

**Laboratory** Rajasthan Environmental Testing Lab, 1/8, 1<sup>st</sup> Floor UIT, Sector-1, Bhiwadi, Distt. Alwar, Rajasthan

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

**Certificate Number** TC-5425 (In lieu of T-3128)

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**Validity** 31.03.2017 to 30.03.2019

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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						
<b>I. ATMOSPHERIC POLLUTION</b>						
<b>1.</b>	<b>Ambient Air</b>	RSPM (PM <sub>10</sub> )	IS 5182 (Part 23)	5 µg/m <sup>3</sup> to 1000µg/m <sup>3</sup>		
		PM (PM <sub>2.5</sub> )	FRP/FEM USEPA	10 µg/m <sup>3</sup> to 500µg/m <sup>3</sup>		
		Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2)	5 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>		
		Nitrogen Dioxide (NO <sub>2</sub> )	IS 5182 (Part 6)	5 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>		
		Ozone (O <sub>3</sub> )	IS 5182 (Part 9)	5 µg/m <sup>3</sup> to 250 µg/m <sup>3</sup>		
		Carbon Monoxide(CO)	IS 13270	0.20 % to 20 % by volume		
		Ammonia(NH <sub>3</sub> )	SOP SP- 61	1.0 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>		
		<b>2.</b>	<b>Stack Emission (Source Emission)</b>	Lead (Pb)	IS 5182 (Part 22)	0.05 µg/m <sup>3</sup> to 5 µg/m <sup>3</sup>
				Nickel (Ni)	IS 5182 (Part 22)	0.1 µg/m <sup>3</sup> to 5 µg/m <sup>3</sup>
				Particulate Matter	IS 11225 (Part I)	5 mg/Nm <sup>3</sup> to 2000 mg/Nm <sup>3</sup>
Sulphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part 2)			5 mg/Nm <sup>3</sup> to 500 mg/Nm <sup>3</sup>		
Nitrogen Dioxide(NO <sub>x</sub> )	IS 11255 (Part 7)			5.0 mg/Nm <sup>3</sup> to 1000 mg/Nm <sup>3</sup>		
Carbon Monoxide(CO)	IS 13270			0.20 % to 100% by volume		
Oxygen (O <sub>2</sub> )	IS 13270			0.2 % v/v to 100 % v/v		
	Carbon Dioxide (CO <sub>2</sub> )	IS 13270	0.2 % v/v to 100 % v/v			
<b>II. POLLUTION &amp; ENVIRONMENT</b>						
<b>1.</b>	<b>Waste Water</b>	pH	IS 3025 (Part 11)	2 to 14		
		TDS (Total Dissolved Solids)	IS 3025 (Part 16)	5 mg/L to 5000 mg/L		
		TSS (Total Suspended Solids)	IS 3025 (Part 17)	10 mg/L to 500 mg/L		

**Deepak Kumar Sharma**  
Convenor

**N. Venkateswaran**  
Program Director

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		Chemical Oxygen Demand (COD)	APHA P 5220 B	5 mg/L to 15000 mg/L
		Bio- Chemical Oxygen Demand (BOD)	IS 3025 (Part 44)	5 mg/L to 7500 mg/L
		Oil & Grease	IS 3025 (Part 39)	1 mg/L to 500 mg/L
		Copper(Cu)	APHA (P-3111)	0.01 mg/L to 10 mg/L
		Nickel(Ni)	APHA (P-3111)	0.01 mg/L to 10 mg/L
		Cadmium (Cd)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Zinc (Zn)	APHA (P-3111)	0.01 mg/L to 10 mg/L
		Lead(Pb)	APHA (P-3111)	0.01 mg/L to 10 mg/L
		Chromium (Total)	APHA (P-3111)	0.01 mg/L to 10 mg/L
		Phosphate	IS 3025 (Part 31)	1.0 mg/L to 200 mg/L
		Total kjeldhal nitrogen	IS 3025 (Part 34)	2 mg/L to 100 mg/L
		Dissolved Oxygen	APHA 4500 O B	0.5 mg/L to 12 mg/L
		Silica(SiO <sub>2</sub> )	IS 3025 (Part 35)	0.5 mg/L to 50 mg/L
		Sulphide	APHA 4500S <sup>2</sup> - F	1.0 mg/L to 50 mg/L
<b>2.</b>	<b>Soil</b>	pH	IS 2720 (Part 26)	2 to 12
		Conductivity	IS:14767	1 mS/cm to 20 mS/cm
		Chloride	SOP,SP- 86	2.0 mg/kg to 1000 mg/kg
		Bulk Density	IS 2720 (Part 3)	0.5 to 5
		Moisture	IS 2720 (Part 2)	1.0 % to 50%
		Calcium	SOP,SP- 83	2.0 mg/kg to 1000 mg/kg
		Magnesium	SOP,SP- 83	0.5 mg/kg to 1000 mg/kg
		Organic Matter	IS 2720 (Part 22)	0.05% to 20 %
		Sodium	SOP,SP- 85	1 kg/hect. to 500 kg/hect.
		Texture	SOP,SP- 99	Qualitative
		Potassium	SOP,SP- 85	1 kg/hect to 500 kg/hect
		Nitrogen	IS 14684	1 mg/kg to 1000 mg/kg
		Organic Carbon	IS 2720 (Part 22)	0.1% to 20 %
		Water Holding Capacity	SOP,SP- 82	10 % to 50 %

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		Sulphate	IS 2720 (Part 27)	0.05 % to 20%
		Total Soluble Solid	IS 2720 (Part 21)	5 mg/kg to 500 mg/kg
		Phosphate(P)	SOP,SP- 87	1 mg/kg to 500 mg/kg
		Zinc (Zn)	SOP,SP- 97	0.01 mg/kg to 5 mg/kg
		Copper(Cu)	SOP,SP- 97	0.01 mg/kg to 5 mg/kg
		Iron (Fe)	SOP,SP- 98	0.01 mg/kg to 5 mg/kg
		Total Sulphur	IS 14685	0.01 mg/kg to 5 mg/kg
<b>III.</b>	<b>Water</b>			
<b>1.</b>	<b>Surface Water, Ground Water</b>	pH	IS 3025(Part 11)	2 to 14
		Colour	IS 3025 (Part 4)	5 Hazen to 50 Hazen
		Odour	IS 3025 (Part 5)	Qualitative (Agreeable/ Disagreeable)
		Turbidity	IS 3025 (Part 10)	1 NTU to 100 NTU
		TDS (Total Dissolved Solids)	IS 3025 (Part 16)	5 mg/L to 5000 mg/L
		Boron(B)	APHA 4500 B C	0.50 mg/L to 100 mg/L
		Total Hardness	IS 3025(Part 21)	5 mg/L to 1500 mg/L
		Calcium Hardness	IS 3025 (Part 40)	5 mg/L to 1000 mg/L
		Magnesium Hardness	IS 3025 (Part 46)	1.0 mg/L to 350 mg/L
		Chloride(Cl)	IS 3025 (Part 32 )	1 mg/L to 1000 mg/L
		Phenol	IS 3025 (Part 43)	0.5 mg/L to 20 mg/L
		Nitrate	IS 3025 (Part 34)	1.0 mg/L to 100 mg/L
		Total Alkalinity	IS 3025 (Part 23)	1.0 mg/L to 1500 mg/L
		Specific Conductivity	IS 3025 (Part 14)	1.0 µS/cm to 5000 µS/cm
		Sulphate	IS 3025 (Part 24)	1 mg/L to 100 mg/L
		Free Residual Chlorine (FRC)	IS 3025 (Part 26)	0.1 mg/L to 5 mg/L
		Fluoride	APHA (P-4500)	0.1 mg/L to 5 mg/L
		Ammonical Nitrogen	IS 3025 (Part 34)	1.0 mg/L to 100 mg/L

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		Manganese	APHA (P-3500 Mn B)	0.1 mg/L to 10 mg/L
		Phosphate	IS 3025 (Part 31)	1.0 mg/L to 200 mg/L
2.	Drinking Water	pH	IS 3025(Part 11)	2 to 14
		Colour	IS 3025 (Part 4)	5 Hazen to 50 Hazen
		Odour	IS 3025 (Part 5)	Qualitative (Agreeable/ Disagreeable)
		Turbidity	IS 3025 (Part 10)	1 NTU to 100 NTU
		TDS (Total Dissolved Solids)	IS 3025 (Part 16)	5 mg/L to 2000 mg/L
		Total Hardness	IS 3025(Part 21)	1 mg/L to 1000 mg/L
		Calcium Hardness	IS 3025 (Part 40)	1.0 mg/L to 750 mg/L
		Magnesium Hardness	IS 3025 (Part 46)	1.0 mg/L to 500 mg/L
		Chloride(Cl)	IS 3025 (Part 32 )	1 mg/L to 1000 mg/L
		Phenol	IS 3025 (Part 43)	0.5 mg/L to 20 mg/L
		Nitrate	IS 3025 (Part 34)	1.0 mg/L to 100 mg/L
		Total Alkalinity	IS 3025 (Part 23)	1.0 mg/L to 1500 mg/L
		Specific Conductivity	IS 3025 (Part 14)	2.0 µS/cm to 5000 µS/cm
		Sulphate	IS 3025 (Part 24)	1 mg/L to 80 mg/L
		Free Residual Chlorine (FRC)	IS 3025 (Part 26)	0.1 mg/L to 5 mg/L
		Fluoride	APHA (P-4500)	0.1 mg/L to 5 mg/L
		Ammonical Nitrogen	IS 3025 (Part 34)	1.0 mg/L to 50 mg/L
		Phosphate	IS 3025 (Part 31)	1.0 mg/L to 200 mg/L
<b>IV.</b>	<b>RESIDUES IN WATER</b>			
1.	Surface Water, Ground Water	Copper(Cu)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Nickel(Ni)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Cadmium (Cd)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Zinc (Zn)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Lead(Pb)	APHA (P-3111)	0.01 mg/L to 5 mg/L

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		Chromium (Total)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Iron	APHA (P-3111)	0.05 mg/L to 10 mg/L
		Sodium	APHA 3500 Na B	1 mg/L to 500 mg/L
		Potassium	APHA 3500 K	1 mg/L to 500 mg/L
		Hexavalant Chromium	APHA 3500 Cr B	0.20 mg/L to 5 mg/L
2.	Drinking Water	Iron	APHA (P-3111)	0.05 mg/L to 10 mg/L
		Manganese	APHA (P-3500 Mn B)	0.1 mg/L to 10 mg/L
		Copper(Cu)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Nickel(Ni)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Cadmium (Cd)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Zinc (Zn)	APHA (P-3111)	0.01 mg/L to 5 mg/L
		Lead(Pb)	APHA P-3111)	0.01 mg/L to 5 mg/L
		Chromium (Total)	APHA (P-3111)	0.01 mg/L to 5 mg/L

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	AT SITE			
I.	ATMOSPHERIC POLLUTION			
1.	Noise Monitoring	Ambient Noise	IS 9989	30 dB(A) to 120 dB(A)
		Source Noise	IS 4758	30 dB(A) to 130 dB(A)

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