

Laboratory	Vidyabharti Trust Institute of Technology & Research Centre, Umrah, TA – Bardoli, Dist. Surat, Gujarat		
Accreditation Standard	ISO/IEC 17025: 2005		
Discipline	Chemical Testing	Issue Date	24.10.2014
Certificate Number	T-3167	Valid Until	23.10.2016
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I. POLLUTION & ENVIRONMENT				
1.	Solid Waste, Hazardous Solid Wastes, Toxic Waste	Loss on drying	ASTM E 1868 : 10 - 1997 (RA 2010)	0.02 % to 99 %
		Loss on ignition	ASTM 7348 : 13 - 2007 (RA 2013)	0.02 % to 99 %
		Calorific value	ASTM D 2015 : 96	50 cal/gm to 15000 cal/gm
		Proximate analysis: Moisture	ASTM D 5142 : 02 a - 1990 (RA 2003)	0.1 % to 50 %
		Proximate analysis: Volatile Matter	ASTM D 5142 : 02 a - 1990 (RA 2003)	0.1 % to 95 %
		Proximate analysis: Fixed Carbon	ASTM D 5142 : 02 a - 1990 (RA 2003)	0.1 % to 95 %
		Proximate analysis: Ash	ASTM D 5142 : 02 a - 1 (RA 2003)	0.1 % to 95 %
2.	Sewage and Effluent Waste water, Sewage water	pH	IS 3025 (Part 11): 1983 (RA 2002)	2 to 12
		Temperature	IS 3025 (Part 09): 1984 (RA 2002)	5°C to 50 °C
		Colour	IS 3025 (Part 04): 1983 (RA 2012)	1 Hazen unit to 1000 Hazen unit
		Total Solids	IS 3025 (Part 15): 1984 (RA 2003)	2 mg/L to 50000 mg/L

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	Sewage and Effluent Waste water, Sewage water	Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	2 mg/L to 50000 mg/L
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 1996)	5 mg/L to 5000 mg/L
		Oil and Grease	IS 3025 (Part 39): 1991 (RA 2003)	5 mg/L to 100 mg/L
		Dissolved Oxygen (DO)	IS 3025 (Part 38): 1989 (RA 2003)	1 mg/L to 12 mg/L
		Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993 (RA 2003)	1 mg/L to 50000 mg/L
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006	5 mg/L to 100000 mg/L
		Ammonical Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	0.1 mg/L to 20000 mg/L
		Nitrite Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	1 mg/L to 100 mg/L
		Nitrate Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	0.1 mg/L to 50 mg/L
		Nickel (Ni)	IS 3025 (Part 54): 2003	1 mg/L to 1500 mg/L
		Lead (Pb)	IS 3025 (Part 47): 1994 (RA 2009)	0.5 mg/L to 1500 mg/L
		Arsenic (As)	IS 3025 (Part 37): 1988 (RA 2003)	0.05 mg/L to 20 mg/L
		Mercury (Hg)	IS 3025 (Part 48): 1994 (RA 2003)	0.02 mg/L to 50 mg/L

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II. AIR, GASES & ATMOSPHERE				
1.	Ambient air monitoring	Suspended Particulate Matter (SPM)	IS 5182 (Part 04): 1999 (RA 2010)	5 µg/m ³ to 10000 µg/m ³
		Respirable Suspended Particulate Matter (RSPM)	IS 5182 (Part 23): 2006 (RA 2012)	5 µg/m ³ to 10000 µg/m ³
		Sulphur Dioxide (SO _x)	IS 5182 (Part 02): 2001 (RA 2012)	3 µg/m ³ to 1500 µg/m ³
		Oxides of Nitrogen (NO _x)	IS 5182 (Part 06): 2006	6 µg/m ³ to 750 µg/m ³
		PM _{2.5}	VBTT/ENGG/EAC/SOP/11/36 Based on CPCB Guideline (2012) Issue No. 1.1 Issue Date 03 rd Jan, 2013	5 µg/m ³ to 250 µg/m ³
2.	Stack emission monitoring	Particulate Matter (PM)	IS 11255 (Part 1): 1985 (RA 2012)	5 mg/Nm ³ to 10000 mg/Nm ³
		Sulphur Dioxide (SO _x)	IS 11255 (Part 2): 1985 (RA 2009)	1 mg/Nm ³ to 50000 mg/Nm ³
		Oxides of Nitrogen (NO _x)	IS 11255 (Part 7): 2005 (RA 2012)	2 mg/Nm ³ to 1000 mg/Nm ³

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III. WATER				
1.	Bore water, Potable and domestic water, Surface water, Ground water, Water from distilled & Demineralised water, Water from cooling, Water for Construction	pH	IS 3025 (Part 11): 1983 (RA 2002)	2 to 12
		Temperature	IS 3025 (Part 09): 1984 (RA 2002)	5 °C to 50 °C
		Colour	IS 3025 (Part 04): 1983 (RA 2012)	1 Hazen Unit to 500 Hazen Unit
		Total Hardness	IS 3025 (Part 21): 2009	5 mg/L to 5000 mg/L
		Total Solids	IS 3025 (Part 15): 1984 (RA 2003)	2 mg/L to 5000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	2 mg/L to 5000 mg/L
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 1996)	2 mg/L to 5000 mg/L
		Oil and Grease	IS 3025 (Part 39): 1991 (RA 2003)	5 mg/L to 100 mg/L
		Dissolved Oxygen (DO)	IS 3025 (Part 38): 1989 (RA 2003)	1 mg/L to 12 mg/L
		Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993 (RA 2003)	1 mg/L to 750 mg/L
		Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2006	5 mg/L to 1200 mg/L
		Ammonical Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	0.1 mg/L to 500 mg/L
		Nitrite Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	1 mg/L to 100 mg/L

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	Bore water, Potable and domestic water, Surface water, Ground water, Water from distilled & Demineralised water, Water from cooling, Water for Construction	Nitrate Nitrogen	IS 3025 (Part 34): 1988 (RA 2009)	0.1 mg/L to 50 mg/L
		Nickel (Ni)	IS 3025 (Part 54): 2003	1 mg/L to 1000 mg/L
		Lead (Pb)	IS 3025 (Part 47): 1994 (RA 2009)	0.5 mg/L to 1000 mg/L
		Arsenic (As)	IS 3025 (Part 37): 1988 (RA 2003)	0.05 mg/L to 10 mg/L
		Mercury (Hg)	IS 3025 (Part 48): 1994 (RA 2003)	0.02 mg/L to 50 mg/L

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