



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name LOTUS GRANGES (INDIA) LTD., NO. 371/10, 2ND RAILWAY BRIDGE, SHE'LA NAGAR TO VSEZ BACK GATE ROAD, VISAKHAPATNAM, ANDHRA PRADESH, INDIA

Accreditation Standard ISO/IEC 17025:2005

Certificate Number TC-8219 Page No. : 1 / 7

Validity 21/12/2018 to 20/12/2020 Last Amended on -

'In view of the transition deadline for ISO/IEC 17025:2017, the validity of this accreditation certificate will cease on 30.11.2020.'

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	Waste Water & Industrial effluents	Coliforms	APHA 23rd Edn 9222 B: 2017	1 CFU/100ml to 1000000 CFU/100ml
2	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Waste Water & Industrial effluents	Faecal Coliform	APHA 23rd Edn 9222 D: 2017	1.8 MPN/100ml to 1600 MPN/100ml
3	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Waste Water & Industrial effluents	Faecal Coliform, (MFT)	APHA 23rd Edn 9222 D: 2017	1 CFU/100ml to 1000000 CFU/100ml
4	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Waste Water & Industrial effluents	Total Coliform, (MFT)	APHA 23rd Edn 9222 B: 2017	1 CFU/100ml to 1000000 CFU/100ml
5	BIOLOGICAL- ENVIRONMENT AND POLLUTION	Waste water and Industrial effluent	Faecal Coliform	APHA 23rd Edn 9222 D & USP: 2017	1 CFU/100ml to 100000 CFU/100ml
6	BIOLOGICAL- WATER	Drinking water	Coliform	IS 5401 (Part 1): 2012	Qualitative
7	BIOLOGICAL- WATER	Drinking water	Coliform Bacteria	IS 1622: 2009	2 MPN /100 ml to 1600 MPN / 100ml
8	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Escherichia coli	USP 37/EP/IP: 2014	Qualitative
9	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Pseudomonas aeruginosa	USP 37/EP/IP: 2014	Qualitative
10	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Salomnella	USP 37/EP/IP: 2014	Qualitative



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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
11	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Staphylococcus aureus	USP 37/EP/ IP: 2014	Qualitative
12	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Total plate count	IS 5402:2012/ ISO 6222:1999 RA: 2012	1 CFU/ml to 1000000 CFU/ml
13	BIOLOGICAL- WATER	Raw water, Drinking water, Purified water, potable water	Yeast & moulds	IS 5403: 2014	1 CFU/ml to 100000 CFU/ml
14	BIOLOGICAL- WATER	Surface Water	Vibrio cholerae	IS:5887(Part-5)/ APHA 23rd Edn 9260 H: 2017	Qualitative
15	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Ammonia as NH ₃ -N	IS 3025 (Part-34): 2017	1 mg/L to 100 mg/L
16	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Biochemical Oxygen Demand (BOD)	IS: 3025 (Part-44): 2017	2 mg/L to 50000 mg/L
17	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Boron as B	IS 3025 (Part-57): 2017	0.1 mg/L to 10 mg/L
18	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Calcium as Ca	IS 3025 (Part-40): 2014	5 mg/L to 5000 mg/L
19	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Chemical Oxygen Demand (COD)	IS 3025 (Part- 58): 2012	5 mg/L to 100000 mg/L
20	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Chloride as Cl	IS 3025 (Part-32): 2017	10 mg/L to 5000 mg/L



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21	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Colour	IS 3025 (Part- 4): 2017	5 CU to 100 CU
22	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Conductivity	IS 3025 (Part-14): 2013	1 μ S/cm to 20000 μ S/cm
23	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Magnesium as Mg	APHA 23rd Edn 3500-Mg B: 2017	5 mg/L to 2000 mg/L
24	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Nitrate as NO ₃	IS 3025 (Part- 34) : 2017	1 mg/L to 100 mg/L
25	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Oil & Grease	IS 3025 (Part- 39) : 2017	4 mg/L to 40 mg/L
26	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	pH	IS 3025 (Part-11): 2017	2 to 12
27	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Phosphate as PO ₄	APHA-23rd Edn 4500 D: 2017	0.5 mg/L to 50 mg/L
28	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Sulphate as SO ₄	IS 3025 (Part- 24): 2014	10 mg/L to 5000 mg/L
29	CHEMICAL-POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Total Dissolved Solids	IS 3025 (Part-16): 2013	5 mg/L to 50000 mg/L



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Certificate Number TC-8219 Page No. : 4 / 7

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30	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Total Kjeldhal Nitrogen as NH ₃	IS 3025 (Part-34): 2017	1 mg/L to 200 mg/L
31	CHEMICAL- POLLUTION & ENVIRONMENT	Liquid Effluent/ Waste Water	Turbidity	IS 3025 (Part-10): 2017	1 NTU to 200 NTU
32	CHEMICAL- POLLUTION & ENVIRONMENT	waste water & Industrial waste	Total Suspended solids	IS 3025 (Part- 17): 2017	5 mg/L to 10000 mg/L
33	CHEMICAL- WATER	Drining Water	Free residual Chlorine	IS 3025 (Part 26): 2003 RA: 2014	0.1 mg/L to 10 mg/L
34	CHEMICAL- WATER	Drinking water	Calcium as Ca	IS 3025 (Part 40): 1991 RA: 2014	1 mg/L to 1000 mg/L
35	CHEMICAL- WATER	Drinking Water	Chloride as Cl	IS 3025 (Part 32): 1988 RA: 2014	1 mg/L to 1000 mg/L
36	CHEMICAL- WATER	Drinking Water	Colour	IS 3025 (Part-4):1983 RA: 2017	1 CU to 100 CU
37	CHEMICAL- WATER	Drinking Water	Fluoride as F	APHA 23rd Edn 4500 D: 2017	0.1 mg/L to 10 mg/L
38	CHEMICAL- WATER	Drinking water	Iron as Fe	IS 3025 (Part 53): 2003 RA: 2014	0.05 mg/L to 10 mg/L
39	CHEMICAL- WATER	Drinking water	Magnesium as Mg	APHA 23rd Edn 3500- D: 2017	1 mg/L to 1000 mg/L
40	CHEMICAL- WATER	Drinking water	Nitrate as NO ₃	APHA 23rd Edn 4500 B: 2017	1 mg/L to 100 mg/L
41	CHEMICAL- WATER	Drinking water	Nitrite as NO ₂	IS 3025 (Part 34): 1988 RA: 2014	0.05 mg/L to 1 mg/L



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Certificate Number TC-8219 Page No. : 5 / 7

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42	CHEMICAL- WATER	Drinking Water	pH	IS 3025 (Part-11): 1984 RA: 2017	2 to 13
43	CHEMICAL- WATER	Drinking water	Sulfate as SO ₄	IS 3025 (Part 24): 1986 RA: 2014	10 mg/L to 100 mg/L
44	CHEMICAL- WATER	Drinking water	Total Alkalinity as CaCO ₃	IS 3025 (Part 23): 1986 RA: 2014	1 mg/L to 1000 mg/L
45	CHEMICAL- WATER	Drinking Water	Total Hardness as CaCO ₃	IS 3025 (Part 21): 2009 RA: 2014	2 mg/L to 1000 mg/L
46	CHEMICAL- WATER	Drinking water	Turbidity	IS 3025 (Part-10):1984 RA: 2017	1 NTU to 100 NTU
47	CHEMICAL- WATER	Drinking water	Total Dissolved Solids	IS 3025 (Part 16): 1984 RA: 2017	5 mg/L to 2000 mg/L
48	CHEMICAL- WATER	Ground water	Calcium as Ca	IS 3025 (Part 40): 1991 RA: 2014	1 mg/L to 1000 mg/L
49	CHEMICAL- WATER	Ground water	Chloride as Cl	IS 3025 (Part 32): 1988 RA: 2014	1 mg/L to 1000 mg/L
50	CHEMICAL- WATER	Ground water	Colour	IS 3025 (Part 4): 1983 RA: 2017	2 CU to 400 CU
51	CHEMICAL- WATER	Ground water	Fluoride as F	APHA 23rd Edn 4500 D: 2017	0.1 mg/L to 10 mg/L
52	CHEMICAL- WATER	Ground Water	Free Residual Chlorine	IS 3025 (Part 26): 2003 RA: 2014	0.1 mg/L to 10 mg/L
53	CHEMICAL- WATER	Ground Water	Iron as Fe	IS 3025 (Part 53): 2003 RA: 2014	0.05 mg/L to 10 mg/L
54	CHEMICAL- WATER	Ground water	Magnesium as Mg	APHA 23rd Edn 3500 B: 2017	1 mg/L to 1000 mg/L
55	CHEMICAL- WATER	Ground Water	Nitrate as NO ₃	APHA 23rd Edn 4500 B: 2017	1 mg/L to 100 mg/L

This is annexure to 'Certificate of Accreditation' and does not require any signature.



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56	CHEMICAL- WATER	Ground water	Nitrite as NO ₂	IS 3025 (Part 34): 1988 RA: 2014	0.1 mg/L to 5 mg/L
57	CHEMICAL- WATER	Ground water	pH	IS 3025 (Part 11): 1984 RA: 2017	2 to 12
58	CHEMICAL- WATER	Ground water	Sulfate as SO ₄	IS 3025 (Part 24): 1986 RA: 2014	10 mg/L to 100 mg/L
59	CHEMICAL- WATER	Ground Water	Total Alkalinity as CaCO ₃	IS 3025 (Part 23): 1986 RA: 2014	1 mg/L to 1000 mg/L
60	CHEMICAL- WATER	Ground Water	Total Dissolved Solids	IS 3025 (Part 16): 1884 RA: 2017	5 mg/L to 3000 mg/L
61	CHEMICAL- WATER	Ground water	Total Hardness as CaCO ₃	IS 3025 (Part 21): 2009 RA: 2014	2 mg/L to 1000 mg/L
62	CHEMICAL- WATER	Ground water	Turbidity	IS 3025 (Part 10): 1984 RA: 2017	1 NTU to 200 NTU
63	CHEMICAL- WATER	Surface Water	Ammonical Nitrogen as NH ₃ -N	IS 3025 (Part 34): 1988 RA: 2014	1 mg/L to 50 mg/L
64	CHEMICAL- WATER	Surface Water	Biochemical Oxygen Demand (BOD)	IS 3025 (Part 44): 2017	2 mg/L to 1000 mg/L
65	CHEMICAL- WATER	Surface Water	Boron as B	IS 3025 (Part 57): 2017	0.1 mg/L to 10 mg/L
66	CHEMICAL- WATER	Surface Water	Calcium as Ca	IS 3025 (Part 40): 2014	5 mg/L to 5000 mg/L
67	CHEMICAL- WATER	Surface Water	Chemical Oxygen Demand (COD)	IS 3025 (Part 58): 2017	4 mg/L to 2000 mg/L
68	CHEMICAL- WATER	Surface Water	Chloride	IS 3025 (Part 32): 2014	10 mg/L to 50000 mg/L
69	CHEMICAL- WATER	Surface Water	colour	IS3025 (Part 4): 2017	5 CU to 100 CU
70	CHEMICAL- WATER	Surface Water	Dissolved Oxygen	IS 3025 (Part 38): 2014	1 mg/L to 8.5 mg/L
71	CHEMICAL- WATER	Surface Water	Fluoride as F	IS 3025 (Part 60): 2014	0.2 mg/L to 20 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
72	CHEMICAL- WATER	Surface Water	Free residual chlorine	IS 3025(Part 26): 2003 RA: 2014	0.1 mg/L to 10 mg/L
73	CHEMICAL- WATER	Surface Water	Iron as Fe	IS 3025 (Part 53): 2014	0.05 mg/L to 10 mg/L
74	CHEMICAL- WATER	Surface Water	Magnesium as Mg	APHA 23rd Edn 3500 B: 2017	5 mg/L to 2000 mg/L
75	CHEMICAL- WATER	Surface Water	Nitrate as NO3	IS 3025 (Part 34): 2017	1 mg/L to 100 mg/L
76	CHEMICAL- WATER	Surface Water	Oil & Grease	IS 3025 (Part 39): 2014	4 mg/L to 40 mg/L
77	CHEMICAL- WATER	Surface Water	Oil & Grease	IS 3025 (Part 39): 2014	4 mg/L to 40 mg/L
78	CHEMICAL- WATER	Surface Water	pH	IS 3025 (Part 11): 2017	2 to 12
79	CHEMICAL- WATER	Surface Water	Phosphorus as P	APHA 23rd Edn 4500 D: 2017	0.5 mg/L to 50 mg/L
80	CHEMICAL- WATER	Surface water	Sulphate as SO4	IS 3025 (Part 24): 2014	5 mg/L to 5000 mg/L
81	CHEMICAL- WATER	Surface Water	Total Dissolved Solids	IS 3025 (Part 16): 2017	5 mg/L to 50000 mg/L
82	CHEMICAL- WATER	Surface Water	Turbidity	IS 3025 (Part 10): 2017	1 NTU to 4000 NTU