Boron	APHA 34500-B C, 23 rd Ed. 2017	0.5 mg/L to 10.0 mg/L
		Copper	APHA 3111 A+B, 23 rd Ed. 2017	0.01 mg/L to 5.0 mg/L
		Nickel	APHA 3111 A+B, 23 rd Ed. 2017	0.04 mg/L to 10 mg/L
		Lead	APHA 3111 A+B, 23 rd Ed. 2017	0.05 mg/L to 5.0 mg/L
		Iron	APHA 3111 A+B, 23 rd Ed. 2017	0.05 mg/L to 5.0 mg/L
		Cadmium	APHA 3111 A+B, 23 rd Ed. 2017	0.01 mg/L to 2.5 mg/L
		Zinc	APHA 3111 A+B, 23 rd Ed. 2017	0.01 mg/L to 10 mg/L
		Chromium	APHA 3111 A+B, 23 rd Ed. 2017	0.05 mg/L to 10 mg/L
		Manganese	APHA 3111 A+B, 23 rd Ed. 2017	0.02 mg/L to 5 mg/L
		Cobalt	APHA 3111 A+B, 23 rd Ed. 2017	0.05 mg/L to 5 mg/L
		Chromium – VI	APHA 3500-Cr B, 23 rd Ed. 2017	0.1 mg/L to 5 mg/L

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III.	POLLUTION AND ENVIRONMENT			
1	Waste water	Temperature	APHA 2550 A+B, 23 rd Ed. 2017	1°C to 50 °C
		Colour	APHA 2120-B, 23 rd Ed. 2017	5 Hazen to 20000 Hazen
		Conductivity	APHA 2510-B, 23 rd Ed. 2017	0.1 µS/cm to 12mS/cm
		pH	APHA 4500 H ⁺ -B, ;23 rd Ed. 2017	2 to 12
		Suspended solids	APHA 2540 D, 23 rd Ed. 2017	2.5 mg/L to 10000 mg/L
		Total solids	APHA 2540 B, 23 rd Ed. 2017	2.5 mg/l to 125 g/L
		Total Dissolved Solids	APHA 2540 C, 23 rd Ed. 2017	2.5 mg/l to 100 g/L
		Volatile Solids	APHA 2540 E, 23 rd Ed. 2017	2.5 mg/L to 10000 mg/L
		Turbidity	APHA 2130 B, 23 rd Ed. 2017	1 NTU to 500 NTU
		COD	APHA 5220 B, 23 rd Ed. 2017=	5 mg/L to 100000 mg/L
		Biochemical Oxygen demand (BOD)	APHA 5210 B, 23 rd Ed. 2017 4500 OC , 23 rd Ed. 2017 IS 3025 part 44; 1993	5.0 mg/L to 50000 mg/L
		Dissolved Oxygen	APHA 4500-OC, 23 rd Ed. 2017	2 mg/L to 12 mg/L
		Nitrate Nitrogen	APHA 4500-NO ₃ -E, 23 rd Ed. 2017 (Cadmium Reduction Method)	

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			APHA 4500 – NO ₃ ⁻ – B, 23 rd Ed. 2017 (Ultraviolet Spectrophotometric Method) APHA 4500 NO ₃ ⁻ D, 23 rd Ed. 2017 (Nitrate Electrode Method) APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	0.5 mg/L to 100mg/L
		Nitrite Nitrogen	APHA 4500-NO ₂ -B, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017 (Determination of Anions by Ion Chromatography)	0.05 mg/L to 50 mg/L
		Ammonical nitrogen	APHA 4500-NH ₃ -C, 23 rd Ed. 2017 (Titrimetric Method) APHA 4500-NH ₃ -F, 23 rd Ed. 2017 (Phenate Method) APHA 4500 NH ₃ D, 23 rd Ed. 2017 (Ammonium Electrode Method) ISO 14911:1998 (E)	0.1 mg/L to 200 mg/L

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		Oil and grease	APHA 5520-B, 23 rd Ed. 2017	5 mg/L to 1000 mg/L
		Phosphate	APHA 4500-PD, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017	0.5 mg/L to 100 mg/L
		Sulphate	APHA 4500-SO ₄ ²⁻ E, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017	2.0 mg/L to 500 mg/L
		Alkalinity	APHA 2320-B, 23 rd Ed. 2017	1.0 mg/L to 5000mg/L
		Chloride	APHA 4500-Cl B, 23 rd Ed. 2017 APHA 4110, 23 rd Ed. 2017	2.0 mg/L to 10,000 mg/L
		Chlorine Residual	APHA 4500-Cl B, 23 rd Ed. 2017	1.0 mg/L to 10 mg/L
		Calcium	APHA 3500-Ca B, 23 rd Ed. 2017 ISO 14911:1998 (E)	2.0 mg/L to 2000mg/L
		Sodium	APHA 3500-Na B, 23 rd Ed. 2017 ISO 14911:1998 (E)	0.5 mg/L to 500 mg/L
		Potassium	APHA 3500-K B, 23 rd Ed. 2017 ISO 14911:1998 (E)	1.0 mg/L to 250 mg/L
		Magnesium	APHA 3500-Mg B, 23 rd Ed. 2017 ISO 14911:1998 (E)	1.0 mg/L to 1000 mg/l

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		Fluoride	APHA 4500-F D, 23 rd Ed. 2017 (SPADNS Method) APHA 4500-F C, 23 rd Ed. 2017 (Ion Selective Electrode Method) APHA 4110, 23 rd Ed. 2017	0.5 mg/L to 20 mg/L
		Sulphide	APHA 4500 S ²⁻ F, 23 rd Ed. 2017	1.0 mg/L to 50 mg/L
		Phenol	APHA 5530-B, 23 rd Ed. 2017	0.1 mg/L to 5.0 mg/L
		TKN	APHA 4500-N _{org} B, 23 rd Ed. 2017	0.2 mg/L to 80 mg/L
		Boron	APHA 34500-B C, 23 rd Ed. 2017	0.5 mg/L to 10.0 mg/L
		Copper	APHA 3111 A+B, 23 rd Ed. 2017	0.2 mg/L to 5.0 mg/L
		Nickle	APHA 3111 A+B, 23 rd Ed. 2017	0.2 mg/L to 5 mg/L
		Lead	APHA 3111 A+B, 23 rd Ed. 2017	0.5 mg/L to 10 mg/L
		Iron	APHA 3111 A+B, 23 rd Ed. 2017	0.2 mg/L to 10 mg/L
		Cadmium	APHA 3111 A+B, 23 rd Ed. 2017	0.1 mg/L to 10 mg/L
		Zinc	APHA 3111 A+B, 23 rd Ed. 2017	0.1 mg/L to 10 mg/L
		Chromium	APHA 3111 A+B, 23 rd Ed. 2017	0.2 mg/L to 100 mg/L
		Manganese	APHA 3111 A+B, 23 rd Ed. 2017	0.1 mg/L to 10 mg/L

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		Cobalt	APHA 3111 A+B, 23 rd Ed. 2017	0.2 mg/L to 10 mg/L
		Chromium - VI	APHA 3500-Cr B, 23 rd Ed. 2017	0.1 mg/L to 20 mg/L