

Laboratory **Ekdant Enviro Services (P) Ltd., R-7/1, Ground Floor, A.V.K. Tower, North Main Road, Anna Nagar, West Extension, Chennai, Tamil Nadu**

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

Certificate Number **TC-5028**

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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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BIOLOGICAL TESTING

I.	WATER			
1.	Drinking Water	Total Bacterial Count	IS:1622:1981(RA.2009) APHA 23 rd Edition 2012 9215B Page No:9-37	≥ 1 cfu /ml
		Total Coliforms (MPN Technique)	IS:1622:1981(RA.2009) IS 5401(Part: 2) (RA.2012)	2 - 1600 MPN/100 ml 0.3 - 110 MPN/ml
			APHA 23 rd Edition 2012 - 9221B Page No:9-49	1.8 - 1600 MPN/100 ml
		Faecal Coliforms (MPN Technique)	IS:1622:1981(RA.2009) APHA 23 rd Edition 2012 9221E Page No:9-56	2 - 1600 MPN/100 ml 1.8 - 1600 MPN /100 ml
		Escherichia Coli (MPN Technique)	IS:1622:1981(RA.2009) IS:5887(Part:1)/1976 (RA.2009)	2 - 1600 MPN/100 ml 0.3 - 110 MPN/ml
			APHA 23 rd Edition 2012 - 9221F Page No:9-57	1.8 - 1600 MPN /100 ml
			APHA 23 rd Edition 2012 - 9230 Page No:9-88	(Qualitative) Present/Absent
		Faecal Streptococci	IS:1622:1981(RA.2009) APHA 23 rd Edition 2012 - 9230 Page No:9-88	2 - 1600 MPN/100 ml (Qualitative) Present/Absent
2.	Packaged Drinking Water	Total viable colony count @37°C for 24 hrs	IS:5402: 2012	≥1 cfu / ml
		Total viable colony count @ 22°C for 72 hrs	IS:5402:2012 IS14543:2004 (RA.2009)	≥1 cfu / ml
		Yeast & Mould Count	IS : 5403 : 1999 (RA. 2009)	Present/Absent / 250 ml
		Coliforms	IS : 15185 : 2002 (RA.2009)	Present/Absent / 250 ml
		E.coli	IS : 15185 : 2002 (RA.2009)	Present/Absent / 250 ml

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Convenor

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		Faecal Streptococci	IS : 15186 : 2002 (RA.2009) IS : 5887 (Part 2) : 1976 (RA. 2009)	Present/Absent / 250 ml
		Salmonella	IS : 15187 : 2002 (RA.2009) IS : 5887 (Part 3) : 1976 (RA. 2009)	Present/Absent / 250 ml
		Shigella	IS : 5887 (Part 7) : 1999 (RA. 2009)	Present/Absent / 250 ml
		Staphylococcus aureus	IS : 5887 (Part 2) : 1976 (RA. 2009)	Present/Absent / 250 ml
		Vibrio cholerae	IS : 5887 (Part 5) : 1976 (RA. 2009)	Present/Absent / 250 ml
		Vibrio parahaemolyticus	IS : 5887 (Part 5) : 1976 (RA. 2009)	Present/Absent / 250 ml
		Pseudomonas aeruginosa	IS : 13428 : 2005 (RA.2009) (Annexure D)	Present/Absent / 250 ml
		Sulphite Reducing Anaerobes	IS : 13428 : 2005 (RA.2009) (Annexure C)	Present/Absent / 50 ml
II.	FOOD AND AGRICULTURAL PRODUCTS			
1.	Bakery and Confectionary Products (Cake , Bread, Chocolate)	Total plate count	IS:5402: 2012	≥1cfu/ml or ≥10 cfu/g
		Total coliforms	IS 5401: (Part 1): 2012	≥1cfu/ml or ≥10 cfu/g
			IS 5401: (Part 2): 2012	0.30 - 110 MPN/ gm or ml
		Escherichia coli	IS:5887: (Part 1) : 1976 (RA – 2009)	≥1cfu/ml or ≥10 cfu/g
			IS:5887: (Part 1) : 1976 (RA – 2009)	0.30 - 110 MPN/gm or ml
		Yeast and Mould	IS:5403:1999 (RA- 2009)	≥1cfu/ml or ≥10 cfu/g

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		Staphylococcus aureus Colony Count	IS 5887: (Part 8/Sec.1)-2012	≥10cfu/g/ml or ≥ 1cfuU/ml
		Salmonella	IS 5887: (Part 3): 1976 (RA – 2009)	Absent / Present /25-375g/ml
2.	Cooked Food Products Vegetables Curry Sambar Rice Varieties	Total plate count	IS:5402: 2012	≥1cfu/ml or ≥10 cfu/g
		Total coliforms	IS 5401: (Part 1): 2012	≥1cfu/ml or ≥10 cfu/g
			IS 5401: (Part 2): 2012	0.30 - 110 MPN/ gm or ml
		Escherichia coli	IS:5887: (Part 1) : 1976 (RA – 2009)	≥1cfu/ml or ≥10 cfu/g
			IS:5887: (Part 1) : 1976 (RA – 2009)	0.30 - 110 MPN/gm or ml
		Yeast and Mould	IS:5403:1999 (RA- 2009)	≥1cfu/ml or ≥10 cfu/g
		Staphylococcus aureus	IS 5887: (Part 8/Sec.1)-2012	≥10cfu/g/ml or ≥ 1cfuU/ml
		Salmonella	IS 5887: (Part 3): 1976 (RA – 2009)	Absent / Present /25-375g/ml
3.	Cereals,Pulses & Cereal Products Wheat Flour & Rice Flour	Total plate count	IS:5402: 2012	≥1cfu/ml or ≥10 cfu/g
		Total coliforms	IS 5401: (Part 1): 2012	≥1cfu/ml or ≥10 cfu/g
			IS 5401: (Part 2): 2012	0.30 - 110 MPN/ gm or ml
		Escherichia coli	IS:5887: (Part 1) : 1976 (RA – 2009)	≥1cfu/ml or ≥10 cfu/g
			IS:5887: (Part 1) : 1976 (RA – 2009)	0.30 - 110 MPN/gm or ml
		Yeast and Mould	IS:5403:1999 (RA- 2009)	≥1cfu/ml or ≥10 cfu/g
		Staphylococcus aureus	IS 5887: (Part 8/Sec.1)-2012	≥10cfu/g/ml or ≥ 1cfuU/ml

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		Salmonella	IS 5887: (Part 3): 1976 (RA – 2009)	Absent / Present /25-375g/ml

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.**

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CHEMICAL TESTING

I.	WATER			
1.	Packaged Drinking Water, Drinking Water, Natural Mineral Drinking Water	Appearance	APHA (23rd Edition) 2017 /2110 Visual Comparison Method	Qualitative
		Color	IS 3025(Part 4) : 1983 (RA 2012) / APHA (23rd Edition) 2017 2120B / P 2 – 2 Visual Comparison Method	1 HU to 70 HU
		Odor	IS 3025(Part 5) : 1983 (RA 2012) Threshold Odor Method	Qualitative
		Turbidity	IS 3025(Part 10) : 1984 (RA 2012) / APHA (23rd Edition) 2017 / 2130B / P 2- 9 Nephelometric Method	0.1 NTU to 10 NTU
		pH Value	IS 3025(Part 11) : 1983 (RA 2012) / APHA (23rd Edition) 2017 4500 H+ /P 4 – 90 Electrometric Method	1 to 13
		Total Dissolved Solids	IS 3025(Part 16) : 1984 (RA 2012) / APHA (23 rd Edition) 2017 2540 C / P 2 – 58 Gravimetric Method	1 mg/l to 50,000mg/l
		Chlorides as Cl	IS 3025(Part 32) : 1988 (RA 2009) / APHA (23 rd Edition) 2017	0.1 mg/ to 20,000mg/l

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			4500 Cl ⁻ B / P 4 – 70 Argenometric Method	
		Sulphates as SO ₄	IS 3025(Part 24) : 1986 (RA 2009) / APHA (23 rd Edition) 2017 4500 SO ₄ ²⁻ E / P 4 – 188 Turbidity Method	0.1 mg/l to 5000 mg/l
		Total Alkalinity as CaCO ₃	IS 3025(Part 23) : 1986 (RA 2009) / APHA (23 rd Edition) 2017 2320 B / P 2 – 27 Titrimetric Method	1 mg/l to 5000 mg/l
		Total Hardness as CaCO ₃	IS 3025(Part 21) : 2009 APHA (23 rd Edition) 2017 / 2340 C / P 2 – 37 EDTA Titrimetric Method	1.0 mg/l to 2000mg/l
		Calcium Hardness as CaCO ₃	APHA (23 rd Edition) 2017 3500 Ca B / P 3 – 65 EDTA Titrimetric Method	1.0 mg/l to 1000 mg/l
		Magnesium Hardness as CaCO ₃	APHA (23 rd Edition) 2017 3500 Mg ⁺ B/P 3 – 83 Calculation Method	1.0 mg/l to 1000 mg/l
		Iron as Fe	APHA (23 rd Edition) 2017 3500 Fe- B/ 3-77 / IS 3025(Part 53) : 2003 (RA 2009) 1,10 Phenanthroline Method	0.01 to 1.0 1.0 to 20 mg/l
		Free Residual Chlorine as Cl ₂	IS 3025(Part 26) : 1986 (RA 2009) / APHA (23 rd Edition) 2017 4500 Cl B/P 4 – 58 Iodometric Method	0.1 mg/l to 10 mg/l 10 mg/l to 500 mg/l

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		Nitrate as NO ₃	APHA (23 rd Edition) 2017 4500 NO3 B Ultraviolet Spectro Photometric Screening Method	0.1 mg/l to 1 mg/l 1 mg/l to 10 mg/l 10 mg/l to 100 mg/l
		Fluoride as F	APHA (23 rd Edition) 2017 4500 F D /P 4 – 85 SPADNS Colorimetric Method	0.1mg/l to 10 mg/l
		Calcium as ca	IS 3025(Part 40) : 1991 (RA 2009) / APHA (23 rd Edition) 2017 3500 Ca B /P 3 – 65 Calculation Method	1.0 mg/l to 250mg/l
		Magnesium as Mg	IS 3025(Part 46) : 1994 (RA 2009) / APHA (23 rd Edition) 2017 2340 C / P 3 - 84 Calculation Method	0.24 mg/l to 150 mg/l
		Phenolic compounds	IS 3025(Part 43) : 1992 (RA 2009) / APHA (23 rd Edition) 2017 5530 C / P 5 – 45 Chloroform Extraction Method	0.1mg/l to 10 mg/l
		Sulfide as H ₂ S	IS 3025(Part 29) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 S ²⁻ F/ P 4 – 176 Titrimetric Iodine Method	0.04mg/l to 10 mg/l
		Copper as Cu	IS 3025(Part 42) : 1992 (RA 2009) / APHA (23rd Edition) 2017 3500 Cu B/ P 3 – 72 Atomic Absorption	0.05mg/l to 5.0 mg/l

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			Spectrometric Method	
		Manganese as Mn	IS 3025(Part 59) : 2006 (RA 2012) / APHA (23rd Edition) 2017 3500 Mn B / P 3 – 84 Periodate Colorimetric Method	0.05mg/l to 5 mg/l
		Lead as Pb	IS 3025(Part 47) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Pb B / P 3 – 80 Atomic Absorption Spectrometric Method	0.05mg/l to 5 mg/l
		Zinc as Zn	IS 3025(Part 49) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Zn B / PP 3 – 106 Atomic Absorption Spectrometric Method	0.05mg/l to 5 mg/l
		Anionic Surfactants	APHA (23rd Edition) 2017 5540 C / P 5 – 50 MBAS Method	0.1mg/l to 5.0 mg/l
		Chromium - Total as Cr	IS 3025(Part 52) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Cr / P 3- 67 Diphenylcarbazide Method	0.05mg/l to 5.0 mg/l
		Chromium– Hexavalent as Cr ⁶⁺	IS 3025(Part 52) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Cr / P 3- 67 Diphenylcarbazide Method	0.05mg/l to 5.0 mg/l
		Nickel as Ni	IS 3025(Part 54) : 2003 (RA 2009) Atomic Absorption	0.05mg/l to 5.0 mg/l

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			Spectrometric Method	
		Boron as B	APHA (23rd Edition) 2017 4500 B B / P 4 – 23 Curcumin Method	0.05mg/l to 5.0 mg/l
		Oxygen Absorbed after 4 hrs	IS 3025(Part 63) : (RA 2007) Iodometric Method	0.1mg/l to 10 mg/l
		Aluminum as Al	IS 3025(Part 55) : (RA 2009) / APHA (23rd Edition) 2017 Eriochrome Cyanine R Method	0.05mg/l to 5.0 mg/l
		Arsenic as As	APHA (23rd Edition) 2017 3500- As –P 3- 61 Atomic Absorption Spectrometric Method	0.005mg/l to 2.0 mg/l
		Oil and Grease	APHA (23rd Edition) 2017 5520 O/G B,C Partition Gravimetric Method	1mg/l to 50 mg/l
		Electrical Conductivity	IS 3025(Part 14) : 2013 / APHA 23rd Edition) 2017 2510 B /P 2 – 47 Electrometric Method	1.0µs/cm to 1000µS/cm 1000 to 50,000
		Total Suspended Solids	APHA (23rd Edition) 2017 2540 D /2 -58 / IS 3025(Part 17) : 1984 (RA 2012) Gravimetric Method	1.0 mg/l to 20000mg/l
		Temperature	IS 3025(Part 9) : 1984 (RA 2012) / APHA (23rd Edition) 2017 2550 B / P 2- 61 Using Thermometer	20°C to 50°C

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		Total Solids	IS 3025(Part 15) :1984(RA2009) / APHA 23 rd Edition) 2017 2540B/P 2 -56 Gravimetric Method	1.0 mg/l to 20000 mg/l
		Total Acidity as CaCO ₃	IS 3025(Part 22) : 1986 (RA 2009)/ APHA (23rd Edition) 2017 2310 B/P 2 – 24 Titrimetric Method	1 mg/l to 100 mg/l 100 mg/l to 500 mg/l 500 mg/l to 1000mg/l
		Reactive Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/P 4 -165 Molybdosilicate Method	0.04 mg/l to 1 mg/l 1 mg/l to 10 mg/l 10 mg/l to 100 mg/l
		Carbonate Hardness as CaCO ₃	APHA (23rd Edition) 2017 2340A / P 2 -37 Calculation Method	1.0 mg/l to 1000 mg/l
		Non carbonate-Hardness as CaCO ₃	APHA (23rd Edition) 2017 2340A/P 2 -37 Calculation Method	1.0 mg/l to 1000 mg/l
		Free carbon dioxide as CO ₂	APHA (23rd Edition) 2017 4500 CO ₂ C /P 4 -33 Titrimetric Method	1.0 mg/l to 100 mg/l
		Carbonates / bicarbonates	IS 3025(Part 51) : (RA 2001) (RA 2012) Titrimetric Method	1 mg/l to 100 mg/l 100 mg/l to 500 mg/l 500mg/l to 5000 mg/l
		Nitrite as NO ₂	IS 3025(Part 34) : 1988 (RA 2009) NEEDA Method	0.01 mg/l to 1 mg/l 1.0 mg/l to 10 mg/l 10 mg/l to 100 mg/l
		Total Phosphorous as P	IS 3025(Part 31) : 1988 (RA 2009) / 4500 P D Stannous Chloride Method	1.0 mg/l to 20 mg/l

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		Sodium as Na	IS 3025(Part 45) : 1993 (RA 2009) / APHA (23rd Edition) 2017 3500 Na B / P 3-98 Flame Emission Photometric Method	0.1 mg/l to 1 mg/l 1 mg/l to 1000 mg/l
		Potassium as K	IS 3025(Part 45) : 1993 (RA 2009) / APHA (23rd Edition) 2017 3500 K B / P 3-98 Flame Emission Photometric Method	0.1 mg/l to 1 mg/l 1 mg/l to 1000 mg/l
		Nitrogen Ammoniacal as NH ₃ -N	IS 3025(Part 34) : 1988 (RA 2009) Titrimetric Method	1.0mg/l to 100mg/l
		Nitrogen Total as N	IS 3025(Part 34) : 1988 (RA 2009) Titrimetric Method	1.0mg/l to 100mg/l
		Sulphite as SO ₃	IS 3025(Part 28) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 SO ₃ ²⁻ B / P 4 -183 Iodide – Iodate Titrimetric Method	0.5mg/l to 10 mg/l
		Particulate Size of Suspended Sediments	IS 6339 : 2013 By Sieve Method	Qualitative
		Bromide as Br	IS 3025(Part 30) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500Br B / P 4-23 Spectrophotometric Method	0.1mg/l to 10 mg/l
		Cyanide as CN	APHA (23rd Edition) 2017 4500- CN E-4-42 Calorimetric Method	0.05mg/l to 10 mg/l

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		Percentage Sodium	IS 11624 : 1986 (RA 2009) By Calculation Method	1.0% to 100 %
		Residual Sodium Carbonate	IS11624 : 1986 (RF 2009) By Calculation Method	0 to 20 m.equ/l
		Sodium Absorption Ratio	IS11624 : 1986 (RA 2009) By Calculation Method	1 to 20 m.equ/l
		Free Ammonia as NH ₃	IS 3025(Part 34) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 NH ₃ Nesslerization Method	1 mg/l to 20 mg/l
		Borate as B	Annex.H of IS 13428 2005 IS 3025(Part 57) : 2005 (RA 2010) By Curcumin Method	0.2 mg/l to 1.0 mg/l 1.0 mg/l to 10 mg/l
		Colloidal Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/ P 4-165 Molybdosilicate Method	0.04 to 1 mg/l 1 to 10 mg/l
		Total Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/ P 4-165 Molybdosilicate Method	0.04 to 1 mg/l 1 to 10 mg/l 10 mg/l to 200 mg/l
		Dissolved Iron as Fe	IS 3025(Part 53) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Fe- B/ P 3-77 1,10 Phenanthroline Method	0.01 to 1.0 1.0 mg/l to 10 mg/l
		Ferrous Iron as Fe	IS 3025(Part 53) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Fe- B/ 3-77	0.01 to 1.0 1.0mg/l to 10 mg/l

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			1,10 Phenanthroline Method	
		Dissolved Phosphorous as P	IS 3025(Part 31) : 1988 (RA 2009) / APHA (23rd Edition) N 2017 4500 P Stannous Chloride Method	1.0 mg/l to 20 mg/l
2.	Construction Water	Water Neutralization a)To neutralize 100ml of sample water using phenolphthalein as an indicator using 0.02 N NaOH	IS 3025(Part 22) : 1986 (RA 2009) / APHA (23rd Edition) 2017 2310 B Titration Method	0.1ml to 50 ml
		b)To neutralize 100ml of sample water using Mixed indicator using 0.02N H ₂ SO ₄	APHA (23rd Edition) 2017 2320 B IS 3025(Part 23) : 1986 (RA 2009) Titration Method	0.1ml to 100 ml
		Organic Solids	APHA (23rd Edition) 2017 2540 B/E Gravimetric Method	1.0 mg/l to 1000 mg/l
		Inorganic Solids	APHA (23rd Edition) 2017 2540 B/E Gravimetric Method	1.0 mg/l to 1000 mg/l
		Sulphates as SO ₄	IS 3025(Part 24) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 SO ₄ ²⁻ E / P 4-188 Turbidity Method	0.5 mg/l to 10000 mg/l
		Chlorides as Cl	IS 3025(Part 32) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl ⁻ B / P 4-70 Argemometric Method	1 mg/l to 20,000 mg/l

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		pH Value	IS 3025(Part 11) : 1983 (RA 2012) / APHA 23rd Edition) 2017 4500 H+ / P 4-90 Electrometric Method	1 to 13
		Total Suspended Solids	APHA (23rd Edition) 2017 2540 D / 2 -58 / IS 3025(Part 17) : 1984 (RA 2012) Gravimetric Method	1.0 mg/l to 20000 mg/l
3.	Swimming Pool Water	pH Value	IS 3025(Part 11) : 1983 (RA 2012) / APHA 23rd Edition) 2017 4500 H+ / P 4-90 Electrometric Method	1 to 13
		Color	IS 3025(Part 4) : 1983 (RA 2012) / APHA (23rd Edition) 2017 2120B / P 2-2 By Visual Comparison Method	1 to 70 HU
		Odor	IS 3025(Part 5) : 1983 (RA 2012) Threshold Odor Method	Qualitative
		Total Dissolved Solids	IS 3025(Part 16) : 1984 (RA 2012) / APHA (23rd Edition) 2017 2540 C / P 2 -58 Gravimetric Method	1 mg/l to 50,000mg/l
		Chlorides as Cl	IS 3025(Part 32) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl ⁻ B / P 4-70 Argemetric Method	1 mg/l to 20,000 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 Alkalinity as CaCO ₃	IS 3025(Part 23) : 1986 (RA 2009) / APHA (23rd Edition) 2017 2320 B / P 2 – 27 Titrimetric Method	1 mg/l to 5000 mg/l
		Aluminum as Al	IS 3025(Part 55) : (RA 2009) / APHA (23rd Edition) 2017 Eriochrome Cyanine R Method	0.05mg/l to 5.0 mg/l
		Oxygen Absorbed after 4 hrs at 27°C	IS 3025(Part 63) : 2007 Iodometric Method	0.1mg/l to 10 mg/l
		Iron	APHA (23rd Edition) 2017 3500 Fe- B/ P 3-77 / IS 3025(Part 53) : 2003 (RA 2009) 1,10 Phenanthroline Method	0.01 to 1.0 1.0 mg/l to 20 mg/l
		Turbidity	IS 3025(Part 10) : 1984 (RA 2012) / APHA (23rd Edition) 2017/2130 B /P2-9 Nephelometric Method	0.1 NTU to 10 NTU
		Lead as Pb	IS 3025(Part 47) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Pb B / P 3 -80 Atomic Absorption Spectrometric Method	0.05 mg/l to 5 mg/l
		Free Residual Chlorine as Cl ₂	IS 3025(Part 26) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl B/ P 4-58 Iodometric Method	0.1 mg/l to 10 mg/l 10 mg/l to 500 mg/l

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4.	Reagent Grade Water	pH Value	IS 3025(Part 11) : 1983 (RA 2012) / APHA (23rd Edition) 2017 4500 H+ / P 4-90 Electrometric Method	1 to 10
		Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/ P 4-165 Molybdosilicate Method	0.04 to 20 mg/l 1 mg/l to 10 mg/l 10 mg/l to 200 mg/l
		Total Solids	IS 3025(Part 15) : 1984 (RA 2009) / APHA (23rd Edition) 2017 2540B / P 2 -56 Gravimetric Method	1.0 mg/l to 20 mg/l
		Color Retention of KMnO ₄ at 27° C	IS 1070 : 1992 (RA 2003) Annex A Iodometric Method	Qualitative
		Specific Conductivity	IS 3025(Part 14) : 2013 / APHA 23rd Edition) 2017 2510 B / P 2-47 Electrometric Method	1.0µs/cm to 50µS/cm
5.	Water for Processed Food Industry	pH Value	IS 3025(Part 11) :1983 (RA2012) / APHA 23rd Edition) 2017 4500 H+ / P 4-90 Electrometric Method	1 to 13
		Turbidity	IS 3025(Part 10) : 1984 (RA 2012) / APHA 23rd Edition) 2017 /2130B/P 2-9 Nephelometric Method	0.1 NTU to 10 NTU
		Odor	IS 3025(Part 5) : 1983 (RA 2012) Threshold Odor Method	Qualitative

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		Color	IS 3025(Part 4) : 1983 (RA 2012) / APHA (23rd Edition) 2017 2120B /P2-2 Visual Comparison Method	1 to 70 HU
		Total Solids	IS 3025(Part 15) : 1984 (RA 2009) / APHA (23rd Edition) 2017 2540B / P 2 -56 Gravimetric Method	1.0 mg/l to 20000 mg/l
		Total Hardness as CaCO ₃	IS 3025(Part 21) : 2009 APHA (23rd Edition) 2017 / 2340 C / P 2 – 37 EDTA Titrimetric Method	1.0 mg/l to 2000mg/l
		Sulphates as SO ₄	IS 3025(Part 24) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 SO ₄ ²⁻ E / P 4-188 Turbidity Method	0.5 mg/l to 10000 mg/l
		Chlorides as Cl	IS 3025(Part 32) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl ⁻ B / P 4-70 Argemometric Method	1 mg/l to 20,000 mg/l
		Fluoride as F	APHA (23rd Edition) 2017 4500 F D / P 4-85 SPADNS Colorimetric Method	0.1mg/l to 10 mg/l
		Cyanide as CN	APHA (23rd Edition) 2017 4500- CN ⁻ E-4-42 Colorimetric Method	0.05mg/l to 10 mg/l
		Iron as Fe	APHA (23rd Edition) 2017 3500 Fe- B/ P 3-77 / IS 3025(Part 53) : 2003 (RA 2009)	0.01 to 1.0 1.0 to 20 mg/l

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			1,10 Phenanthroline Method	
		Magnesium as Mg	IS 3025(Part 46) : 1994 (RA 2009) / APHA (23rd Edition) 2017 2340 C / P 3-84 Calculation Method	0.24 mg/l to 150 mg/l
		Phenolic compounds	IS 3025(Part 43) : 1992 (RA 2009) / APHA (23rd Edition) 2017 5530 C / P 5-45 Chloroform Extraction Method	0.1mg/l to 10 mg/l
		Copper as Cu	IS 3025(Part 42) : 1992 (RA 2009) / APHA (23rd Edition) 2017 3500 Cu B/ P 3-72 Atomic Absorption Spectrometric Method	0.05mg/l to 5.0 mg/l
		Manganese as Mn	IS 3025(Part 59) : 2006 (RA 2012) / APHA (23rd Edition) 2017 3500 Mn B / P 3-84 Periodate Colorimetric Method	0.05mg/l to 5 mg/l
		Lead as Pb	IS 3025(Part 47) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Pb B / P 3 -80 Atomic Absorption Spectrometric Method	0.05mg/l to 5 mg/l
		Zinc as Zn	IS 3025(Part 49) : 1994 (RA 2009) / APHA (22 nd Edition) 2017 3500 Zn B / P 3 – 106	0.05 mg/l to 5 mg/l

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			Atomic Absorption Spectrometric Method	
		Chromium - Total as Cr	IS 3025(Part 52) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Cr / P 3- 67 1,5-Diphenylcarbazide Method	0.05 mg/l to 5.0 mg/l
		Arsenic as As	APHA (23rd Edition) 2017 3500- As / P 3-61 Silver Diethyldithiocarbamate Method	0.005 mg/l to 2.0 mg/l
		Nitrate as NO ₃	APHA (23rd Edition) 2017 4500 NO3 B Ultraviolet Spectro Photometric Screening Method	0.1 mg/l to 100 mg/l
II.	POLLUTION / ENVIRONMENT			
1.	Waste Water	Appearance	APHA (22 nd Edition) 2012 /2110 Test No.9 Visual Comparison Method	Qualitative
		Temperature	IS 3025(Part 9) : 1984 (RA 2012) /APHA (23rd Edition) 2017 2550 B/ P 2-61 By Using Thermometer	Ambient -50°C
		Color	IS 3025(Part 4) : 1983 (RA 2012) / APHA (23rd Edition) 2017 2120B / P 2-2 Visual Comparison Method	2 to 500 Color Units

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		Turbidity	IS 3025(Part 10) : 1984 (RA 2012) / APHA 23 rd Edition) 2012 /213 B /P 2-9 Nephelometric Method	1 mg/l to 20,000 mg/l
		pH Value	IS 3025(Part 11) : 1983 (RA 2012) / APHA 23 rd Edition) 2012 4500 H+ /P 4-90 Electrometric Method	1 to 13
		Electrical Conductivity	IS 3025(Part 14) : 2013 / APHA 23 rd Edition) 2012 2510 B / P 2-47 Electrometric Method	10 µs /cm to 90000 µs/cm
		Total Suspended Solids Dried at 103 - 105°C	APHA (23 rd Edition) 2017 2540 D Gravimetric Method	1 mg/l to 10000 mg/l
		Volatile Solids Ignited at 550 °C	APHA (23 rd Edition) 2017 2540 E Gravimetric Method	1 mg/l to 10000 mg/l
		Fixed Solids Ignited at 550°C	APHA (23 rd Edition) 2017 2540 E Gravimetric Method	1 mg/l to 10000 mg/l
		Total Dissolved Solids	IS 3025(Part 16) : 1984 (RA 2012) / APHA (23 rd Edition) 2017 2540 C /P 2 -58 Gravimetric Method	1.0 mg/l to 20000 mg/l
		Total Solids	IS 3025(Part 15) : 1984 (RA 2009) / APHA (23 rd Edition) 2017 2540B / P 2 -56 Gravimetric Method	1.0 mg/l to 20000 mg/l
		Settleable Solids	IS 3025(Part 19) : 1984 (RA 2012) /	1mg/l to 500 mg/l

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			APHA (23rd Edition) 2017 2540 F/ P 2 -59 Gravimetric Method	
		Sludge volume index	APHA (23rd Edition) 2017 2710D/ P 2-81 Gravimetric Method	1mg/l to 100 mg/l
		Chlorides as Cl	IS 3025(Part 32) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl ⁻ B / P 4-70 Argenometric Method	1 mg/l to 20,000 mg/l
		Sulphates as SO ₄	IS 3025(Part 24) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 SO ₄ ²⁻ E / P 4-188 Turbidity Method	0.5 mg/l to 10000 mg/l
		Total Alkalinity as CaCO ₃	IS 3025(Part 23) : 1986 (RA 2009) / APHA (23rd Edition) 2017 2320 B / P 2 – 27 Titrimetric Method	1 mg/l to 10000 mg/l
		Total Hardness as CaCO ₃	IS 3025(Part 21) : 2009 / APHA (23rd Edition) 2017 2340 C / P 2 – 37 EDTA Titrimetric Method	1mg/l to 5000 mg/l
		Calcium Hardness as CaCO ₃	APHA (23rd Edition) 2017 3500 Ca B / P 3 – 65 EDTA Titrimetric Method	1mg/l to 5000 mg/l
		Magnesium Hardness as CaCO ₃	APHA (23rd Edition) 2017 3500 Mg ⁺ B/ P 3 – 83 Calculation Method	1mg/l to 5000 mg/l
		Total Acidity as CaCO ₃	IS 3025(Part 22) : 1986 (RA 2009) / APHA (23rd Edition) 2017 2310 B/ P 2-24	1 mg/l to 1000 mg/l

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			Titrimetric Method	
		Iron as Fe	IS 3025(Part 53) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Fe- B/ P 3-77 1,10 Phenanthroline Method	0.01mg/l to 20 mg/l
		Reactive Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/ P 4-165 Molybdosilicate Method	0.04mg/l to 200 mg/l
		Carbonate Hardness as CaCO ₃	APHA (23rd Edition) 2017 2340A / P 2-37 Calculation Method	1mg/l to 5000 mg/l
		Non carbonate-Hardness as CaCO ₃	APHA (23rd Edition) 2017 2340A/ P 2-37 Calculation Method	1mg/l to 5000 mg/l
		Free carbon dioxide as CO ₂	APHA (23rd Edition) 2017 4500 CO ₂ C / P 4-33 Titrimetric Method	1.0 mg/l to 100 mg/l
		Carbonates / bicarbonates	IS 3025(Part 51) : (RA 2001) (RA 2012) Titrimetric Method	1 mg/l to 10000 mg/l
		Dissolved oxygen	IS 3025(Part 38) : 1989 (RA 2009)/ APHA (23rd Edition) 2017 4500 O B/ P 4-136 Iodometric Method	1mg/l to 10 mg/l
		Chemical Oxygen Demand	IS 3025(Part 58) : 2006 (RA 2012)/ APHA (23rd Edition) 2017 5220 B/ P 5-15 Open Reflux Method	4 mg/l to 50000 mg/l

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		Biochemical Oxygen Demand 3 days @ 27°C	IS 3025(Part 44) : 1993 (RA 2009)/ APHA (23rd Edition) 2017 5210 B/ P 5-10 Oxygen Depletion Method	2 mg/l to 10000 mg/l
		Free Residual Chlorine as Cl ₂	IS 3025(Part 26) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 Cl B/ P 4-58 Iodometric Method	0.1 mg/l to 10.0 mg/l
		Nitrate as NO ₃	IS 3025(Part 34) : 1988 (RA 2009) Ultraviolet Spectro Photometric screening Method	0.1mg/l to 200 mg/l
		Nitrite as NO ₂	IS 3025(Part 34) : 1988 (RA 2009) NEEDA Method	0.05 mg/l to 100 mg/l
		Total Phosphorous as P	IS 3025(Part 31) : 1988 (RA 2009) /4500 P D Stannous Chloride Method	0.1mg/l to 10 mg/l
		Fluoride as F	APHA (23rd Edition) 2017 4500 F D / P 4-85 SPADNS Colorimetric Method	0.1 mg/l to 20 mg/l
		Sodium as Na	IS 3025(Part 45) : 1993 (RA 2009) / APHA (23rd Edition) 2017 3500 Na B / P 3-98 Flame Emission Photometric Method	0.1 mg/l to 2000 mg/l
		Potassium as K	IS 3025(Part 45) : 1993 (RA 2009) / APHA (23rd Edition) 2017 3500 K B / P 3-98	0.1 mg/l to 1000 mg/l

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			Flame Emission Photometric Method	
		Nitrogen Ammonical as NH ₃ -N	IS 3025(Part 34) : 1988 (RA 2009) Titrimetric Method	1.0 mg/l to 100 mg/l
		Nitrogen Total as N	IS 3025(Part 34) : 1988 (RA 2009) Titrimetric Method	1.0 mg/l to 1000 mg/l
		Calcium as ca	IS 3025(Part 40) : 1991 (RA 2009) / APHA (23rd Edition) 2017 3500 Ca B / P 3-65 Calculation Method	0.4 mg/l to 5000 mg/l
		Magnesium as Mg	IS 3025(Part 46) : 1994 (RA 2009) / APHA (23rd Edition) 2017 2340 C / P 3-84 Calculation Method	0.24 mg/l to 5000 mg/l
		Oil and Grease	IS3025(Part 39) : 1991 (RA 2009) / APHA (23rd Edition) 2017 5520 D Partition Gravimetric Method	1.0 mg/l to 50000 mg/l
		Phenolic compounds	IS 3025(Part 43) : 1992 (RA 2009) / APHA (23rd Edition) 2017 5530 C / P 5-45 Chloroform Extraction Method	0.001 mg/l to 20 mg/l
		Sulfide as S	IS 3025(Part 29) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 S ²⁻ F/P 4-176 Titrimetric Iodine Method	0.1 mg/l to 100 mg/l

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		Sulphite as SO ₃	IS 3025(Part 28) : 1986 (RA 2009) / APHA (23rd Edition) 2017 4500 SO ₃ ²⁻ B / P 4 -183 Iodide – Iodate Titrimetric Method	0.1 mg/l to 100 mg/l
		Copper as Cu	IS 3025(Part 42) : 1992 (RA 2009) / APHA (23rd Edition) 2017 3500 Cu B/P 3-72 Atomic Absorption Spectrometric Method	0.01 mg/ l to 10 mg/l
		Manganese as Mn	IS 3025(Part 59) : 2006 (RA 2012) / APHA (23rd Edition) 2017 3500 Mn B /P 3-84 Periodate Colorimetric Method	0.01 mg/ l to 10 mg/l
		Lead as Pb	IS 3025(Part 47) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Pb B / P 3 -80 Atomic Absorption Spectrometric Method	0.01 mg/ l to 10 mg/l
		Zinc as Zn	IS 3025(Part 49) : 1994 (RA 2009) / APHA (23rd Edition) 2017 3500 Zn B / P 3 – 106 7 Atomic Absorption Spectrometric Method	0.01 mg/ l to 10 mg/l
		Particulate Size of Suspended Sediments	IS 6339 : 2013 By Sieve Method	Qualitative
		Anionic Surfactants	APHA (23rd Edition) 2017 5540 C / P 5 – 50 MBAS Method	0.5mg/l to 50 mg/l

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		Chromium - Total as Cr	IS 302(Part 52) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Cr / P 3- 67 1,5 Diphenylcarbazide Method	0.01 mg/l to 10 mg/l
		Chromium– Hexavalent as Cr ⁺⁶	IS 3025(Part 52) : 2003 (RA 2009) / APHA (23rd Edition) 2017 3500 Cr / P 3- 67 1,5 Diphenylcarbazide Method	0.01 mg/l to 10 mg/l
		Nickel as Ni	IS 3025(Part 54) : 2003 (RA 2009) Atomic Absorption Spectrometric Method	0.01 mg/l to 10 mg/l
		Boron as B	APHA (23rd Edition) 2017 4500 B B / P 4 – 23 Curcumin Method	0.01 mg/l to 10 mg/l
		Oxygen Absorbed after 4 hrs	IS 3025(Part 63) : 2007 Iodometric Method	1.0 mg/l to 100 mg/l
		Bromide as Br	IS 3025(Part 30) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500Br B / P 4-23 Spectrophotometric Method	0.1mg/l to100 mg/l
		Aluminum as Al	APHA (23rd Edition) 2017 IS 3025(Part 55) : RA (2009) Eriochrome Cyanine R Method	0.01 mg/l to 10 mg/l
		Arsenic as As	APHA (23rd Edition) 2017 3500- As / P3- 61 Atomic Absorption Spectrometric Method	0.01 mg/l to 10 mg/l

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		Cyanide as CN	APHA (23rd Edition) 2017 4500- CN- E/ P 4-42 Calorimetric Method	1 mg/l to 10 mg/l
		Oil and Grease	APHA (23rd Edition) 2017 5520 O/G B,C Partition Gravimetric Method	1.0 to 50000 mg/l
		Percentage Sodium	IS 11624: 1986 (RA 2009) Calculation method	0.1 % to 100 %
		Residual Sodium Carbonate	IS11624 :1986 (RA 2009) Calculation method	1 to 20 m.equ/l
		Sodium Absorption Ratio	IS11624 : 1986(RA 2009) Calculation method	1 to 20 m.equ/l
		Free Ammonia as NH ₃	IS 3025(Part 4) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 NH ₃ Nesslerization Method	0.1 mg/l to 10 mg/l
		Borate as B	Annex.H of IS 13428 2005 IS 3025(Part 57) : 2005 (RA 2010) Curcumin Method	0.01 mg/l to 10 mg/l
		Colloidal Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/ P 4-165 Molybdosilicate Method	0.04mg/l to 10 mg/l
		Total Silica as SiO ₂	IS 3025(Part 35) : 1988 (RA 2009) / APHA (23rd Edition) 2017 4500 SiO ₂ C/P 4-165 Molybdosilicate Method	0.04mg/l to 200 mg/l
		Dissolved Iron as Fe	IS 3025(Part 53) : 2003 (RA 2009) / APHA ((23rd Edition)	0.01mg/l to 20mg/l

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			2017 3500 Fe- B/ P 3-77 1,10 Phenanthroline Method	
		Ferrous Iron as Fe	IS 3025(Part 53) : 2003 (RA 2009) / APHA ((23rd Edition) 2017 3500 Fe- B/ P 3-77 1,10 Phenanthroline Method	0.01mg/l to 20mg/l
		Dissolved Phosphorous as P	IS 3025(Part 31) : 1988 (RA 2009) / APHA ((23rd Edition) 2017 4500 P Stannous Chloride Method	0.1 mg/l to 10 mg/l
		Organic Nitrogen as N	IS 3025(Part 34) : 1988 (RA 2009) Titrimetric Method	1.0 mg/l to 100 mg/l
		Langlier and Ryznar Index	SOP EC 079 Issue No/Date 03/4.08.2014 calculation method	6 to 7
2.	Soil	pH	IS 2720(Part 26) : 1987 (RA 2011)	1.0 to 14
		Organic Matter	IS 2720(Part 22) : 1972 (RA 2010)	0.5% to 20 %
		Total Soluble Solids	IS 2720(Part 21) : 1977 (RA 2010)	1% to 20 %
		Specific Gravity	IS 2720(Part 3)Sec2 : 1980 (RA 2011)	1 to 10
		Water Content	IS 2720(Part 2) : 1973 (RA 2010)	0.5% to 20 %
		Total Soluble Sulphate	IS 2720(Part 27) : 1977 (RA 2010)	0.1% to 20 %

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		Calcium Carbonate	IS 2720(Part 23) : 1976 (RA 2010)	0.1% to 20 %
		Electrical Conductivity	IS 14767 : 2000 RA 2006 / FAO 2007	1 to 50000 µmhos/cm
		Bulk Density	IS 2720(Part 3)Sec 2 : 1980 (RA 2011)	1 g/cc to10 g/cc
		Color	SOP No. ESO -010 Issue / Rev No / Date 03/04.08.14 / 01/04.08.14	Qualitative
		Consistency	SOP No. ESO -011 Issue / Rev No / Date 03/04.08.14 / 01/04.08.14	Qualitative (Sticky / Non-sticky)
		Texture	SOP No. ESO -036 Issue / Rev No / Date 03/04.08.14 / 01/04.08.14	1% to 100 %
		Alkalinity	SOP No. ESO -037 03/04.08.14	0.1% to 20 %
		Sodium absorption Ratio	SOP No. ESO -038 03/04.08.14	1% to 20%
		Oil / Grease	SOP No. ESO -039 03/04.08.14	0.1% to 10 %
		Sulphates	IS 2720(Part 27) : 1977 (RA 2010)	0.01% to 20 %
		Nitrates	IS 14684 : 1999 (RA 2008) / IS 3025(Part 34) : 1988 (RA 2009) Ultraviolet Spectro Photometric Method	0.1% to 20 %
		Total Nitrogen	IS 14684 : 1999 (RA 2008) / FAO 2007	0.1% to 20 %
		Total Phosphorous	IS 14684 : 1999 (RA 2008)	0.1% to 20 %

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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
2.	Solid Wastes - Sludge, Sediment, Water Formed Deposits	Calcium	USEPA 3050B- 1996	0.05% to 20%
		Magnesium	USEPA 3050B- 1996	0.04% to 20%
		Sodium	USEPA 3050B- 1996	0.05% to 20%
		Potassium	USEPA 3050B- 1996	0.05% to 20%
		Iron	USEPA 3050B- 1996	0.05% to 20%
		Copper	USEPA 3050B- 1996	0.02% to 20%
		Nickel	USEPA 3050B- 1996	0.01% to 20%
		Chromium	USEPA 3050B- 1996	0.01% to 20%
		Lead	USEPA 3050B- 1996	0.0%1 to 20%
		Zinc	USEPA 3050B- 1996	0.02% to 20%
		Arsenic	USEPA 3050B- 1996	0.1% to 20%
		Silica	IS 2720(Part 25): 1982 (RA 2010)	0.1% to 20%
		Manganese	USEPA 3050B- 1996	0.001% to 20%
		Aluminium	USEPA 3050B- 1996	0.001% to 20%
		Moisture	IS 13624 : 1993 (RA 2013)	0.01% to 20 %
		Loss on Ignition	IS 13624 : 1993 (RA 2013)	0.1% to 20 %
		Oil and Grease	IS 13624 : 1993 (RA 2013)	0.02% to 20 %
		Phosphates	IS 13624 : 1993 (RA 2013)	0.001% to 20%
		Sulphate	IS 13624 : 1993 (RA 2013)	0.005% to 20%
		Manganese	IS 13624 : 1993 (RA 2013)	0.001% to 20%
Iron	IS 13624 : 1993 (RA 2013)	0.5% to 20%		
Chromium	IS 13624 : 1993 (RA 2013)	0.001% to 20%		
Lead	IS 13624 : 1993 (RA 2013)	0.001% to 20%		
Copper	IS 13624 : 1993 (RA 2013)	0.002% to 20%		
Nickel	IS 13624 : 1993 (RA 2013)	0.002% to 20%		
Zinc	IS 13624 : 1993 (RA 2013)	0.002% to 30%		
Calcium	IS 13624 : 1993 (RA 2013)	0.05% to 30%		
Magnesium	IS 13624 : 1993 (RA 2013)	0.04% to 30%		
Aluminum	IS 13624 : 1993 (RA 2013)	0.05% to 30 %		

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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
III.	ATMOSPHERIC POLLUTION			
1.	Ambient Air	Particulate Matter (PM _{2.5}) Resirable	SOP – EA -001- In house validated method / Issue No/Date : 03 / 04.08.2014	5 µg/m ³ to 200 µg/m ³
		Suspended Particulate Matter	IS 5182(Part 4) : 1999 (RA 2010)	5 µg/m ³ to 1000µg/m ³
		Respirable Suspended Particulate Matter (PM ₁₀)	IS 5182(Part 23) : 2006 (RA 2012)	5 µg/m ³ to 1000 µg /m ³
		Sulphur Dioxide	IS 5182(Part 2) : 2001 (RA 2012)	5 µg/m ³ to 100 µg /m ³
		Oxides of Nitrogen	IS 5182(Part 6) : 2006 (RA 2012)	6 µg/m ³ to 750 µg /m ³
		Carbon Monoxide (Co)	IS 5182(Part 10) : 1999 (RA 2009) Indicator Tube Method	1.15 mg/m ³ to 20 mg/m ³
		Ozone	IS 5182(Part 9) : 1974 (RA 2009)	20 µg /m ³ to 500 µg /m ³
		Lead	IS 5182(Part 22) : 2004 (RA 2009)	0.5 µg/m ³ to 10 µg /m ³
		Ammonia	SOP – EA -009 - In house validated method / Issue No/Date :03/04.08.2014 (Based on CPCB Method)	10 µg/m ³ to 2000 µg /m ³
		Arsenic	SOP – EA -010 - In house validated method / Issue No/Date :03/04.08.2014 (Based on CPCB Method)	1 ng /m ³ to 50 ng /m ³
		Nickel	SOP – EA -011 - In house validated method / Issue No/Date :03/04.08.2014 (Based on CPCB Guideline)	1 ng /m ³ to 10 ng /m ³

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		Benzene	IS 5182(Part 11) : 2006 (RA 2012)	1 µg /m ³ to 10 µg /m ³
		Benzo (a) Pyrene	IS 5182(Part 12) :2004 (RA 2009)	1 ng /m ³ to 10 ng /m ³
2.	Stack Emission	Stack Velocity	IS 11255(Part 3) : 2009	3 m/s to 50 m/s
		Stack Temperature	IS 11255(Part 3) : 1985 (RA 2008)	Ambient-1000°C
		Stack Pressure	IS 11255(Part 3) : 1985 (RA 2008)	0.5 to 100 mm Hg
		Volume of Gas discharged	IS 11255(Part 3) : 1985 (RA 2008)	70 Nm ³ / hr to 500000 Nm ³ / hr
		Particulate Matter	IS 11255(Part 1) : 1985 (RA 2009)	5 mg / Nm ³ to 1000 mg / Nm ³
		Sulphur dioxide	IS 11255(Part 2) : 1985 (RA 2003)	5 mg / Nm ³ to 100 mg / Nm ³
		Oxide of Nitrogen	IS 11255(Part 7) : 2005 (RA 2012)	2.0 mg / Nm ³ to 100mg / Nm ³
		Carbon dioxide	IS 13270 :1992 (RA 2009)	0.2% to 20%
		Carbon Monoxide	IS 13270 : 1992 (RA 2009)	0.2% to 10%
		Oxygen	IS 13270 : 1992 (RA 2009)	0.2% to 20%
3.	Noise	Noise Level	IS 9989 : 1981 (RA 2008)	30 to 130 dB(A)
IV.	FOOD & AGRICULTURAL PRODUCTS			
1.	Food & Agri Products (Cereals and Pulses, Nut and Nut products, Milk and Milk products, Chocolate and bakery items)	Moisture	AOAC (20 th Edition).2016 .925.10 AOAC (19 th Edition).2012 .984.20	0.1% to 10%
		Protein	AOAC (20 th Edition).2016 920.87	0.5% to 30.0%
		Crude Fibre	AOAC (20 th Edition).2016 920.86	0.1% to 20 %
		Total Ash	AOAC (20 th Edition).2016 .923.03	0.1% to 10.0%

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		Acid insoluble ash	IS 4706 (Part 2) 1978 (RA 2009)	0.01% to 5.0%
		Fat	AOAC (20 th Edition). 2016 .920.85	0.1% to 25.0%
		Energy	SOP EF - 034 Issue No : 01/15.12.2014	10 to 800 Kcal/100g
		Carbohydrates	SOP EF - 034 Issue No : 01/15.12.2014	10% to 80%

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**.