

<b>Laboratory</b>	<b>Health Safety and Environment Laboratory, University of Petroleum and Energy Studies, Energy Acres, PO Bidholi (Via Premnagar), Dehradun, Uttarakhand</b>		
<b>Accreditation Standard</b>	<b>ISO/IEC 17025: 2005</b>		
<b>Discipline</b>	<b>Chemical Testing</b>	<b>Issue Date</b>	<b>13.01.2015</b>
<b>Certificate Number</b>	<b>T-3263</b>	<b>Valid Until</b>	<b>12.01.2017</b>
<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>1 of 3</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
<b>I.</b>	<b>WATER</b>			
<b>1.</b>	<b>Waste Water</b>	pH	IS 3025 (Part 11): 1983 (RA 2002)	1 to 13.9
		Oil and Grease	IS 3025 (Part 39): 1991 (RA 2003)	2 mg/L to 100 mg/L
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 2006)	5 mg/L to 10000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	5 mg/L to 100000 mg/L
		Total Solids	IS 3025 (Part 15): 1984 (RA 2009)	10 mg/L to 100000 mg/L
		Conductivity	IS 3025 (Part 14): 1984 (RA 2006)	0.1 µS to 100 mS
		Chloride	IS 3025 (Part 32): 1988 (RA 2003)	5 mg/L to 1000 mg/L
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) Nephelometric Method	2 NTU to 100 NTU
		Oxygen Dissolved (DO)	IS 3025 (Part 38): 1989 (RA 1999) Winkler Method with Azide Modification	1 mg/L to 10 mg/L
		Sulphate as SO <sub>4</sub>	APHA 22 <sup>nd</sup> Edition 2012 4500 E IS 3025 (Part 24): 1986 (RA 1998) Turbidity Method	1 mg/L to 500 mg/L
		Nitrate as NO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2012 4500 B	0.5 mg/L to 100 mg/L
<b>2.</b>	<b>Surface Water, Drinking Water &amp; Ground Water</b>	pH	IS 3025 (Part 11): 1983 (RA 2002)	1 to 14
		Total Suspended Solids	IS 3025 (Part 17): 1984 (RA 2006)	5 mg/L to 1000 mg/L

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<b>Last Amended on</b>	<b>-</b>	<b>Page</b>	<b>2 of 3</b>

<b>S.No.</b>	<b>Product / Material of Test</b>	<b>Specific Test Performed</b>	<b>Test Method Specification against which tests are performed</b>	<b>Range of Testing / Limits of Detection</b>
	<b>Surface Water, Drinking Water &amp; Ground Water</b>	Total Dissolved Solids	IS 3025 (Part 16): 1984 (RA 2006)	5 mg/L to 1000 mg/L
		Total Solids	IS 3025 (Part 15): 1984 (RA 2009)	10 mg/L to 10000 mg/L
		Chloride	IS 3025 (Part 32): 1988 (RA 2003)	5 mg/L to 1000 mg/L
		Total Hardness	IS 3025 (Part 21): 1983 (RA 2002)	5 mg/L to 1000 mg/L
		Calcium as Ca	IS 3025 (Part 40): 1991 (RA 2003)	5 mg/L to 400 mg/L
		Magnesium as Mg	IS 3025 (Part 46): 1994 (RA 2003) By Calculation	5 mg/L to 400 mg/L
		Alkalinity	IS 3025 (Part 23): 1986 (RA 2009)	5 mg/L to 800 mg/L
		Conductivity	IS 3025 (Part 14): 1984 (RA 2006)	0.1 µS to 100 mS
		Turbidity	IS 3025 (Part 10): 1984 (RA 2002) Nephelometric Method	2 NTU to 100 NTU
		Nitrate as NO <sub>3</sub>	APHA 22 <sup>nd</sup> Edition 2012 4500 B	0.5 mg/L to 100 mg/L
		Sulphate as SO <sub>4</sub>	IS 3025 (Part 24): 1986 (RA 1998) Turbidity Method	1 mg/L to 500 mg/L
		Iron as Fe	IS 3025 (Part 53): 2003 Phenanthroline Method	0.1 mg/L to 10 mg/L
		Fluoride as F	APHA 22 <sup>nd</sup> Edition 2012 4500 D SPANDS Method	0.1 mg/L to 20 mg/L

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

**Discipline** Chemical Testing **Issue Date** 13.01.2015

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**Last Amended on** - **Page** 3 of 3

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Surface Water, Drinking Water & Ground Water	Oxygen Dissolved (DO)	IS 3025 (Part 38): 1989 (RA 1999) Winkler Method with Azide Modification	1 mg/L to 10 mg/L
		Temperature	IS 3025 (Part 9): 1984 (RA 2002)	1 ° C to 100 ° C
<b>II. AIR, GASES &amp; ATMOSPHERE</b>				
<b>1.</b>	<b>Ambient Air</b>	Respirable Particulate Matter (RPM) PM10	IS 5182 (Part 23): 2004	10 µg/m <sup>3</sup> to 900 µg/m <sup>3</sup>
		Sulphur Dioxide	IS 5182 (Part 2): 2001	3.0 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		Oxides of Nitrogen	IS 5182 (Part 6): 1975	6 µg/m <sup>3</sup> to 100 µg/m <sup>3</sup>
		PM- 2.5	Lab SOP UPES-A1-PM2.5 No.1 Dated 1.6.14	1 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>

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