

Laboratory **SGS India Private Limited, 152, New Baradwari Layout Extension, Sakchi, Jamshedpur, Jharkhand**

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

Certificate Number **TC-6721**

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Validity **20.10.2018 to 19.10.2020**

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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**

I.	WATER			
1.	Ground Water (Raw Water, Bore Well Water, Tube Well Water)	Temperature	APHA 23rd EDN:2017 (2550 B)	10 °C to 50 °C
		pH	IS 3025 Part 11:1983 (RA 2017)	4.0 to 12.0
		Electrical Conductivity	IS 3025 Part 14:2013/APHA 23rd EDN:2017-2510 B	5 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15):1984 (RA 2014)/APHA 23rd EDN:2017. (Method No.-2540B)	10 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 Part 16:1984 (RA 2017)	10 mg/l to 2500 mg/l
		Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edn. (2310B)/ IS 3025 (Part 22):1986 (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity As CaCO <sub>3</sub>	IS 3025 Part 23-1986 (RA 2014)/APHA 23rd EDN:2017 (2320 B)	5 mg/l to 500 mg/l
		Chloride as Cl <sup>-</sup>	IS 3025 Part 32-1988 (RA 2014)/APHA 23rd EDN:2017 (4500-Cl B)	2 mg/l to 1000 mg/l
		Total Suspended Solids	IS 3025:Part 17 1984 (RA 2017)/APHA 23rd EDN:2017 2540 D	2.0 mg/l to 1000 mg/l
		Sulphate as SO <sub>4</sub> <sup>-</sup>	IS 3025 Part 24 1986 (RA 2014)/ APHA 23rd EDN:2017 (4500-SO <sub>4</sub> E)	2 mg/l to 100 mg/l
		Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21:2009 (RA 2014)/APHA 23rd EDN:2017-2340 C	1.0 mg/l to 1000 mg/l

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		Phosphate as P	IS 3025:Part 31 1988 (RA 2014)/APHA 23rd EDN:2017 4500 P-D	0.05 mg/l to 20 mg/l
		Nitrate as NO <sup>3</sup>	APHA 23rd EDN:2017 (4500-NO3-B/E)/IS 3025:Part 34 1988 (RA 2014) (Cadmium Reduction)	0.1 mg/l to 40 mg/l
		Biological Oxygen Demand (5 Days)	APHA 23 <sup>rd</sup> Edn:2017(5210-B)	2 mg/l to 500 mg/l
		Biological Oxygen Demand (3 Days)	IS 3025 Part 44:1993 (RA 2014)	2.0 mg/l to 500 mg/l
		Chemical Oxygen Demand	APHA 23 <sup>rd</sup> Edn:2017(5220-B) SO-IN-EHS-JMD-TE-008 Issue No. 1, Issue Date 24.11.2017	5.0 mg/l to 1000 mg/l
		Nitrite as NO <sup>2</sup>	APHA 23rd EDN:2017 (4500-NO2 B)/IS 3025:1988 Part 34 (colorimetric) (RA 2014)	0.02 mg/l to 10 mg/l
		Calcium as Ca	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium as Mg	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Iron as Fe	IS 3025 Part 53-2003; (RA 2014)	0.02 mg/l to 50 mg/l
		Fluoride as F <sup>-</sup>	IS 3025 (Part 60):2008 (RA 2013)/APHA 23rd EDN:2017 (4500-F-D/C)	0.1 mg/l to 10 mg/l
		Color	IS 3025 (Part 4):1983; (RA 2017)	5 HZ to 100 HZ
		Calcium Hardness (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 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
		Magnesium Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Turbidity	IS 3025 Part 10:1984 (RA 2017)	0.5 NTU to 100 NTU
		Cyanide as CN <sup>-</sup>	APHA 23rd EDN:2017 (4500-CN-C,E & F)	0.02 mg/l to 50.0 mg/l
2.	<b>Drinking Water</b>	Temperature	APHA 23rd EDN:2017 (2550B)	10 °C to 50 °C
		pH	IS 3025 Part 11:1983 (RA 2017)	4.0 to 12.0
		Electrical Conductivity	IS 3025 Part 14:2013/APHA 23rd EDN:2017-2510 B	5 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15):1984 (Reaff. 2014)/ APHA 23rd EDN:2017. (Method No.-2540B)	10 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 Part 16:1984 (RA 2017)	10 mg/l to 1500 mg/l
		Acidity (As CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> Edn. (2310B)/ IS 3025 (Part 22):1986 (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity (As CaCO <sub>3</sub> )	IS 3025 Part 23-1986 (RA 2014)/APHA 23rd EDN:2017 (2320 B)	5 mg/l to 500 mg/l
		Chloride as Cl <sup>-</sup>	IS 3025 Part 32-1988 (RA 2006)/APHA 23rd EDN:2017 (4500-Cl B)	2 mg/l to 1000 mg/l
		Nitrite as NO <sup>2-</sup>	APHA 23rd EDN:2017 (4500-NO2 B)/IS 3025:1988 Part 34 (colorimetric) (RA 2009)	0.02 mg/l to 10 mg/l
		Sulphate as SO <sub>4</sub> <sup>-</sup>	IS 3025 Part 24 1986; (RA 2006)/APHA 23rd EDN:2017 (4500-SO4 E)	2 mg/l to 100 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
		Color	IS 3025 (Part 4):1983; (RA 2012)	5 HZ to 100 HZ
		Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21:1983; (RA 2009)/APHA 23rd EDN:2017-2340 C	1.0 mg/l to 1000 mg/l
		Phosphate as P	IS 3025:Part 31 1988 (RA 2009)/APHA 23rd EDN:2017 4500 P-D	0.05 mg/l to 20 mg/l
		Nitrate as NO <sup>3</sup>	APHA 23rd EDN:2017 (4500-NO3-B/E)/ IS 3025:Part 34 1988 (RA 2014) (Cadmium Reduction)	0.1 mg/l to 40 mg/l
		Calcium as Ca	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025:Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium as Mg	IS 3025 Part 46-1994; (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Iron as Fe	IS 3025 Part 53-2003; (RA 2014)	0.02 mg/l to 50 mg/l
		Fluoride as F <sup>-</sup>	IS 3025 (Part-60):2008 (RA 2013)/APHA 23rd EDN:2017 (4500-F-D/C)	0.1 mg/l to 10 mg/l
		Calcium Hardness (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2009)	1.0 mg/l to 500 mg/l
		Magnesium Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 46-1994 (RA 2009)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Turbidity	IS 3025 Part 10:1984 (RA 2006)	0.5 NTU to 100 NTU
		Cyanide as CN <sup>-</sup>	APHA 23rd EDN:2017 (4500-CN-C,E & F)	0.02 mg/l to 0.5 mg/l

**Ruchi Guntuku**  
Convenor

**Sunita Rawat**  
Program Manager

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3.	Industrial Water (Treated Water, Process Water, DM Water)	Temperature	APHA 23rd EDN:2017 (2550B)	10 °C to 50 °C
		pH	IS 3025 Part 11:1983 (RA 2017)	4.0 to 12.0
		Electrical Conductivity	IS 3025 Part 14:2013/ APHA 23rd EDN:2017-2510 B	5 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15):1984 (RA 2014)/APHA 23rd EDN:2017. (Method No.-2540B)	10 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 Part 16:1984 (RA 2017)	10 mg/l to 2500 mg/l
		Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edn. (2310B)/ IS 3025 (Part 22) (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity (As CaCO <sub>3</sub> )	IS 3025 Pat 23-1986 (RA 2014)/APHA 23rd EDN:2017 (2320 B)	5 mg/l to 500 mg/l
		Chloride as Cl <sup>-</sup>	IS 3025 Part 32-1988 (RA 2017)/APHA 23rd EDN:2017 (4500-Cl B)	2 mg/l to 1000 mg/l
		Total Suspended Solids	IS 3025:Part 17 1984 (RA 2017)/APHA 23rd EDN:2017 2540 D	2.0 mg/l to 1000 mg/l
		Sulphate as SO <sub>4</sub> <sup>-</sup>	IS 3025 Part 24 1986 (RA 2014)/ APHA 23rd EDN:2017 (4500-SO <sub>4</sub> E)	2 mg/l to 100 mg/l
		Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21:2009 (RA 2014)/APHA 23rd EDN:2017-2340 C	1.0 mg/l to 1000 mg/l
		Phosphate as P	IS 3025:Part 31 1988 (RA 2014)/APHA 23rd EDN:2017 4500 P-D	0.05 mg/l to 20 mg/l
		Nitrate as NO <sub>3</sub> <sup>-</sup>	APHA 23rd EDN:2017:(4500-NO <sub>3</sub> -B/E)/IS 3025 (Part 34):	0.1 mg/l to 40 mg/l

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			1988 (RA 2014) (Cadmium Reduction)	
		Biological Oxygen Demand (5 Days)	APHA 23 <sup>rd</sup> Edn:2017(5210-B)	2 mg/l to 500 mg/l
		Biological Oxygen Demand (3 Days)	IS 3025 Part 44:1993 (RA 2014)	2.0 mg/l to 500 mg/l
		Chemical Oxygen Demand	APHA 23 <sup>rd</sup> Edn:2017(5220-B) SO-IN-EHS-JMD-TE-008 Issue No. 1, Issue Date 24.11.2017	5.0 mg/l to 1000 mg/l
		Nitrite as NO <sup>2</sup>	APHA 23 <sup>rd</sup> EDN:2017 (4500-NO2 B)/IS 3025:1988 Part 34 (RA 2014) (colorimetric)	0.02 mg/l to 10 mg/l
		Calcium as Ca	APHA 23 <sup>rd</sup> EDN:2017 (3500-Ca B)/ IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium as Mg	IS 3025 Part 46-1994 (RA 2014)/APHA 23 <sup>rd</sup> EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Iron as Fe	IS 3025 Part 53-2003; (RA 2014)	0.02 mg/l to 50 mg/l
		Fluoride as F <sup>-</sup>	IS 3025 (Part-60):2008 (RA 2013)/APHA 23 <sup>rd</sup> EDN:2017:2012 (4500-F-D/C)	0.1 mg/l to 10 mg/l
		Color	IS 3025 (Part 4):1983; (RA 2017)	5 HZ to 100 HZ
		Calcium Hardness (as CaCO <sub>3</sub> )	APHA 23 <sup>rd</sup> EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 46-1994 (RA 2014)/ APHA 23 <sup>rd</sup> EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l

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		Turbidity	IS 3025 Part 10:1984 (RA 2017)	0.5 NTU to 100 NTU
		Cyanide as CN <sup>-</sup>	APHA 23rd EDN:2017 (4500-CN-C, E & F)	0.02 mg/l to 50.0 mg/l
4.	Swimming Pool Water	Temperature	APHA 23rd EDN:2017. (2550B)	10 °C to 50 °C
		pH	IS 3025 Part 11:1983 (RA 2017)	4.0 to 12.0
		Electrical Conductivity	IS 3025 Part 14:2013/ APHA 23rd EDN:2017-2510 B	5 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15):1984 (RA 2014)/APHA 23rd EDN:2017 (Method No.-2540B)	10 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 Part 16:1984 (RA 2017)	10 mg/l to 2500 mg/l
		Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edn. (2310B)/ IS 3025 (Part 22):1986 (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity (As CaCO <sub>3</sub> )	IS 3025 Part 23-1986 (RA 2014)/APHA 23rd EDN:2017 (2320 B)	5 mg/l to 500 mg/l
		Chloride as Cl <sup>-</sup>	IS 3025 Part 32-1988 (RA 2014)/APHA 23rd EDN:2017 (4500-Cl B)	2 mg/l to 1000 mg/l
		Total Suspended Solids	IS 3025:Part 17 1984 (RA 2014)/APHA 23rd EDN:2017 2540 D	2.0 mg/l to 1000 mg/l
		Sulphate as SO <sub>4</sub> <sup>-</sup>	IS 3025 Part 24 1986 (RA 2014)/ APHA 23rd EDN:2017 (4500-SO <sub>4</sub> E)	2 mg/l to 100 mg/l
		Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21:2009 (RA 2014)/APHA 23rd EDN:2017-2340 C	1.0 mg/l to 1000 mg/l

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		Phosphate as P	IS 3025:Part 31 1988 (RA 2014)/APHA 23rd EDN:2017 4500 P-D	0.05 mg/l to 20 mg/l
		Nitrate as NO <sup>3</sup>	APHA 23rd EDN:2017:(4500-NO3-B/E)/IS 3025:Part 34 (cadmium reduction) 1988 (RA 2014)	0.1 mg/l to 40 mg/l
		Biological Oxygen Demand (5 Days)	APHA 22 Ed-2012(5210-B)	2 mg/l to 500 mg/l
		Biological Oxygen Demand (3 Days)	IS 3025 Part 44:1993 (RA 2014)	2.0 mg/l to 500 mg/l
		Chemical Oxygen Demand	APHA 23 <sup>rd</sup> Edn:2017(5220-B) SO-IN-EHS-JMD-TE-008 Issue No. 1, Issue Date 24.11.2017	5.0 mg/l to 1000 mg/l
		Nitrite as NO <sup>2</sup>	APHA 23rd EDN:2017 (4500-NO2 B)/IS 3025:1988 Part 34 (RA 2014) (colorimetric)	0.02 mg/l to 10 mg/l
		Calcium as Ca	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Iron as Fe	IS 3025 Part 53-2003; (RA 2014)	0.02 mg/l to 50 mg/l
		Fluoride as F <sup>-</sup>	IS 3025 (Part 60):2008 (RA 2013)/APHA 23rd EDN:2017:2012 (4500-F-D/C)	0.1 mg/l to 10 mg/l
		Color	IS 3025 (Part 4):1983; (RA 2017)	5 HZ to 100 HZ
		Calcium Hardness (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (3500-Ca B)/ IS 3025:Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l

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		Magnesium as Mg	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Magnesium Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Turbidity	IS 3025 Part 10:1984 (RA 2017)	0.5 NTU to 100 NTU
		Cyanide as CN	APHA 23rd EDN:2017 (4500-CN-C, E & F)	0.02 mg/l to 50.0 mg/l
5.	<b>Surface Water</b>	Temperature	APHA 23rd EDN:2017 (2550B)	10 °C to 50 °C
		pH	IS 3025 Part 11:1983 (RA 2017)	4.0 to 12.0
		Electrical Conductivity	IS 3025 Part 14:2013/APHA 23rd EDN:2017-2510 B	5 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15):1984 (RA 2014)/ APHA 23rd EDN:2017 (Method No.-2540B)	10 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025 Part 16:1984 (RA 2017)	10 mg/l to 2500 mg/l
		Acidity as CaCO <sub>3</sub>	APHA 23 <sup>rd</sup> Edn. (2310B)/ IS 3025 (Part 22):1986 (RA 2014)	5 mg/l to 500 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	IS 3025 Part 23-1986 (RA 2014)/APHA 23rd EDN:2017 (2320 B)	5 mg/l to 500 mg/l
		Chloride as Cl	IS 3025 Part 32-1988 (RA 2014)/APHA 23rd EDN:2017 (4500-Cl B)	2 mg/l to 1000 mg/l
		Total Suspended Solids	IS 3025:Part 17 1984 (RA 2017)/APHA 23rd EDN:2017 2540 D	2.0 mg/l to 1000 mg/l

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		Sulphate as SO <sub>4</sub> <sup>-</sup>	IS 3025 Part 24 1986 (RA 2014)/ APHA 23rd EDN:2017 (4500-SO <sub>4</sub> E)	2 mg/l to 100 mg/l
		Total Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 21:2009 (RA 2014)/APHA 23rd EDN:2017-2340 C	1.0 mg/l to 1000 mg/l
		Phosphate as P	IS 3025:Part 31 1988 (RA 2014)/APHA 23rd EDN:2017 4500 P-D	0.05 mg/l to 20 mg/l
		Nitrate as NO <sub>3</sub> <sup>3</sup>	APHA 23rd EDN:2017 (4500-NO <sub>3</sub> -B/E)/IS 3025 (Part 34): 1988 (RA 2014) (Cadmium Reduction)	0.1 mg/l to 40 mg/l
		Biological Oxygen Demand (5 Days)	APHA 23 <sup>rd</sup> Edn (5210-B)/ IS 3025 Part 44:1993 (RA 2009)	2 mg/l to 500 mg/l
		Biological Oxygen Demand (3 Days)	APHA 23 <sup>rd</sup> Edn. (5210-B)/ IS 3025 Part 44:1993 (RA 2014)	2.0 mg/l to 500 mg/l
		Chemical Oxygen Demand	APHA 23 <sup>rd</sup> Edn:2017(5220-B) SO-IN-EHS-JMD-TE-008 Issue No. 1, Issue Date 24.11.2017	5.0 mg/l to 1000 mg/l
		Nitrite as NO <sub>2</sub> <sup>2</sup>	APHA 23rd EDN:2017 (4500-NO <sub>2</sub> B)/IS 3025:1988 Part 34 (RA 2014) (colorimetric)	0.02 mg/l to 10 mg/l
		Calcium as Ca	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium as Mg	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l

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		Iron as Fe	IS 3025 Part 53-2003; (RA 2014)	0.02 mg/l to 50 mg/l
		Fluoride as F <sup>-</sup>	IS 3025 (Part 60):2008/ (RA 2013)APHA 23rd EDN:2017:2012 (4500-F-D/C)	0.1 mg/l to 10 mg/l
		Color	IS 3025 (Part 4):1983; (RA 2017)	5 HZ to 100 HZ
		Calcium Hardness (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (3500-Ca B)/IS 3025: Part 40:1991 (RA 2014)	1.0 mg/l to 500 mg/l
		Magnesium Hardness (as CaCO <sub>3</sub> )	IS 3025 Part 46-1994 (RA 2014)/APHA 23rd EDN:2017 (3500-Mg B)	1.0 mg/l to 200 mg/l
		Turbidity	IS 3025 Part 10:1984 (RA 2017)	0.5 NTU to 100 NTU
		Cyanide as CN <sup>-</sup>	APHA 23rd EDN:2017 (4500-CN-C,E & F)	0.02 mg/l to 50.0 mg/l
<b>II.</b>	<b>POLLUTION &amp; ENVIRONMENT</b>			
<b>1.</b>	<b>Liquid Effluent &amp; Waste Water</b>	Dissolved solids	APHA 23rd EDN:2017 2540C/IS 3025(Part 16) (RA 2006)	10 mg/l to 10000 mg/l
		pH	APHA 23rd EDN:2017 (4500 H/B)	4 to 12
		Oil & Grease	APHA 23rd EDN:2017/5520B	2.0 mg/l to 200 mg/l
		Biological Oxygen Demand	APHA 23 <sup>rd</sup> Edn.-2017 (5210-B)/IS 3025 Part 44:1993 (RA 2017)	2.0 mg/l to 1000 mg/l
		Chemical Oxygen Demand	APHA 23 <sup>rd</sup> Edn:2017(5220-B) SO-IN-EHS-JMD-TE-008 Issue No. 1, Issue Date 24.11.2017	5.0 mg/l to 10000 mg/l

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		DO	APHA 23rd EDN:2017 (4500-O-C)	1.0 mg/l to 8.5 mg/l
		Biological Oxygen Demand (5 Days)	APHA 22 Ed-2012(5210-B)	2 mg/l to 100000 mg/l
		Sulphate as SO <sup>4</sup>	APHA 23rd EDN:2017 (4500 SO4 E)	2.0 mg/l to 1000 mg/l
		Temperature	APHA 23rd EDN:2017 (2550B)	10 deg C to 200 deg C
		Phosphorous as P	IS 3025:Part 31 1988 (RA 2009)/APHA 23rd EDN:2017 4500 P-D	0.10 mg/l to 20 mg/l
		Phosphite as PO <sup>4</sup>	IS 3025:Part 31 1988 (RA 2014)/APHA 23rd EDN:2017 4500 P-D	0.25 mg/l to 50 mg/l
		Nitrate as NO <sup>3</sup>	APHA 23rd EDN:2017 4500-NO3 E/APHA 23rd EDN:2017 4500-NO3 B)/ IS 3025:Part 34 (RA 2014) (Cadmium Reduction)	0.5 mg/l to 100 mg/l
		Iron as Fe	APHA 23rd EDN:2017 (3120B)	0.02 mg/l to 50 mg/l
		Calcium as Ca	APHA 23rd EDN:2017 (3120B)	1 mg/l to 200 mg/l
		Total Suspended Solids	IS 3025:Part 17 1984 (RA 2017)//APHA 23rd EDN:2017 2540 D	2 mg/l to 10000 mg/l
		Alkalinity (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (2320-B)	10 mg/l to 500 mg/l
		Acidity as CaCO <sub>3</sub>	APHA 23rd EDN:2017. (2310B)/IS 3025 (Part 22) (RA 2014)	5 mg/l to 200 mg/l
		Fluoride as F <sup>-</sup>	APHA 23rd EDN:2017 (4500-F-C/D)	0.1 mg/l to 10 mg/l
		Cyanide as CN <sup>-</sup>	APHA 23rd EDN:2017 (4500-CN-C, E & F)	0.02 mg/l to 50.0 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
		Total Solids	APHA 23rd EDN:2017 (2540 B)	5.0 mg/l to 50000 mg/l
		Electrical Conductivity	APHA 23rd EDN:2017 (2510 B)	5.0 µs/cm to 10000 µs/cm
		Chloride as Cl <sup>-</sup>	APHA 23rd EDN:2017 (4500 Cl-B)	2.0 mg/l to 1000 mg/l
		Total Hardness (as CaCO <sub>3</sub> )	APHA 23rd EDN:2017 (2340 C)	1.0 mg/l to 1000 mg/l
		Turbidity	APHA 23rd EDN:2017 (2130-B)	0.5 NTU to 100 NTU
		Magnesium as Mg	APHA 23rd EDN:2017 (3120B)	1.0 mg/l to 200 mg/l
<b>III.</b>	<b>ATMOSPHEISC POLLUTION</b>			
<b>1.</b>	<b>Ambient Air</b>	Sulfur Dioxide (SO <sub>2</sub> )	IS 5182 (Part 2): 2001(RA 2017)	4 µg/m <sup>3</sup> to 1050 µg/m <sup>3</sup>
		Oxides of Nitrogen (NO <sub>2</sub> )	IS 5182 (Part 6):2006 (RA 2017)	4 µg/m <sup>3</sup> to 1000 µg/m <sup>3</sup>
		Suspended Particulate Matter (SPM)	IS 5182 (Part 4):1999 (RA 2014)	8 µg/m <sup>3</sup> to 5000 µg/m <sup>3</sup>
		Respirable Suspended Particulate Matter (PM <sub>10</sub> )	IS 5182 (Part 23):2006: (RA 2017) Cyclonic FlowTechnique	5 µg/m <sup>3</sup> to 2000 µg/m <sup>3</sup>
		PM <sub>2.5</sub>	USEPA CFR 40, APPN. L	5 µg/m <sup>3</sup> to 200 µg/m <sup>3</sup>
		Ammonia	Methods for Air sampling and analysis, 3 <sup>rd</sup> Edn James P Lodge (method no-401)	20 µg/m <sup>3</sup> to 800 µg/m <sup>3</sup>
		Ozone	Methods for Air sampling and analysis, 3 <sup>rd</sup> Edn James P Lodge (method no-411)	6 µg/m <sup>3</sup> to 19620 µg/m <sup>3</sup>

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2.	Stack emission	Particulate Matter	IS 11255 (Part 1)-1995 (RA 2014)/ IS 11255 (Part 3): 2008 (RA 2013)	5 mg/Nm <sup>3</sup> to 2000 mg/Nm <sup>3</sup>
		Sulfur Dioxide	IS 11255 (Part 2): 1985 (RA 2014)	5 mg/Nm <sup>3</sup> to 14,250 mg/Nm <sup>3</sup>
		Nitrogen Oxides (NO <sub>2</sub> )	IS 11255 (Part 7): 2005 (RA 2017)	5 mg/Nm <sup>3</sup> to 2000 mg/Nm <sup>3</sup>
		Ammonia	IS 11255 (Part 6): 1999	5 mg/Nm <sup>3</sup> to 500 mg/Nm <sup>3</sup>

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**CHEMICAL TESTING**

<b><u>AT SITE</u></b>				
I.	<b>ATMOSPHERIC POLLUTION</b>			
1.	<b>Source Noise Level</b>	Noise Level Measurement	IS 7194:1994 (RA 2002)	50 dB to 130 dB
2.	<b>Ambient Noise Level</b>	Noise Level Measurement	IS 9989:1981	50 dB to 130 dB
3.	<b>Stack Emission (Flue Gas Analyser)</b>	Sulfur Dioxide	USEPA-1990 (Method-6C)	1 mg/m <sup>3</sup> to 1906 mg/m <sup>3</sup>
		Nitrogen Oxides (NO <sub>x</sub> )	USEPA-2008 (Method-7E)	1 mg/m <sup>3</sup> to 265 mg/m <sup>3</sup>
		Carbon Monoxide	USEPA-1994 (Method-10B)	1 mg/m <sup>3</sup> to 11000 mg/m <sup>3</sup>
		Oxygen	USEPA-1989 (Method-3A)	0.5 V/V to 25 % V/V

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