



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name SHIVALIK SOLID WASTE MANAGEMENT LTD, VILLAGE -MAJRA, P.O. -DABHOTA, SOLAN, HIMACHAL PRADESH , INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-5757 Page No. : 1 / 22

Validity 05/07/2019 to 04/07/2021 Last Amended on -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Effluents/Waste Water	Escherichia coli	APHA23rd Edition (9221 B, 9221 F, 9221 C) Multiple Tube Dilution Test : 2017	Qualitative(Absent/Present per/100 ml)
2	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Effluents/Waste Water	Faecal Coliform	APHA23rd Edition (9221 B, 9221 E) Multiple Tube Dilution Test: 2017	1.8 MPN/100 ml to 1600 MPN/100 ml
3	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Effluents/Waste Water	Total Coliform Baterial	APHA23rd Edition (9221 B) Multiple Tube Dilution Test: 2017	1.8 MPN/100 ml to 1600 MPN/100 ml
4	BIOLOGICAL- WATER	Drinking Water	Escherichia coli	APHA23rd Edition (9221B, 9221F, 9221C) MultipleTube Dilution Test : 2017	Qualitative(Absent /Present per/100 ml)
5	BIOLOGICAL- WATER	Drinking Water	Standard Plate Count	APHA23rd Edition (9215 B) Pour Plate Method: 2017	1 CFU/ml to 100000 CFU/ml
6	BIOLOGICAL- WATER	Drinking Water	Total Coliform	APHA23rd Edition (9221 B) Multiple Tube Dilution Test: 2017	1.8 MPN/100 ml to 1600 MPN/100 ml
7	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Ammonia	CPCB Manual for measurement of Ambient Air Pollutants Vol-I: 2011	10 mg/m ³ to 400 mg/m ³
8	CHEMICAL- ATMOSPHERIC POLLUTION	Ambient Air	Benzene	IS 5182 (Part 11): 2006	0.01 mg/m ³ to 10 mg/m ³



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9	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Benzopyrene (BaP) in Particulate Matter	IS 5182 (Part 12): 2004	0.1 ng/m ³ to 5 ng/m ³
10	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Metals in Particulate Matter Arsenic (As)	SOP No. T/AA-05: 2015	2 ng/m ³ to 50 ng/m ³
11	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Metals in Particulate Matter Lead (Pb)	IS 5182 (Part 22): 2014	0.4 mg/m ³ to 100 mg/m ³
12	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Metals in Particulate Matter Nickel (Ni)	SOP No. T/AA-05: 2015	10 ng/m ³ to 100 ng/m ³
13	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Nitrogen Dioxide (NO ₂)	IS 5182 (Part VI): 2006	3 mg/m ³ to 80 mg/m ³
14	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Ozone	IS 5182 (Part 9): 1974	10 mg/m ³ to 200 mg/m ³
15	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	PM ₁₀	IS 5182 (Part 23) : 2006	5 mg/m ³ to 1000 mg/m ³
16	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	PM _{2.5}	CPCB Manual for measurement of Ambient Air Pollutants Vol-I -PM 2.5: 2011	5 mg/m ³ to 500 mg/m ³
17	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Sulphur Dioxide (SO ₂)	IS 5182 (Part II): 2001	3 mg/m ³ to 150 mg/m ³



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18	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Oxide of Nitrogen	IS 11255 (Part 7): 2005	1 mg/Nm ³ to 130 mg/Nm ³
19	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Particulate Matter	IS 11255 (Part 1): 1985	5 mg/Nm ³ to 2000 mg/Nm ³
20	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Sulphur Dioxide (SO ₂)	IS 11255 (Part 2): 1985	3 mg/Nm ³ to 200 mg/Nm ³
21	CHEMICAL-POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Cadmium	USEPA Method 1311-TCLP: 1992	0.5 mg/L to 50 mg/L
22	CHEMICAL-POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Chromium as Cr	USEPA Method 1311-TCLP: 1992	0.5 mg/L to 50 mg/L
23	CHEMICAL-POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Copper	USEPA Method 1311-TCLP: 1992	0.5 mg/L to 50 mg/L
24	CHEMICAL-POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Iron	USEPA Method 1311-TCLP: 1992	0.5 mg/L to 50 mg/L
25	CHEMICAL-POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Lead	USEPA Method 1311-TCLP: 1992	0.5 mg/L to 50 mg/L



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26	CHEMICAL- POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Nickel	USEPA Method 1311- TCLP: 1992	0.5 mg/L to 50 mg/L
27	CHEMICAL- POLLUTION & ENVIRONMENT	Metal Testing in Leachate (TCLP)(Liquid/Slurry/Sludge/Solid/Semi)	Zinc	USEPA Method 1311- TCLP: 1992	0.5 mg/L to 50 mg/L
28	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Arsenic	USEPA 3050B: 1996	0.5 mg/kg to 1000 mg/kg
29	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Cadmium as Cd	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
30	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Chromium as Cr	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
31	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Copper	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
32	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Iron as Fe	USEPA Method 3050B: 1996	0.5 mg/kg to 2000 mg/kg
33	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Lead as Pb	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
34	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Mercury as Hg	USEPA Method 3050B: 1996	0.5 mg/kg to 100 mg/kg



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35	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Nickel as Ni	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
36	CHEMICAL- POLLUTION & ENVIRONMENT	Metals in Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Zinc as Zn	USEPA Method 3050B: 1996	0.5 mg/kg to 1000 mg/kg
37	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Available Phosphorus	IS 10158 and Manual - Soil Testing in India (Department of Agriculture) : 1982	1 mg/Kg to 2000 mg/Kg
38	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Available Potassium	Lab SOP No. T/S-10 Manual -Soil Testing in India (Department of Agriculture) : 2015	1 Kg/ha to 100 Kg/ha
39	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Cadmium	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
40	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Conductivity	IS 14767: 2000	0.01 mS/cm to 199.9 mS/cm
41	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Copper	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
42	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Iron	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
43	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Lead	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg



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44	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Manganese	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
45	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Moisture Content	Sec-1 IS 2720 (Part II): 1973	1 % to 80 %
46	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Nickel	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
47	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Organic carbon	Sec-1 IS 2720 (Part XXII): 1972	1 % to 70 %
48	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Organic Matter	Sec-1 IS 2720 (Part XXII): 1972	1 % to 70 %
49	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	pH	cl-2 IS 2720 (Part 26) : 1987	1 to 13
50	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Total Nitrogen	IS 14684 : 1999	1 % to 40 %
51	CHEMICAL- POLLUTION & ENVIRONMENT	Soil /Sediments	Zinc	SOP No. T/S-07 : 2015	1 mg/Kg to 100 mg/Kg
52	CHEMICAL- POLLUTION & ENVIRONMENT	Soil/sediments	Cation Exchange Capacity as Metallic Ions	IS 2720 (part XXIV) clause -3 : 1976	2 meq percent to 100 meq percent
53	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water	Bio Assay Test (Acute Toxicity)	IS 6582: 1971	Qualitative



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54	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water (Effluent/Sewage)	pH	APHA23rd Edition (4500 H+ B) : 2017	2 to 13
55	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Acidity as CaCO ₃	APHA23rd Edition (2310 B): 2017	1 mg/L to 500 mg/L
56	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Arsenic	APHA23rd Edition (3113 B): 2017	0.05 mg /L to 5 mg /L
57	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993	1 mg/L to 5000 mg/L
58	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Boron as B	APHA23rd Edition (4500-B-B): 2017	0.1 mg/L to 100 mg/L
59	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Cadmium	APHA23rd Edition (3111B): 2017	0.1 mg/L to 100 mg/L
60	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Chemical Oxygen Demand (COD)	APHA23rd Edition (5220 B): 2017	10 mg/L to 20000 mg/L
61	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Chloride	APHA23rd Edition (4500Cl - B)): 2017	5 mg/L to 1000 mg/L
62	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Chromium	APHA23rd Edition (3111-B): 2017	0.1 mg/L to 100 mg/L
63	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Cobalt	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 15 mg/L



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64	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Copper	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 100 mg/L
65	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Dissolved Oxygen	APHA23rd Edition (4500-O-B,C): 2017	0.1 mg/L to 10 mg/L
66	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Fixed Solids/ Inorganic Solids	APHA23rd Edition (2540 G): 2017	2 mg/L to 4000 mg/L
67	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Free Residual Chlorine in Treated Water	IS 3025 (Part 26), Iodometric Method: 1986	0.1 mg/L to 5 mg/L
68	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Hexavalent Chromium	APHA23rd Edition (3500 Cr B): 2017	0.1 mg/L to 1 mg/L
69	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Iron	APHA23rd Edition 3111 B: 2017	0.1 mg/L to 100 mg/L
70	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Lead	APHA23rd Edition 3111 B: 2017	0.05 mg/L to 100 mg/L
71	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Manganese	APHA23rd Edition 3111 B: 2017	0.1 mg/L to 100 mg/L
72	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Mercury	APHA23rd Edition 3112 B: 2017	0.01 mg/L to 5 mg/L
73	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Nickel	APHA23rd Edition 3111 B: 2017	0.1 mg/L to 100 mg/L



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74	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Nitrate Nitrogen	APHA23rd Edition (4500 B): 2017	0.5 mg/L to 50 mg/L
75	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Nitrogen (Ammonia as NH ₃ – N)	APHA23rd Edition (4500 NH ₃ B & C): 2017	0.5 mg/L to 100 mg/L
76	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Oil & Grease	APHA23rd Edition (5520 B): 2017	1 mg/L to 500 mg/L
77	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Phenolic Compounds	IS 3025 (Part 43): 1992	0.05 mg/L to 20 mg/L
78	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Phosphorous	IS 3025 (Part 31): 1988	0.1 mg/L to 50 mg/L
79	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Potassium	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 800 mg/L
80	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Selenium	APHA23rd Edition (3113 B): 2017	0.05 mg/L to 10 mg/L
81	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Sodium	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 800 mg/L
82	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Specific Conductance at 25 Deg.C	APHA23rd Edition (2510-B): 2017	1 µS/cm to 100 mS/cm
83	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Sulphate	APHA23rd Edition (4500 D): 2017	2 mg/L to 1000 mg/L



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84	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Sulphate	IS 3025 (Part 24) Turbidity Method : 1986	1 mg/L to 400 mg/L
85	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Sulphide	APHA23rd Edition (4500-S2- F): 2017	0.1 mg/L to 5
86	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Sulphite	APHA23rd Edition (4500-SO3- B): 2017	1 mg/L to 50 mg/L
87	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Temperature	IS 3025 (Part 9): 1984	4 °C to 50 °C
88	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Total Kjeldhal Nitrogen	APHA23rd Edition (4500 NH3 B): 2017	2 mg/L to 100 mg/L
89	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Total Dissolved Solids	APHA23rd Edition (2540-C): 2017	2 mg/L to 40000 mg/L
90	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Total Suspended Solids	APHA23rd Edition (2540-D): 2017	2 mg/L to 5000 mg/L
91	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Volatile Solids/ Organic Solids	IS 3025 (Part 18) Gravimetric Method: 1984	2 mg/L to 4000 mg/L
92	CHEMICAL- POLLUTION & ENVIRONMENT	Waste Water(Effluents/ Sewage)	Zinc	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 100 mg/L
93	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Ash Content	IS 1448 (Part 126): 1988	0.5 % to 90 %



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94	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Calorific Value	IS 1350 (Part 2): 1970	100 cal/g to 10000 cal/g
95	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Fixed Solids/ Inorganic Solids	APHA 23rd Edition (2540 E): 2017	0.05 % to 25 %
96	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Loss on Drying	CPCB Manual LATS/16/2003-04: 2006	1 % to 95 %
97	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	pH	APHA23rd Edition (4500 H+ B): 2017	2 to 12
98	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Volatile Solids	APHA 23rd Edition (2540 E): 2017	0.05 % to 25 %
99	CHEMICAL- POLLUTION & ENVIRONMENT	Wastes (Liquid/Slurry/Sludge/Solid/Semi)	Volatile Solids (Loss on Ignition)	APHA 23rd edition 2540 G: 2017	0.5 % to 90 %
100	CHEMICAL- WATER	Construction water	Chloride (as Cl)	IS 3025 (Part 32) Argentometric Method: 1988	5 mg/L to 3000 mg/L
101	CHEMICAL- WATER	Construction Water	Colour Retention of KMnO4	IS 1070 (Annex A): 1992	Qualitative(Pass/ Fail)
102	CHEMICAL- WATER	Construction water	Inorganic Solid	IS 3025 (Part 18) Gravimetric Method: 1984	2 mg/L to 3000 mg/L
103	CHEMICAL- WATER	Construction water	pH	APHA23rd Ed. 2017 (4500 H+ B): 2017	4 to 12
104	CHEMICAL- WATER	Construction water	Sulphates	IS 3025 (Part 24) Turbidity Method: 1986	5 mg/L to 500 mg/L



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105	CHEMICAL- WATER	Construction water	Sulphates	IS 3025 (Part 24) Turbidity Method: 1986	5 mg/L to 500 mg/L
106	CHEMICAL- WATER	Construction water	Volatile Solids/ Organic Solids	IS 3025 (Part 18) Gravimetric Method: 1984	2 mg/L to 200 mg/L
107	CHEMICAL- WATER	Construction water	Volume of 0.02 N H ₂ SO ₄ required to neutralize 100 ml of the sample using mixed indicator (Alkalinity)	IS 3025 (Part 23): 1986	1 ml to 30 ml
108	CHEMICAL- WATER	Construction water	Volume of 0.02 N NaOH required to neutralize 100 ml of the sample using Phenolphthalein Indicator (Acidity)	IS 3025 (part 22): 1986	1 ml to 30 ml
109	CHEMICAL- WATER	Drinking Water	Aluminium	IS 3025 (Part 55): 2003	0.05 mg/L to 5 mg/L
110	CHEMICAL- WATER	Drinking Water	Anionic Surfactants (as MBAS)	APHA23rd Edition (5540 C): 2017	0.1 mg/L to 10 mg/L
111	CHEMICAL- WATER	Drinking Water	Arsenic	APHA23rd Edition (3113 B): 2017	0.01 mg/L to 2 mg/L
112	CHEMICAL- WATER	Drinking Water	Boron	IS 3025 (Part 57): 2005	0.02 mg/L to 5 mg/L
113	CHEMICAL- WATER	Drinking Water	Cadmium	APHA23rd Edition (3111 B): 2017	0.003 mg/L to 2 mg/L
114	CHEMICAL- WATER	Drinking Water	Calcium	IS 3025 (Part 40) EDTA Titrimetric Method: 1991	1 mg/L to 900 mg/L
115	CHEMICAL- WATER	Drinking Water	Chloride	IS 3025 (Part 32) Argentometric Method: 1988	5 mg/L to 2000 mg/L



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
116	CHEMICAL- WATER	Drinking Water	Cobalt (Co)	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 10 mg/L
117	CHEMICAL- WATER	Drinking Water	Colour	APHA23rd Edition (2120 B): 2017	1 Hazen to 100 Hazen
118	CHEMICAL- WATER	Drinking Water	Copper	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
119	CHEMICAL- WATER	Drinking Water	Fluoride	APHA23rd Edition (4500 F -D): 2017	0.1 mg/L to 10 mg/L
120	CHEMICAL- WATER	Drinking Water	Free Residual Chlorine	IS 3025 (Part 26), Iodometric Method: 1986	0.1 mg/L to 1.5 mg/L
121	CHEMICAL- WATER	Drinking Water	Iron	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 5 mg/L
122	CHEMICAL- WATER	Drinking Water	Lead	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
123	CHEMICAL- WATER	Drinking Water	Magnesium	APHA23rd Edition (3500 Mg - B): 2017	1 mg/L to 600 mg/L
124	CHEMICAL- WATER	Drinking Water	Manganese	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 5 mg/L
125	CHEMICAL- WATER	Drinking Water	Mercury	APHA23rd Edition (3112 B): 2017	0.001 mg/L to 0.5 mg/L
126	CHEMICAL- WATER	Drinking Water	Nickel	APHA23rd Edition (3111 B): 2017	0.02 mg/L to 10 mg/L
127	CHEMICAL- WATER	Drinking Water	Nitrate Nitrogen	APHA23rd Edition (4500-NO3 B): 2017	1 mg/L to 100 mg/L
128	CHEMICAL- WATER	Drinking Water	Nitrogen (Ammonia as NH3 -N)	APHA23rd Edition (4500-NH3 B & C): 2017	0.1 mg/L to 10 mg/L



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129	CHEMICAL- WATER	Drinking Water	Odour	IS 3025 (Part 5): 1983	Qualitative(Agreeable /Not agreeable)
130	CHEMICAL- WATER	Drinking Water	pH	APHA23rd Edition (4500H+ B): 2017	4 to 12
131	CHEMICAL- WATER	Drinking Water	Phenolic Compounds	IS 3025 (Part 43): 1992	0.001 mg/L to 0.1 mg/L
132	CHEMICAL- WATER	Drinking Water	Selenium	APHA23rd Edition (3113 B): 2017	0.005 mg/L to 1 mg/L
133	CHEMICAL- WATER	Drinking Water	Specific Conductance at 25 Deg.C	APHA23rd Edition (2510 B): 2017	0.001 mS/cm to 100 mS/cm
134	CHEMICAL- WATER	Drinking Water	Sulphate	IS 3025 (Part 24) Turbidity Method: 1986	5 mg/L to 600 mg/L
135	CHEMICAL- WATER	Drinking Water	Sulphide	IS 3025 (Part 29): 1986	0.1 mg/L to 5 mg/L
136	CHEMICAL- WATER	Drinking Water	Temperature	IS 3025 (Part 9): 1984	4 °C to 50 °C
137	CHEMICAL- WATER	Drinking Water	Total Alkalinity	APHA23rd Edition (2320 B): 2017	5 mg/L to 1000 mg/L
138	CHEMICAL- WATER	Drinking Water	Total Chromium	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
139	CHEMICAL- WATER	Drinking Water	Total Dissolved Solids	IS 3025 (Part 16) Gravimetric Method: 1984	2 mg/L to 40000 mg/L
140	CHEMICAL- WATER	Drinking Water	Total Hardness as CaCO3	APHA23rd Edition (2340 C): 2017	5 mg/L to 2000 mg/L
141	CHEMICAL- WATER	Drinking Water	Total Suspended Solids	IS 3025 (Part 17) Gravimetric Method: 1984	2 mg/L to 50 mg/L
142	CHEMICAL- WATER	Drinking Water	Turbidity	IS 3025 (Part 10) by Nephelometric Method: 1984	0.1 NTU to 300 NTU



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
143	CHEMICAL- WATER	Drinking Water	Zinc	APHA23rd Edition (3111 B): 2017	0.2 mg/L to 25 mg/L
144	CHEMICAL- WATER	Ground water	Arsenic	APHA23rd Edition (3113 B): 2017	0.01 mg/L to 5 mg/L
145	CHEMICAL- WATER	Ground water	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993	5 mg/L to 100 mg/L
146	CHEMICAL- WATER	Ground water	Cadmium	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
147	CHEMICAL- WATER	Ground water	Calcium	IS 3025 (Part 40) EDTA Titrimetric Method: 1991	1 mg/L to 500 mg/L
148	CHEMICAL- WATER	Ground water	Chemical Oxygen Demand (COD)	APHA23rd Edition (5220 B): 2017	4 mg/L to 200 mg/L
149	CHEMICAL- WATER	Ground water	Chloride	IS 3025 (Part 32) Argentometric Method: 1988	5 mg/L to 1000 mg/L
150	CHEMICAL- WATER	Ground water	Color	APHA23rd Edition (2120 B): 1983	1 Hazen to 100 Hazen
151	CHEMICAL- WATER	Ground water	Copper	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
152	CHEMICAL- WATER	Ground water	Dissolved Oxygen	APHA23rd Edition (4500-O-B,C): 2017	0.1 mg/L to 10 mg/L
153	CHEMICAL- WATER	Ground water	Iron	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 10 mg/L
154	CHEMICAL- WATER	Ground Water	Iron	APHA23rd Edition (3500 Fe - B): 2018	0.1 mg/L to 10 mg/L
155	CHEMICAL- WATER	Ground water	Lead	APHA23rd Edition (3111 B): 2017	0.05 mg/L to 10 mg/L



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
156	CHEMICAL- WATER	Ground water	Magnesium	APHA23rd Edition (3500 Mg - B): 2017	1 mg/L to 100 mg/L
157	CHEMICAL- WATER	Ground water	Manganese	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
158	CHEMICAL- WATER	Ground water	Mercury	APHA23rd Edition (3112 B): 2017	0.001 mg/L to 2 mg/L
159	CHEMICAL- WATER	Ground water	Nickel	APHA23rd Edition 3111 B (page no 3-20): 2017	0.2 mg/L to 10 mg/L
160	CHEMICAL- WATER	Ground water	Nitrate Nitrogen	APHA23rd Edition (4500 NO3 - B): 2017	0.5 mg/L to 100 mg/L
161	CHEMICAL- WATER	Ground Water	Oil & Grease	APHA23rd Edition (5520 B): 2017	1 mg/L to 100 mg/L
162	CHEMICAL- WATER	Ground water	pH	APHA23rd Edition (4500 H+ B): 2017	4 to 12
163	CHEMICAL- WATER	Ground water	Phenolic Compounds	IS 3025 (Part 43): 1992	0.001 mg/L to 0.1 mg/L
164	CHEMICAL- WATER	Ground water	Phosphorous	IS 3025 (Part 31) Stannous Chloride Method: 1988	0.01 mg/L to 2 mg/L
165	CHEMICAL- WATER	Ground water	Potassium	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 100 mg/L
166	CHEMICAL- WATER	Ground water	Reactive Silica	APHA23rd Edition (4500 SiO2 C): 2017	0.2 mg/L to 25 mg/L
167	CHEMICAL- WATER	Ground water	Selenium	APHA23rd Edition (3113 B): 2017	0.05 mg/L to 5 mg/L
168	CHEMICAL- WATER	Ground water	Sodium	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 100 mg/L
169	CHEMICAL- WATER	Ground water	Specific Conductance at 25 Deg.C	APHA23rd Edition (2510 B): 2017	1 µS/cm to 100 mS/cm



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170	CHEMICAL- WATER	Ground water	Sulphates	IS 3025 (part 24) Turbidity Method: 1986	1 mg/L to 400 mg/L
171	CHEMICAL- WATER	Ground water	Sulphide	IS 3025 (Part 29): 1986	0.2 mg/L to 20 mg/L
172	CHEMICAL- WATER	Ground water	Temperature	IS 3025 (part 9): 1984	4 °C to 50 °C
173	CHEMICAL- WATER	Ground water	Total Alkalinity	APHA23rd Edition (2320 B): 2017	5 mg/L to 1000 mg/L
174	CHEMICAL- WATER	Ground water	Total Chromium	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
175	CHEMICAL- WATER	Ground water	Total Dissolved Solids	IS 3025 (part 16) Gravimetric Method: 1984	2 mg/L to 2000 mg/L
176	CHEMICAL- WATER	Ground water	Total Hardness as CaCO ₃	APHA23rd Edition (2340 C): 2017	5 mg/L to 1000 mg/L
177	CHEMICAL- WATER	Ground water	Total Suspended Solids	IS 3025 (Part 17) Gravimetric Method: 1984	2 mg/L to 500 mg/L
178	CHEMICAL- WATER	Ground water	Turbidity	IS 3025 (Part 10) Nephelometric Method: 1984	0.01 NTU to 100 NTU
179	CHEMICAL- WATER	Ground water	Volatile Solids/ Organic Solids	IS 3025 (Part 18) Gravimetric Method: 1984	2 mg/L to 200 mg/L
180	CHEMICAL- WATER	Ground water	Zinc	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
181	CHEMICAL- WATER	Surface water	Arsenic	APHA23rd Edition (3113 B): 2017	0.01 mg/L to 5 mg/L
182	CHEMICAL- WATER	Surface water	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 1993	5 mg/L to 100 mg/L



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
183	CHEMICAL- WATER	Surface water	Cadmium	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
184	CHEMICAL- WATER	Surface water	Calcium	IS 3025 (Part 40) EDTA Titrimetric Method): 1991	1 mg/L to 500 mg/L
185	CHEMICAL- WATER	Surface water	Chemical Oxygen Demand (COD)	APHA23rd Edition (5220 B): 2017	4 mg/L to 200 mg/L
186	CHEMICAL- WATER	Surface water	Chloride	IS 3025 (Part 32) Argentometric Method: 1988	5 mg/L to 1000 mg/L
187	CHEMICAL- WATER	Surface water	Chromium	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 2 mg/L
188	CHEMICAL- WATER	Surface water	Colour	APHA23rd Edition (2120 B): 2017	1 Hazen to 100 Hazen
189	CHEMICAL- WATER	Surface water	Copper	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
190	CHEMICAL- WATER	Surface water	Dissolved Oxygen	APHA23rd Edition (4500-O-B,C): 2017	0.1 mg/L to 10 mg/L
191	CHEMICAL- WATER	Surface water	Free Residual Chlorine	IS 3025 (Part 26), Iodometric Method: 1986	0.1 mg/L to 1.5 mg/L
192	CHEMICAL- WATER	Surface water	Iron	APHA23rd Edition (3111 B): 2017	0.1 mg/L to 10 mg/L
193	CHEMICAL- WATER	Surface water	Lead	APHA23rd Edition (3111 B): 2017	0.05 mg/L to 10 mg/L
194	CHEMICAL- WATER	Surface water	Magnesium	APHA23rd Edition (3500 Mg - B): 2017	1 mg/L to 100 mg/L
195	CHEMICAL- WATER	Surface water	Manganese	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
196	CHEMICAL- WATER	Surface water	Mercury	APHA23rd Edition (3112 B): 2017	0.001 mg/L to 2 mg/L
197	CHEMICAL- WATER	Surface water	Nickel	APHA23rd Edition (3111 B): 2017	0.2 mg/L to 10 mg/L
198	CHEMICAL- WATER	Surface water	Nitrate Nitrogen	APHA23rd Edition (4500 B): 2017	0.5 mg/L to 100 mg/L
199	CHEMICAL- WATER	Surface water	Oil & Grease	APHA23rd Edition (5520 B): 2017	1 mg/L to 100 mg/L
200	CHEMICAL- WATER	Surface water	pH	APHA23rd Edition (4500H+ B): 2017	4 to 12
201	CHEMICAL- WATER	Surface water	Phenolic Compounds	IS 3025 (Part 43): 1992	0.001 mg/L to 0.1 mg/L
202	CHEMICAL- WATER	Surface water	Phosphorous	IS 3025 (Part 31) Stannous Chloride: 1988	0.01 to 2
203	CHEMICAL- WATER	Surface water	Potassium	APHA23rd Edition (3111 B): 2017	1 mg/L to 100 mg/L
204	CHEMICAL- WATER	Surface water	Selenium	APHA23rd Edition (3113 B): 2017	0.05 mg/L to 5 mg/L
205	CHEMICAL- WATER	Surface water	Silica	APHA23rd Edition (4500 SiO2 C): 2017	0.2 mg/L to 25 mg/L
206	CHEMICAL- WATER	Surface water	Sodium	APHA23rd Edition (3111 B): 2017	1 mg/L to 100 mg/L
207	CHEMICAL- WATER	Surface water	Specific Conductance at 25 Deg.C	APHA23rd Edition (2510 B): 2017	1 µS/cm to 100 mS/cm
208	CHEMICAL- WATER	Surface Water	Sulphate	IS 3025 (Part 24): 1986	1 mg/L to 400 mg/L
209	CHEMICAL- WATER	Surface water	Sulphide	IS 3025 (Part 29): 1986	0.2 mg/L to 20 mg/L
210	CHEMICAL- WATER	Surface water	Temperature	IS 3025 (Part 9): 1984	4 °C to 50 °C



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
211	CHEMICAL- WATER	Surface water	Total Alkalinity	APHA23rd Edition (2320 B): 2017	5 mg/L to 1000 mg/L
212	CHEMICAL- WATER	Surface water	Total Dissolved Solids	IS 3025 (Part 16) Gravimetric Method: 1984	2 mg/L to 2000 mg/L
213	CHEMICAL- WATER	Surface water	Total Hardness as CaCO ₃	APHA23rd Edition (2340 C): 2017	5 mg/L to 1000 mg/L
214	CHEMICAL- WATER	Surface water	Total Suspended Solids	IS 3025 (Part 17) Gravimetric Method: 1984	2 mg/L to 500 mg /L
215	CHEMICAL- WATER	Surface water	Turbidity	IS 3025 (part 10) Nephelometric Method: 1984	0.01 NTU to 100 NTU
216	CHEMICAL- WATER	Surface water	Volatile and fixed residue (Total filterable and non filterable)	IS 3025 (part 18): 1984	2 mg/L to 200 mg/L
217	CHEMICAL- WATER	Surface water	Zinc	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
218	CHEMICAL- WATER	Swimming Pool	Aluminium	IS 3025 (part 55): 1988	0.05 mg/L to 5 mg/L
219	CHEMICAL- WATER	Swimming Pool	Chloride	IS 3025 (Part 32) Argentometric Method: 1988	5 mg/L to 1000 mg/L
220	CHEMICAL- WATER	Swimming Pool	Colour	APHA23rd Edition (2120 B): 2017	1 Hazen to 100 Hazen
221	CHEMICAL- WATER	Swimming Pool	Iron	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L
222	CHEMICAL- WATER	Swimming Pool	Lead	APHA23rd Edition (3111 B): 2017	0.01 mg/L to 5 mg/L



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223	CHEMICAL- WATER	Swimming Pool	Odour	IS 3025 (part 5) : 1983	Qualitative(Agreeable/ Not Agreeable)
224	CHEMICAL- WATER	Swimming Pool	Oxygen Absorbed in 4 Hrs. at 27 °C	IS 3025 (Part 63): 2007	0.4 mg/L to 5 mg/L
225	CHEMICAL- WATER	Swimming Pool	pH	APHA 23rd Edition (4500 H+ B): 2017	4 to 12
226	CHEMICAL- WATER	Swimming Pool	Total Alkalinity as CaCO ₃	APHA23rd Edition (2350 B): 2017	5 mg/L to 700 mg/L
227	CHEMICAL- WATER	Swimming Pool	Total Dissolved Solids	IS 3025 (Part 16) Gravimetric Method: 1984	2 mg/L to 40000 mg/L
228	CHEMICAL- WATER	Swimming Pool	Total Residual Chlorine	IS 3025 (part 26): 1986	0.1 mg/L to 1 mg/L
229	CHEMICAL- WATER	Swimming Pool	Turbidity	IS 3025 (Part 10) Nephelometric Method: 1984	0.1 NTU to 100 NTU



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S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Site Facility					
1	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Air	Carbon Monoxide (CO)	SOP No. T/AA-06: 2015	1 mg/m ³ to 10 mg/m ³
2	CHEMICAL-ATMOSPHERIC POLLUTION	Ambient Noise Level (Excluding vibration)	Noise Levels Leq dB(A) Ambient	IS 9989: 1981	30 dB(A) to 130 dB(A)
3	CHEMICAL-ATMOSPHERIC POLLUTION	Source Noise Level (DG)	Noise Levels (DG)	IS/ISO 8528 (Part 10): 1998	30 dB(A) to 130 dB(A)
4	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Carbon dioxide (CO ₂)	SOP No. T/AE-04: 2015	0.2 % to 25 %
5	CHEMICAL-ATMOSPHERIC POLLUTION	Stack Emission	Oxygen (O ₂)	SOP No. T/AE-04: 2015	0.2 % to 25 %