

Laboratory **Quality Control & Quality Assurance Laboratory, Biotech Park, Sector-G, Jankipuram, Lucknow, Uttar Pradesh**

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

Certificate Number **TC-8191**

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Validity **14.12.2018 to 13.12.2020**

Last Amended on --

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

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.	COSMETIC & ESSENTIAL OIL			
1.	Cosmetic & Essential Oil	Relative density	IS 326 (Part 3)	0.82 to 0.95
		Acid value	IS 326 (Part 7)	1 to 20
		Residue on evaporation	IS 326 (Part 10)	0.1% to 20%
		Petroleum and mineral oil	IS 326 (Part 15)	Qualitative (Present/Absent)
		Water content	IS 326 (Part 21)	0.01% to 1.0 %
II.	FOOD & AGRICULTURAL PRODUCT			
1.	Oil & Fats	Moisture content	IS 548 (Part 1)	0.1 % to 15 %
		Acid value	IS 548 (Part 1)	2.0 to 20
		Free fatty acid	IS 548 (Part 1)	0.1 % to 5.0 %
		Specific gravity at 30 °C	IS 548 (Part 1)	0.80 to 0.94
		Saponification value	IS 548 (Part 1)	20 to 250
		Peroxide value	IS 548 (Part 1)	0.01 meq/kg to 10 meq/kg
III.	WATER			
1.	Drinking Water	pH value	IS 3025 (Part 11)	5 to 9
		Conductivity	IS 3025 (Part 14)	1 µs/cm to 10000 µs/cm
		Total Solids	IS 3025 (Part 15)	10 mg/L to 1000 mg/L
		Total Dissolved solids	IS 3025 (Part 16)	10 mg/L to 1000 mg/L
		Total Suspended solids	IS 3025 (Part 17)	10 mg/L to 1000 mg/L
		Total hardness (as CaCO ₃)	IS 3025 (Part 21)	1 mg/L to 1000 mg/L
		Total alkalinity as CaCO ₃	IS 3025 (Part 23)	1 mg/L to 1000 mg/L
		Sulphate as SO ₄	IS 3025 (Part 24)	1 mg/L to 1000 mg/L

Amit Kumar
Convenor

Anuja Anand
Program Manager

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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
		Chlorine Residual	IS 3025 (Part 26)	1 mg/L to 100 mg/L
		Dissolved Phosphorus as P	IS 3025 (Part 31)	0.1 mg/L to 100 mg/L
		Chloride as Cl	IS 3025 (Part 32)	1 mg/L to 1000 mg/L
		Nitrate (as NO ₃)	IS 3025 (Part 34)	0.1 mg/L to 100 mg/L
		Arsenic as As	APHA (23 rd Edition) 3111B	0.01 mg/L to 10 mg/L
		Dissolved oxygen	IS 3025 (Part 38)	0.5 mg/L to 10 mg/L
		Oil and Grease	IS 3025 (Part 39)	1 mg/L to 1000 mg/L
		Calcium as Ca	APHA (23 rd Edition) 3111B	1 mg/L to 1000 mg/L
		Cadmium as Cd	APHA (23 rd Edition) 3111B	0.01 mg/L to 10 mg/L
		Copper as Cu	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Biochemical Oxygen demand at 27 °C for 3 days	IS 3025 (Part 44)	2 mg/L to 1000 mg/L
		Sodium as Na	IS 3025 (Part 45)	1 mg/L to 1000 mg/L
		Potassium as K	IS 3025 (Part 45)	1 mg/L to 100 mg/L
		Magnesium as Mg	APHA (23 rd Edition) 3111B	1 mg/L to 1000 mg/L
		Lead as Pb	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Mercury as Hg	APHA (23 rd Edition) 3111B	0.001 mg/L to 1 mg/L
		Zinc as Zn	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Carbonate as CO ₃	IS 3025 (Part 51)	1 mg/L to 100 mg/L
		Bicarbonate as HCO ₃	IS 3025 (Part 51)	1 mg/L to 500 mg/L
		Chromium as Cr	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Iron as Fe	APHA (23 rd Edition) 3111B	0.5 mg/L to 100 mg/L
		Nickel as Ni	APHA (23 rd Edition) 3111B	0.5 mg/L to 100 mg/L
		Chemical oxygen demand	IS 3025 (Part 58)	5 mg/L to 5000 mg/L
		Manganese as Mn	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Molybdenum	APHA (23 rd Edition) 3111B	1 mg/L to 10 mg/L
IV.	POLLUTION & ENVIRONMENT			
1.	Waste Water	pH value	IS 3025 (Part 11)	2 to 14
		Conductivity	IS 3025 (Part 14)	1 µs/cm to 10000 µs/cm

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		Total Solids	IS 3025 (Part 15)	10 mg/L to 1000 mg/L
		Total Dissolved solids	IS 3025 (Part 16)	10 mg/L to 1000 mg/L
		Total Suspended solids	IS 3025 (Part 17)	10 mg/L to 1000 mg/L
		Total hardness (as CaCO ₃)	IS 3025 (Part 21)	1 mg/L to 1000 mg/L
		Total alkalinity as CaCO ₃	IS 3025 (Part 23)	1 mg/L to 1000 mg/L
		Sulphate as SO ₄	IS 3025 (Part 24)	1 mg/L to 1000 mg/L
		Chlorine Residual	IS 3025 (Part 26)	1 mg/L to 100 mg/L
		Dissolved Phosphorus as P	IS 3025 (Part 31)	0.1 mg/L to 100 mg/L
		Chloride as Cl	IS 3025 (Part 32)	1 mg/L to 1000 mg/L
		Nitrate (as NO ₃)	IS 3025 (Part 34)	0.1 mg/L to 100 mg/L
		Arsenic as As	APHA (23 rd Edition) 3111B	0.01 mg/L to 10 mg/L
		Dissolved oxygen	IS 3025 (Part 38)	0.5 mg/L to 10 mg/L
		Oil and Grease	IS 3025 (Part 39)	1 mg/L to 1000 mg/L
		Calcium as Ca	APHA (23 rd Edition) 3111B	1 mg/L to 1000 mg/L
		Cadmium as Cd	APHA (23 rd Edition) 3111B	0.01 mg/L to 10 mg/L
		Copper as Cu	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Biochemical Oxygen demand at 27 °C for 3 days	IS 3025 (Part 44)	2 mg/L to 1000 mg/L
		Sodium as Na	IS 3025 (Part 45)	1 mg/L to 1000 mg/L
		Potassium as K	IS 3025 (Part 45)	1 mg/L to 100 mg/L
		Magnesium as Mg	APHA (23 rd Edition) 3111B	1 mg/L to 1000 mg/L
		Lead as Pb	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Mercury as Hg	APHA (23 rd Edition) 3111B	0.001 mg/L to 1 mg/L
		Zinc as Zn	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Carbonate as CO ₃	IS 3025 (Part 51)	1 mg/L to 100 mg/L
		Bicarbonate as HCO ₃	IS 3025 (Part 51)	1 mg/L to 500 mg/L
		Chromium as Cr	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Iron as Fe	APHA (23 rd Edition) 3111B	0.5 mg/L to 100 mg/L
		Nickel as Ni	APHA (23 rd Edition) 3111B	0.5 mg/L to 100 mg/L
		Chemical oxygen demand	IS 3025 (Part 58)	5 mg/L to 5000 mg/L

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		Manganese as Mn	APHA (23 rd Edition) 3111B	0.5 mg/L to 10 mg/L
		Molybdenum	APHA (23 rd Edition) 3111B	1 mg/L to 10 mg/L
2.	Soil & Clay (Sandy Soils, Loamy Soils, Clayey Soils)	pH (5% aqueous solution) at 27 °C	IS 2720 (Part 26)	2.0 to 12.0
		Moisture content	IS 2720 (Part 9)	2.0 % to 15.0 %
		Sodium	IS 9497	0.02 % to 0.62 %
		Potassium	IS 9497	0.1 % to 2.6 %
		Nitrogen	IS 5194	0.02 % to 5 %
		Available Phosphorous	IS 5305 IS 6092 (Part 3 & Part 4)	0.1 % to 10 %
		Total organic content	IS 2720 (Part 22)	0.3 % to 2.0 %
		Calcium Carbonate	IS 2720(Part 23)	0.1 % to 20 %
		Total soluble sulphate	IS 2720 (Part 27)	0.1 % to 10 %
		Bulk density	IS 918	0.5 to 0.85

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