

**Laboratory** Ankleshwar Research and Analytical Infrastructures Ltd. (ARAIL),  
Plot No. 1501, GIDC Estate, Ankleshwar , Bharuch, Gujarat

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

**Certificate Number** TC-7408

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**Validity** 09.06.2018 to 08.06.2020

**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.	<b>WATER</b>			
1.	Ground water/Surface Water / Potable water / Raw water/Domestic water/ Borewell water	pH	APHA(23 <sup>rd</sup> Edition) 4500 H <sup>+</sup> B: 2012 (Electrometric method)	2 to12
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002)	1 NTU to 190 NTU
		Total Dissolved Solids	IS 3025 (Part-16): 1984 (RA 2002)	20.0 mg/l to 1000 mg/l L
		Chloride	IS 3025 (Part 32): 1988 (RA 1999) (Argentometric Method)	20 mg/l to 1000 mg/l
		Colour	IS 3025 (Part 4): 1983 (RA 2002)	10 to 70 Co-Pt units
		Total Hardness	IS 3025 (Part 21): 1983 (RA 2002) (EDTA Method)	3 mg/l to 1000 mg/l
		Sulphate	APHA (23 <sup>rd</sup> Edition) 4500 SO <sub>4</sub> E :2012 (Turbidimetric)	5.0 mg/L to 1000 mg/L
		Phosphate	APHA (23 <sup>rd</sup> Edition) 4500 P C:2012	5 mg/L to 100 mg/L
		Total Alkalinity	IS 3025 (Part 23): 1986 (RA 2003)	5 mg/L to 500 mg/L
		COD	APHA(23 <sup>rd</sup> Edition) 5220 B:2012 (Open reflux method)	5 mg/L to 1000 mg/L
Iron	APHA (23 <sup>rd</sup> Edition) 3500 FeB:2012 (Phenanthroline) method	0.5 mg/L to 10 mg/L		

**Rini Narayan**  
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**N. Venkateswaran**  
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		Chromium (Hexavalent)	APHA(23 <sup>rd</sup> Edition) 3500 Cr B (Colorimetric method)	0.5 mg/L to 5 mg/L
		Conductivity	APHA(23 <sup>rd</sup> Edition) 2510 B	2 µmhos/cm.to 1500 µmhos/cm.
<b>II</b>	<b>ATMOSPHERIC POLLUTION</b>			
<b>1.</b>	<b>Ambient Air</b>	TSPM	IS 5182 (Part-4) 1999 ,(RA 2005)	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		PM <sub>10</sub>	IS 5182 (Part-23) 2006 (Cyclonic flow technique)	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		PM <sub>2.5</sub>	NAAQMS/36/2012-13	5 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
		SO <sub>2</sub>	IS 5182 (Part-2)2001	13 µg/m <sup>3</sup> to 1050 µg/m <sup>3</sup>
		NO <sub>2</sub>	IS 5182 (Part-6) 2006 (1 <sup>st</sup> revision colorimetric (NEDA) Method)	10 µg/m <sup>3</sup> to 750 µg/m <sup>3</sup>
<b>2.</b>	<b>Stack Emission</b>	NH <sub>3</sub>	NAAQMS/36/2012-13	7 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		PM	IS 11255(Part-1):1985 (RA 2003)	10 mg/Nm <sup>3</sup> to 5000 mg/Nm <sup>3</sup>
		SO <sub>2</sub>	IS 11255(Part-2):1985 (RA 2003)	5 mg/Nm <sup>3</sup> to 5000 mg/Nm <sup>3</sup>
		NO <sub>2</sub>	IS 11255(Part-7):2005	5 mg/Nm <sup>3</sup> to 5000 mg/Nm <sup>3</sup>
<b>III.</b>	<b>POLLUTION &amp; ENVIRONMENT</b>			
<b>1.</b>	<b>Waste Water</b>	pH	APHA(23 <sup>rd</sup> Edition) 4500 H <sup>+</sup> B: 2012 (Electrometric method)	2 to 12
		Turbidity	APHA (23 <sup>rd</sup> Edition) 2130 B :2012 (Nephelometric)	1 NTU to 1000NTU
		Total Dissolved Solids	APHA (23 <sup>rd</sup> Edition) 2540 C: 2012 (dried at 180° C) Gravimetric method	1000 g/L to 40000 g/L

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		Chloride	APHA (23 <sup>rd</sup> Edition) 4500 Cl B:2012	1000 mg/L to 20000 mg/L
		Colour	APHA(23 <sup>rd</sup> Edition) 2120 B :2012	10 to 70 Pt-Co Unit
		Total Hardness	APHA (23 <sup>rd</sup> Edition) 2340 C:2012(EDTA Titrimetric method)	3 mg/L to 3000 mg/L
		Sulphate	APHA (23 <sup>rd</sup> Edition) 4500 SO <sub>4</sub> D:2012(Gravimetric method)	1000 mg/L to 20000 mg/L
		Phosphate	APHA(23 <sup>rd</sup> Edition) 4500 P C:2012	5 mg/L to 100 mg/L
		Total Alkalinity	APHA (23 <sup>rd</sup> Edition) 2320 B:2012 (Titration method)	5 mg/L to 500 mg/L
		COD	APHA(23 <sup>rd</sup> Edition) 5220 B:2012 (Open reflux method)	1000 mg/L to 10000 mg/L
		Iron	APHA (23 <sup>rd</sup> Edition) 3500 FeB:2012 (Phenanthroline) method	0.5 mg/L to 10 mg/L
		Chromium (Hexavalent)	APHA(23 <sup>rd</sup> Edition) 3500 Cr BColorimetric method	0.5 mg/L to 10 mg/L
		Conductivity	APHA (23 <sup>rd</sup> Edition) 2510 B	1000 µmhos/cm.to 9999 µmhos/cm.

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