

Laboratory Polytest Laboratories – Analytical Division, 22 Sonae Industrial Estate, Pirangut, Pune, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7194 (In lieu of T-2779)

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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.	Drinking, Ground, Surface, industrial	Aluminium	IS 3025 (Part 55), Clause 6, APHA 23 rd Edition, 3111 D	2 mg/L to 50 mg/L
			APHA 23 rd Edition, 3500-AI B, IS 3025 (Part 55), Clause 5,	0.01mg/L to 50 mg/L
		Arsenic	IS 3025 (Part 37), APHA 23 rd Edition, 3114 C	0.01mg/L to 15 mg/L
		Boron	APHA 23 rd Edition, 4500-B B, IS 3025 (Part 57)	0.2mg/L to 50 mg/L
		Cadmium	IS 3025 (Part 41), APHA 23 rd Edition, 3111 B	0.05mg/L to 15 mg/L
		Calcium	IS 3025 (Part 40), APHA 23 rd Edition, 3111 D	0.5mg/L to 1000 mg/L
			IS 3025 (Part 40), APHA 23 rd Edition, 3500-Ca B	0.2mg/L to 1000 mg/L
		Copper	APHA 23 rd Edition, 3111 B IS 3025 (Part 42),	0.05mg/L to 50 mg/L
		Hexavalent Chromium	IS 3025 (Part 52), APHA 23 rd Edition, 3500-Cr B	0.03mg/L to 10 mg/L
		Iron	IS 3025 (Part 53), Clause 7, APHA 23 rd Edition, 3111 B	0.2mg/L to 25 mg/L
			IS 3025 (Part 53), Clause 6, APHA 23 rd Edition,	0.075mg/L to 25 mg/L

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		Lead	3500-Fe B IS 3025 (Part 47), APHA 23rd Edition, 3111 B	0.2mg/L to 10 mg/L
		Magnesium	IS 3025 (Part 46), Clause 7, APHA 23rd Edition, 3111 B	0.05mg/L to 1000 mg/L
			APHA 23 rd Edition, 3500-Mg B IS 3025 (Part 46), Clause 6,	0.15mg/L to 1000 mg/L
		Manganese	APHA 23 rd Edition, 3111 B	0.1mg/L to 10 mg/L
		Mercury	IS 3025 (Part 48)	0.01mg/L to 1 mg/L
		Nickel	APHA 23 rd Edition, 3111 B IS 3025 (Part 54)	1mg/L to 50 mg/L
		Potassium	IS 3025 (Part 45), APHA 23 rd Edition, 3111 B	0.05mg/L to 500 mg/L
			IS 3025 (Part 45), APHA 23 rd Edition, 3500-K B	0.5mg/L to 500 mg/L
		Silver	APHA 23 rd Edition, 3111 B	0.1mg/L to 10 mg/L
		Sodium	IS 3025 (Part 45), Clause 6, APHA 23 rd Edition, 3111 B	0.05mg/L to 1000 mg/L
			IS 3025 (Part 45), Clause 5, APHA 23 rd Edition, 3500-Na B	0.5mg/L to 1000 mg/L
		Selenium	IS 3025 (Part 56), APHA 23 rd Edition, 3114C	0.01mg/L to 15mg/L
		Total Chromium/ Chromium	APHA 23 rd Edition, 3111 B IS 3025 (Part 52), Clause 7,	0.5mg/L to 50 mg/L
			IS 3025 (Part 52), Clause 6,	0.03mg/L to 50 mg/L

Pankaj Johri
Convenor

Avijit Das
Program Director

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			APHA 23 rd Edition, 3500-Cr B	
		Zinc	IS 3025 (Part 49) APHA 23 rd Edition, 3111B	0.01mg/L to 50 mg/L
		ORGANICS		
		BOD3 at 27°C	IS 3025 (Part 44)	2mg/L to 600 mg/L
		BOD5 at 20°C	APHA 23 rd Edition, 5210 B	2mg/L to 600 mg/L
		COD	APHA 23 rd Edition, 5220 B IS 3025 (Part 58)	5mg/L to 500 mg/L
		Total Oil & Grease	APHA 23 rd Edition, 5520 B IS 3025 (Part 39)	5mg/L to 500mg/L
		INORGANICS		
		Ammonical Nitrogen	IS 3025 (Part 34)	0.1mg/L to 500 mg/L
		Chloride	IS 3025 (Part 32), APHA 23 rd Edition, 4500-Cr B	2mg/L to 5000 mg/L
		Dissolved Oxygen	IS 3025 (Part 38), APHA 23 rd Edition, 4500-O C	0.2mg/L to 10 mg/L
		Fluoride	APHA 23 rd Edition, 4500-F- D IS 3025 (Part 60)	0.1mg/L to 50 mg/L
		Free Residual Chlorine	IS 3025 (Part 26)	0.1mg/L to 30 mg/L
		Nitrate	IS 3025 (Part 34)	0.2mg/L to 150 mg/L
		Nitrate	APHA 23 rd Edition, 4500-NO3- B	0.2mg/L to 150 mg/L
		Nitrite	IS 3025 (Part 34)	0.1mg/L to 10mg/L
		Phosphate	APHA 23 rd Edition, 4500-P D IS 3025 (Part 31)	0.02mg/L to 500 mg/
		Reactive Silica	APHA 23 rd Edition, 4500-SiO ₂ D	0.02mg/L to 100 mgL
		Sulphate	APHA 23 rd Edition, 4500-SO ₄ ²⁻ E	1mg/L to 10000 mg/L

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		PHYSICAL & AGGREGATE PROPERTIES		
		Colour	APHA 23 rd Edition, 2120 B	1mg/L to 500 Hazen
		Conductivity	IS 3025 (Part 14) APHA 23 rd Edition, 2510 B	1 µmhos/cm to 5000 µmhos/cm
		Fixed Residue / Fixed Solids	APHA 23 rd Edition, 2540 E IS 3025 (Part 18)	10mg/L to 2000 mg/L
		Methyl Orange Alkalinity	IS 3025 (Part 23) APHA 23 rd Edition, 2320 B	0.5mg/L to 500 mg/L
		Odour	IS 3025 (Part 5)	agreeable/ disagreeable
		pH	IS 3025 (Part 11) , APHA 23 rd Edition, 4500-H ⁺ B	2mg/L to 12
		Phenolphthalein Alkalinity	IS 3025 (Part 23), APHA 23 rd Edition, 2320 B	0.5mg/L to 500 mg/L
		Temperature	IS 3025 (Part 9)	10°C to 50°C
		Total Acidity	IS 3025 (Part 22), APHA 23 rd Edition, 2310 B	0.5mg/L to 5000 mg/L
		Total Alkalinity	IS 3025 (Part 23), APHA 23 rd Edition, 2320 B	0.5mg/L to 5000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16)	10mg/L to 50000 mg/L
		Total Hardness	IS 3025 (Part 21) , APHA 23 rd Edition, 2340 C	0.5mg/L to 5000 mg/L
		Total Solids	IS 3025 (Part 15), APHA 23 rd Edition, 2540 B	10mg/L to 50000 mg/L
		Total Suspended Solids	IS 3025 (Part 17), APHA 23 rd Edition, 2540 D	5mg/L to 5000 mg/L
		Turbidity	IS 3025 (Part 10), APHA 23 rd Edition, 2130 B	0.5 NTU to 500 NTU
		Volatile Residue / Volatile Solids	IS 3025 (Part 18), APHA 23 rd Edition, 2540 E	10mg/L to 2000 mg/L
II.	POLLUTION AND ENVIRONMENT			

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1.	Waste Water, Effluents	METALS		
		Aluminium	IS 3025 (Part 55), APHA 23 rd Edition, 3111 D	2mg/L to 50 mg/L
			APHA 23 rd Edition, 3500-AI B	0.01mg/L to 50 mg/L
		Arsenic	IS 3025 (Part 55)	
			IS 3025 (Part 37) , APHA 23 rd Edition, 3114 C	0.01mg/L to 15mg/L
		Boron	APHA 23 rd Edition, 4500-B B	0.2mg/L to 50mg/L
			IS 3025 (Part 57)	
		Cadmium	IS 3025 (Part 41), APHA 23 rd Edition, 3111 B	0.05mg/L to 15mg/L
		Calcium	IS 3025 (Part 40), APHA 23 rd Edition, 3111 D	0.5mg/L to 1000 mg/L
			IS 3025 (Part 40) , APHA 23 rd Edition, 3500-Ca B	0.2mg/L to 1000 mg/L
		Copper	APHA 23 rd Edition, 3111 B	0.05mg/L to 50 mg/L
			IS 3025 (Part 42)	
Hexavalent Chromium	IS 3025 (Part 52), APHA 23 rd Edition, 3500-Cr B	0.03mg/L to 10 mg/L		
Iron	IS 3025 (Part 53), Clause 7, APHA 23 rd Edition, 3111 B	0.2mg/L to 25 mg/L		
	IS 3025 (Part 53), Clause 6, APHA 23 rd Edition, 3500-Fe B	0.075mg/L to 25 mg/L		
Lead	IS 3025 (Part 47), APHA 23 rd Edition, 3111 B	0.2mg/L to 10 mg/L		
Magnesium	IS 3025 (Part 46), Clause 7, APHA 23 rd Edition, 3111 B	0.05mg/L to 1000 mg/L		

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Avijit Das
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			APHA 23 rd Edition, 3500-Mg B IS 3025 (Part 46), Clause 6,	0.15mg/L to 1000 mg/L
		Manganese	APHA 23 rd Edition, 3111 B	0.1mg/L to 10 mg/L
		Mercury	IS 3025 (Part 48)	0.01mg/L to 2 mg/L
		Nickel	APHA 23 rd Edition, 3111 B IS 3025 (Part 54)	1mg/L to 50 mg/L
		Potassium	IS 3025 (Part 45), Clause 6, APHA 23 rd Edition, 3111 B	0.05mg/L to 500 mg/L
			IS 3025 (Part 45), Clause 5, APHA 23 rd Edition, 3500-K B	0.5mg/L to 500 mg/L
		Silver	APHA 23 rd Edition, 3111 B	0.1mg/L to 10 mg/L
		Sodium	IS 3025 (Part 45), Clause 6, APHA 23 rd Edition, 3111 B	0.05mg/L to 1000 mg/L
			IS 3025 (Part 45), Clause 5, APHA 23 rd Edition, 3500-Na B	0.5mg/L to 1000 mg/L
		Selenium	IS 3025 (Part 56), APHA 23 rd Edition, 3114C	0.01mg/L to 20mg/L
		Total Chromium/ Chromium	APHA 23 rd Edition, 3111 B IS 3025 (Part 52), Clause 7,	0.5mg/L to 50 mg/L
			IS 3025 (Part 52), Clause 6, APHA 23 rd Edition, 3500-Cr B	0.03mg/L to 50 mg/L
		Zinc	IS 3025 (Part 49), APHA 23 rd Edition, 3111B	0.01mg/L to 50 mg/L

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		ORGANICS		
		BOD3 at 27°C	IS 3025 (Part 44)	2mg/L to 50000mg/L
		BOD5 at 20 °C	APHA 23 rd Edition, 5210 B	2mg/L to 50000mg/L
		COD	APHA 23 rd Edition, 5220 B IS 3025 (Part 58)	5mg/L to 100000mg/L
		Total Oil & Grease	APHA 23 rd Edition, 5520 B IS 3025 (Part 39)	5mg/L to 500mg/L
		INORGANICS		
		Ammonical Nitrogen/ Ammonia	IS 3025 (Part 34)	0.1mg/L to 600 mg/L
		Total Kjeldahl Nitrogen as N	APHA 23 rd Edition, 4500-N _{org} A	0.1mg/L to 600 mg/L
		Chloride	IS 3025 (Part 32) APHA 23 rd Edition, 4500-Cr B	2mg/L to 50000 mg/L
		Dissolved Oxygen	IS 3025 (Part 38) APHA 23 rd Edition, 4500-O C	0.2mg/L to 10 mg/L
		Fluoride	APHA 23 rd Edition, 4500-F- D IS 3025 (Part 60)	0.1mg/L to 50 mg/L
		Free Residual Chlorine	IS 3025 (Part 26)	0.1mg/L to 30 mg/L
		Nitrate	IS 3025 (Part 34) APHA 23 rd Edition, 4500-NO3- B	0.2mg/L to 150 mg/L
		Nitrite	IS 3025 (Part 34)	0.1mg/L to 100mg/L
		Phosphate	APHA 23 rd Edition, 4500-P D IS 3025 (Part 31)	0.02mg/L to 500 mg/L
		Reactive Silica	APHA 23 rd Edition, 4500-SiO ₂ D	0.02mg/L to 200 mg/L
		Sulphate	APHA 23 rd Edition, 4500-SO ₄ ²⁻ E	1mg/L to 50000 mg/L

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		PHYSICAL & AGGREGATE PROPERTIES		
		Conductivity	IS 3025 (Part 14), APHA 23 rd Edition, 2510 B	1 µmhos/cm to 50000 µmhos/cm
		Fixed Residue /Fixed Solids	APHA 23 rd Edition, 2540 E IS 3025 (Part 18)	10mg/L to 5000 mg/L
		Methyl Orange Alkalinity	IS 3025 (Part 23), APHA 23 rd Edition, 2320 B	0.5mg/L to 5000 mg/L
		Odour	IS 3025 (Part 5)	agreeable/ disagreeable
		pH	IS 3025 (Part 11), APHA 23 rd Edition, 4500-H ⁺ B	2mg/L to 12
		Phenolphthalein Alkalinity	IS 3025 (Part 23), APHA 23 rd Edition, 2320 B	0.5mg/L to 1000 mg/L
		Temperature	IS 3025 (Part 9)	10°C to 50°C
		Total Acidity	IS 3025 (Part 22) , APHA 23 rd Edition, 2310 B	0.5mg/L to 5000 mg/L
		Total Alkalinity	IS 3025 (Part 23) APHA 23 rd Edition, 2320 B	0.5mg/L to 10000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16)	10mg/L to 50000 mg/L
		Total Hardness	IS 3025 (Part 21) , APHA 23 rd Edition, 2340 C	0.5mg/L to 10000 mg/L
		Total Solids	IS 3025 (Part 15) , APHA 23 rd Edition, 2540 B	10mg/L to 50000 mg/L
		Total Suspended Solids	IS 3025 (Part 17) , APHA 23 rd Edition, 2540 D	5mg/L to 50000 mg/L
		Turbidity	IS 3025 (Part 10) , APHA 23 rd Edition, 2130 B	0.5mg/L to 500 NTU
		Volatile Residue / Volatile Solids	IS 3025 (Part 18) , APHA 23 rd Edition, 2540 E	10mg/L to 5000 mg/L
2.	Soil, Solid, SW, Slurry, MSW& Ash	PHYSICAL & AGGREGATE PROPERTIES		

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		pH	IS 10158	2 to 12
		Moisture Content / Loss on drying / Water Content	IS 9235	0.1% to 90 %
		Loss on Ignition/ Organic Content/ Total Organic Matter/ Ash Content	IS1350 (Part 1)	0.5 %to 90%
		Non Volatile Residue / Volatile Solids/Volatile Matter	IS 10158	0.5 %to 90%
		Electrical Conductivity	PL.TP.159, Issue no.01/01-Jun-12, based on Soil Testing Methods, DoAC, GOI, page no. 81	1 µS/cm to 20000 µS/cm
		Total Solids	PL.TP.160, Issue no.01/01-Jun-12, based on CPCB Manual,LATS/16/2003-2004, Ch. 4, 4.7.1	1% to 100 %
		Gross Calorific Value	IS 1350 (Part II)	100 cal/g to 8000 cal/g
		Flash Point / Ignitability	PL.TP.162, Issue no.01/01-Jun-12, based on CPCB Manual LATS/16/2003-2004,Ch.7, 7.2,Page no.166	25°C to 250°C
		INORGANICS		
		Sulphate	IS 2720 (Part 27) USEPA/SW 846/9038	5mg/L to 50000 mg/kg
		Chloride	USEPA/SW 846/ 9253	10mg/L to 50000 mg/kg
		Phosphorus/ Phosphate	PL.TP.116, Issue no.01/01-Jun-12, based on Soil & Solid Waste Analysis, page 102	0.002 %to 25%
		Total Nitrogen	PL.TP.119, Issue no.01/01-Jun-12, based on Soil	0.002% to 50%

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			Testing Methods, DoAC, GOI, page no. 88	
		Total Kjeldahl Nitrogen	APHA 23 rd Edition, 4500 N _{org} , B, IS 10158	0.002% to 50%
		Ammonical Nitrogen	PL.TP.163, Issue no.01/01-Jun-12, based on APHA 23 rd Edition, 4500-NH3 B& IS 3025 (Part 34)	10 mg/kg to 20000 mg/kg
		Nitrate Nitrogen	PL.TP.164, Issue no.01/01-Jun-12, based on Soil Testing Methods, DoAC, GOI, page no. 93	1 mg/kg to 1000 mg/kg
		Nitrite Nitrogen	PL.TP.165, Issue no.01/01-Jun-12, based on CPCB Manual LATS/16/2003-2004, Ch.5, 5.11	1 mg/kg to 1000 mg/kg
		Carbon Nitrogen Ratio	PL.TP.166, Issue no.01/01-Jun-12, By calculation	Not applicable
		ORGANICS		
		Total Organic Carbon	IS 2720 (Part 22)	0.02% to 50%
		Organic Nitrogen	APHA 23 rd Edition, 4500-Norg A	10 mg/kg to 20000 mg/kg
		n-Hexane Extractable Material (HEM) / Oil & Grease	PL.TP.168, Issue no.01/01-Jun-12, based on CPCB Manual LATS/16/2003-2004, Ch.6, 6.12 USEPA/SW 846/ 9071B	1 mg/kg to 10000 mg/kg
		Aluminium	USEPA/SW846/3050B	20 mg/kg to 10000 mg/kg
		Cadmium	CPCB Manual	0.5 mg/kg to 10000mg/kg
		Calcium	LATS/16/2003-2004,	5 mg/kg to 10000 mg/kg
		Copper	Ch.5, 5.4	0.5 mg/kg to 10000 mg/kg
		Chromium/	(By Acid Digestion followed by AAS Method)	5 mg/kg to 10000 mg/kg

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		Total Chromium		
		Iron		2 mg/kg to 10000 mg/kg
		Lead		2 mg/kg to 10000 mg/kg
		Magnesium		0.5 mg/kg to 10000 mg/kg
		Manganese		1 mg/kg to 10000 mg/kg
		Nickel		10 mg/kg to 10000 mg/kg
		Potassium		1 mg/kg to 500000 mg/kg
		Silver		1 mg/kg to 1000 mg/kg
		Sodium		1 mg/kg to 10000 mg/kg
		Zinc		0.2 mg/kg to 10000 mg/kg
		Arsenic	USEPA/SW846/7062 CPCB Manual LATS/16/2003-2004, Ch.5, 5.6 (By Acid Digestion followed by AAS-Hydride Method)	0.5 mg/kg to 1000 mg/kg
		Chromium (Hexavalent)	USEPA/SW 846/3060A CPCB Manual LATS/16/2003-2004, Ch.5, 5.8 (By Acid Digestion followed by Diphenylcarbazide Method)	10 mg/kg to 1000 mg/kg
		Mercury	USEPA/SW846/7471B CPCB Manual LATS/16/2003-2004, Ch.5, 5.7 (By Acid Digestion followed by AAS-Hydride Method)	0.2 mg/kg to 1000 mg/kg
		Potassium	IS 10158 (By Acid Digestion followed by Flame Photometer Method)	1mg/kg to 500000 mg/k
		Sodium	IS 10158	1mg/kg to 50000 mg/kg

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			(By Acid Digestion followed by Flame Photometer Method)	
		Aluminium	USEPA/SW846/7000B	20mg/L to 10000 mg/L
		Cadmium	CPCB Manual	0.5mg/L to 10000 mg/L
		Calcium	LATS/16/2003-2004, Ch.7, page 170	5mg/L to 10000 mg/L
		Copper	(By TCLP Method followed by AAS Method)	0.5mg/L to 10000 mg/L
		Chromium/ Total Chromium		5mg/L to 10000 mg/L
		Iron		2mg/L to 10000 mg/L
		Lead		2mg/L to 10000 mg/L
		Magnesium		0.5mg/L to 10000 mg/L
		Manganese		1mg/L to 10000 mg/L
		Nickel		10mg/L to 10000 mg/L
		Potassium		1mg/L to 500000 mg/L
		Silver		1mg/L to 1000 mg/L
		Sodium		1mg/L to 10000 mg/L
		Zinc		0.2mg/L to 10000 mg/L
		Arsenic	USEPA/SW846/7000B CPCB Manual LATS/16/2003-2004, Ch.7, page 170 (By TCLP Method followed by AAS-Hydride Method)	0.5mg/L to 1000 mg/L
		Chromium (Hexavalent)	USEPA/SW 846/7000B CPCB Manual LATS/16/2003-2004, Ch.7, page 170 (By TCLP Method followed by Diphenylcarbazide Method)	10mg/L to 1000 mg/L
		Mercury	CPCB Manual LATS/16/2003-2004,	0.2mg/L to 1000 mg/L

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			Ch.7, page 170 USEPA/SW846/7000B (By TCLP Method followed by AAS-Hydride Method)	
III.	FOOD AND AGRICULTURE PRODUCTS			
1.	Cereals and Cereal Products	Moisture Content/ Water Content	FSSAI, Lab Manual-3, 2.0, page no. 7 IS 4333 (Part 2)	0.1% to 25%
		Total Ash / Ash Content	FSSAI, Lab Manual-3, 8.3, page no. 12 IS 1155	0.1% to 25%
		Total Fat / Fat Content	IS 12711	0.1% to 25%
		Protein Content	FSSAI, Lab Manual-3, 8.8 IS 7219	0.1% to 60%
		Total Carbohydrates	IS 1656, By difference	5% to 80%
		Energy Value	PL.TP.206, Issue no. 01/01- Jun-12 Pearson's Composition And Analysis of Foods, Ed.9th, page no. 5 By Calculation	1 kcal/g to 500 kcal/g
IV.	PETROLEUM AND PRODUCTS			
	Lubricating Oil, Engine Oil, Metalworking Oil & Fluid,Heat Treatment Oil,HSD,Furnace Oil,LDO	Ash content	IS 1448 (Part 4) , ASTM D482-13	0 to 3%
	Lubricating Oil,Hydraulic	Contamination Class (as per NAS 1638)	AS598, 2012 Microscopic	NAS Class 0 to >12

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	Oil, Turbine Oil	Contamination Code (as per ISO 4406) Particle size range: $\geq 5\mu$ & $\geq 15\mu$ (Microscopic Method)	ISO 4407	ISO Code 0 to 28
	Lubricating Oil, Metalworking Oil & Fluid, Heat Treatment Oil & Fluid, Thermic Fluid, HSD, LDO, Biodiesel	Copper Strip Corrosion Test	IS 1448 (Part 15) , (Qualitative) ASTM D130-12	1a to 4c
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Heat Treatment Oil, Thermic Fluid, Turbine Oil, LDO, HSD, Biodiesel	Density/ Relative Density (by Hydrometer Method)	IS 1448 (Part 16) , ASTM D1298-12b	700 kg/m ³ to 1000 kg/m ³ 0.7000 g/cc to 1.0000 g/cc
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Heat Treatment Oil, Thermic Fluid	Density/ Relative Density/ Specific Gravity (by Pyknometer)	IS 1448 (Part 32) , Method C	700 kg/m ³ to 1500 kg/m ³ 0.7000 g/cc to 1.5000 g/cc
	Lubricating Oil, Metalworking Oil & Fluid, Heat Treatment Oil, Thermic Fluid,	Flash and Fire Point, by COC (Cleveland Open Cup)	IS 1448 ASTM D92-16b	79 g/cc to 400 °C

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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
	Turbine Oil			
	Lubricating Oil, Metalworking Oil & Fluid, Heat Treatment Oil	Flash Point (closed), by PMCC (Pensky-Martens Apparatus)	IS 1448 (Part 21)	40°C to 360 °C
	Lubricating Oil, Metalworking Oil & Fluid, Heat Treatment Oil & Fluid, Thermic Fluid, Turbine Oil	Kinematic Viscosity at 100 °C	IS 1448 (Part 25) , ASTM D445-17a	2 to 100 cSt or mm ² /s
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Thermic Fluid, Heat Treatment Oil & Fluid, Turbine Oil	Kinematic Viscosity at 40 °C	IS 1448 (Part 25) , ASTM D445-17a	1 to 460 cSt or mm ² /s
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Heat Treatment Oil, Thermic Fluid	Pentane Insolubles by Membrane Filtration	ASTM D4055-04	0.01% to 1 % by wt.
	Lubricating Oil & Fluid	Sulphated Ash	IS 1448 (Part 4) , ASTM D874-13a	0 to 5 % by wt.
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Heat Treatment Oil & Fluid, Thermic Fluid, Turbine Oil, Lube Oil, Quenching Oil,	Total Acid Number	IS 1448 (Part 1/sec 1) , ASTM D664-17	0.01 mgKOH/g to 50 mgKOH/g

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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
	Thermic Fluid, Biodiesel, Gear Oil			
	Lubricating Oil, Metalworking Fluid, Heat Treatment Fluid	Neutralization Number/ Acid Number/ Total Acidity	IS 1448 (Part 2)	0.01 mgKOH/g to 50 mgKOH/g
	Hydraulic Oil, Lube Oil, Engine Oil, Turbine Oil	Total Base Number	IS 1448 (Part 1/sec 2) , ASTM D4739-17	0.01 mgKOH/g to 60 mgKOH/g
	Lubricating Oil, Metalworking Oil& Fluid, Thermic Fluid, Heat Treatment Oil& Fluid, Turbine Oil	Viscosity Index (By calculation)	IS 1448 (Part 56) : 2013 ASTM D2270-10, RA 2016	40 to 250
	Lubricating Oil, Transformer Oil, Metalworking Oil & Fluid, Heat Treatment Oil & Fluid, Treatment Oil, Thermic Fluid	Water Content/ Moisture Content (By Potentiometer)	IS 2362	0.01% to 5 %
	Lubricating Oil & Fluid, Metalworking Oil & Fluid, Heat Treatment Oil, Thermic Fluid, Used Oil, Waste Oil	Water Content (By Distillation)	IS 1448 (Part 40)	0 to 25 % by Volume
	Furnace Oil, HSD, LDO	Heat Of combustion/ GCV (Bomb Calorimeter)	IS 1448 (Part 6)	6000 cal/g to 12000 cal/g

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	Furnace Oil	Method) Kinematic Viscosity at 50°C	IS 1448 (Part 25) , ASTM D 445-17a	50 cSt to 450 cSt
		Sulphur Content (Bomb Calorimeter Method)	IS 1448 (Part 33)	0.1% to 10 %
	Furnace Oil, LDO, HSD, Thermic Fluid	Sediment, by mass	IS 1448 (Part 30) , ASTM D 473-07, RA-2017	0 to 1%
	Used Oil, Waste Oil	Sediments (Gravimetric Method)	IS 1866, Annex. A	0.01% to 10 %