

**Laboratory** Narayana Laboratory and Consultancy, Jungle Hakim No.-1, Jail Bypass Road, Padari Bazaar, Gorakhpur, Uttar Pradesh

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

**Certificate Number** TC-6980

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**Validity** 05.03.2018 to 04.03.2020

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.	WATER			
1.	Drinking Water, Package Drinking Water, Potable Water	pH Value	IS 3025(Part-11): 1983 (RA 2002)	1 to 14
		Conductivity	IS 3025(Part-14): 1992	5.0 µmho/cm to 20000 µmho/cm
		Temperature	IS 3025(Part-9): 2002	1 °C to 50°C
		Total Dissolved Solids (Filterable residue)	IS 3025(Part-16):1984 (RA 2003)	5 mg/l to 5000 mg/l
		Total Suspended Solids, (Non-filterable residue)	IS 3025(Part-17):2006	5 mg/l to 500 mg/l
		Total Hardness as CaCO <sub>3</sub>	IS 3025(Part-21): 2009	2 mg/l to 1000 mg/l
		Acidity as CaCO <sub>3</sub>	IS 3025(Part-22): 2003	0.4 mg/l to 500 mg/l
		Alkalinity as CaCO <sub>3</sub>	IS 3025(Part-23):1986	2 mg/l to 500 mg/l
		Chlorine as Cl	IS 3025(Part-26): 1988 (RA 2007)	5 mg/l to 1000 mg/l
		Dissolved Oxygen (D.O)	IS 3025(Part-38)	0.1 mg/l to 10 mg/l
		Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part-24): 1986 (RA 2003)	2 mg/l to 200 mg/l
		Nitrate as NO <sub>3</sub> <sup>-</sup>	IS 3025(Part-34): 1988 (RA 2003)	0.5 mg/l to 100 mg/l
		Ammonia (NH <sub>3</sub> -N)	IS 3025(Part-34): 1988 (RA 2003)	0.5 mg/l to 30 mg/l
	Iron as Fe	IS 3025(Part-34): 1988 (RA 2003)	0.05 mg/l to 10 mg/l	
	Sodium as Na	IS 3025(Part-45): 1993	0 mg/l to 500 mg/l	
	Potassium as K	IS 3025(Part- 45):1993	0 mg/l to 500 mg/l	
	Calcium as Ca	IS 3025(Part- 40): 1991 (RA 2003)	2 mg/l to 1000 mg/l	

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		Magnesium as Mg	IS 3025(Part- 46):1996 (RA 2003)	1 mg/l to 1000 mg/l
		Copper	IS 3025(Part- 42):1992 (RA 2003)	0.5 mg/l to 5 mg/l
		Chromium (Hexavalent)	IS 3025(Part-52):1983 (RA 2007)	0.05 mg/l to 10 mg/l
<b>2.</b>	<b>Ground Water, Surface Water</b>	Color	IS 3025(Part- 4):	5 Hazen to 50 Hazen
		pH Value	IS 3025(Part-11): 1983 (RA 2002)	1 to 14
		Conductivity	IS 3025(Part-14): 1992	5.0 µmho/cm to 20000 µmho/cm
		Temperature	IS 3025(Part-9): 2002	1 °C to 100°C
		Turbidity	IS 3025(Part-10): (RA 2002)	0.1 NTU to 100 NTU
		Total Dissolved Solids (Filterable residue)	IS 3025(Part-16):1984 (RA 2003)	5 mg/l to 1000 mg/l
		Total Suspended Solids, (Non-filterable residue)	IS 3025(Part-17):2006	1 mg/l to 100 mg/l
		Total Hardness as CaCO <sub>3</sub>	IS 3025(Part-21): 2009	2 mg/l to 1000 mg/l
		Acidity as CaCO <sub>3</sub>	IS 3025(Part-22): 2003	0 mg/l to 500 mg/l
		Alkalinity as CaCO <sub>3</sub>	IS 3025(Part-23):1986	2 mg/l to 500 mg/l
		Chlorine as Cl	IS 3025(Part-26): 1988 (RA 2007)	0.4 mg/l to 1000 mg/l
		Dissolved Oxygen (D.O)	IS 3025(Part-38)	0.1 mg/l to 10 mg/l
		Sulphate as SO <sub>4</sub> <sup>2-</sup>	IS 3025(Part-24): 1986 (RA 2003)	2 mg/l to 200 mg/l
		Nitrate as NO <sub>3</sub> <sup>-</sup>	IS 3025(Part-34): 1988 (RA 2003)	0.5 mg/l to 100 mg/l
		Ammonia (NH <sub>3</sub> -N)	IS 3025(Part-34): 1988 (RA 2003)	0.5 mg/l to 30 mg/l
		Iron as Fe	IS 3025(Part-34): 1988 (RA 2003)	0.1 mg/l to 10 mg/l
		Sodium as Na	IS 3025(Part-45): 1993	10 mg/l to 500 mg/l
		Potassium as K	IS 3025(Part- 45):1993	1 mg/l to 500 mg/l

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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
		Calcium as Ca	IS 3025(Part- 40): 1991 (RA 2003)	2 mg/l to 1000 mg/l
		Magnesium as Mg	IS 3025(Part- 46):1996 (RA 2003)	1 mg/l to 1000 mg/l
		Copper	IS 3025(Part- 42):1992 (RA 2003)	0.5 mg/l to 5 mg/l
		Chromium (Hexavalent)	IS 3025(Part-52):1983 (RA 2007)	0.05 mg/l to 10 mg/l
		Biochemical Oxygen Demand	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 50000 mg/l
		Chemical Oxygen Demand	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 10000 mg/l
		Oil & Grease	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 500 mg/l
<b>II.</b>	<b>POLLUTION AND ENVIRONMENT</b>			
<b>1.</b>	<b>Waste Water / Effluent</b>	pH Value	IS 3025 (Part-11) 1983 (RA 2006)	1 to 14
		Color	IS 3025 (Part-11) 1983 (RA 2006)	0 to 50 Hazen
		Odour	IS 3025 (Part-11) 1983 (RA 2006)	Qualitative
		Biochemical Oxygen Demand (BOD 3 days @ 27°C)	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 50000 mg/l
		Chemical Oxygen Demand	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 10000 mg/l
		Oil & Grease	IS 3025 (Part-11) 1983 (RA 2006)	5 mg/l to 500 mg/l
		Total Dissolved Solids (Filterable residue)	IS 3025(Part-16):1984 (RA 2003)	5 mg/l to 5000 mg/l
		Total Suspended Solids,	IS 3025(Part-17):2006	10 mg/l to 500 mg/l

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		(Non-filterable residue)		
2.	Soil	pH Value	IS : 2720 (P-17):1987 (RA 2002)	2 to 12
		Conductivity	IS : 14767-2000, (RA 2011)	1 mS/cm to 20 mS/cm
<b>III. ATMOSPHERIC POLLUTION</b>				
1.	Ambient Air	Particulate Matter (PM10)	IS 5182 (Part 23): 2006	15 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Particulate Matter (PM2.5)	NLC/LAB/STP/AIR/03 Issue no. 1, Issue Date 07.11.2016	15 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2): 2001	5 µg/m <sup>3</sup> to 300 µg/m <sup>3</sup>
		Oxides of Nitrogen (NO <sub>x</sub> )	IS 5182 (Part 6): 2006	5 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
2.	Work Zone	Ozone	IS 5182 (Part 9): 1974	5 µg/m <sup>3</sup> to 250 µg/m <sup>3</sup>
		Particulate Matter	IS 5182 (Part 4): 1999 (RA 2005)	5 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Sulphur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2): 2001	5 µg/m <sup>3</sup> to 300 µg/m <sup>3</sup>
		Oxides of Nitrogen (NO <sub>x</sub> )	IS 5182 (Part 6): 2006	5 µg/m <sup>3</sup> to 500 µg/m <sup>3</sup>
		Ozone	IS 5182 (Part 9): 1974	5 µg/m <sup>3</sup> to 250 µg/m <sup>3</sup>
3.	Noise Monitoring	Carbon monoxide	By Electrochemical Sensor	0.1 mg/l to 200 mg/l
		L <sub>max</sub>	IS: 9876:1981	35 dB(A) to 130 dB(A)
		L <sub>min</sub>	IS: 9876:1981	35 dB(A) to 130 dB(A)
		Leq	IS: 9876:1981	35 dB(A) to 130 dB(A)
		L <sub>10</sub>	IS: 9876:1981	35 dB(A) to 130 dB(A)
		L <sub>50</sub>	IS: 9876:1981	35 dB(A) to 130 dB(A)
		L <sub>90</sub>	IS: 9876:1981	35 dB(A) to 130 dB(A)

**NOTE:** The Laboratory has demonstrated competence for the stated scope for **WATER**. This however **does not fully cover** the specification requirements of **BIS for the Packaged Drinking Water as per IS:14543 and the Packaged Natural Mineral Water IS:13428.**