



National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)



SCOPE OF ACCREDITATION

Laboratory Name ALEX STEWART INTERNATIONAL (INDIA) PRIVATE LIMITED, PLOT NO. L-9, BLOCK NO.6, THIRU.VI.KA INDUSTRIAL ESTATE, GUINDY, CHENNAI, TAMIL NADU, INDIA

Accreditation Standard ISO/IEC 17025:2005

Certificate Number TC-5112 Page No. : 1 / 21

Validity 29/12/2018 to 28/12/2020 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	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Insoluble Impurities	IS 548 (Part 1): 1964	0.003 % to 0.10 %
2	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Acid Value / Free Fatty Acid	IS 548 (Part 1): 1964	1.0 % to 10 %
3	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Acid Value / Free Fatty Acid	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	1.0 % to 10 %
4	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Colour	IS 548 (Part 1): 1964	20 units to 70 units
5	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Colour	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	20 units to 70 units
6	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Flash Point (Pensky Martens Closed Cup)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	105 °C to 300 °C
7	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Iodine Value (Wijs Method)	IS 548 (Part 1): 1964	10 to 20
8	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Melting Point (Open Tube Capillary Slip)	IS 548 (Part 1): 1964	20 °C to 30 °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
9	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Melting Point (Open Tube Capillary Slip)	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	20 °C to 30 °C
10	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Moisture and Volatile Matter	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.05 % to 0.50 %
11	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Moisture and Volatile matter	IS 548 (Part 1): 1964	0.05 % to 0.50 %
12	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Peroxide Value	IS 548 (Part 1): 1964	0.50 meq/1000gms to 10 meq/1000gms
13	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Refractive Index	IS 548 (Part 1): 1964	1.4200 to 1.4800
14	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Refractive Index	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	1.4200 to 1.4800
15	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Saponification Value	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	220 mg.KOH/g to 270 mg.KOH/g
16	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Saponification Value	IS 548 (Part 1): 1964	220 mg.KOH/g to 270 mg.KOH/g



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17	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Specific Gravity / Density	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	0.9100 g/ml to 0.9170 g/ml
18	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Specific Gravity / Density	IS 548 (Part 1): 1964	0.9100 g/ml to 0.9170 g/ml
19	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Unsaponifiable Matter	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.10 % to 1.50 %
20	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Oil (CPKO)	Unsaponifiable Matter	IS 548 (Part 1): 1964	0.10 % to 1.50 %
21	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Kernel Value (CPKO)	Iodine Value (Wijs Method)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	10 to 20
22	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Acid Value / Free Fatty Acid	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	1.0 % to 12 %
23	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Acid Value / Free Fatty Acid	IS 548 (Part 1): 1964	1.0 % to 12 %
24	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Castor Oil	FSSAI : Manual methods of analysis of food (Oils & Fats): 2016	Qualitative(Present / Absent)



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25	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Colour	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	40 units to 120 units
26	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Colour	IS 548 (Part 1): 1964	40 units to 120 units
27	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Cotton Seed Oil (Halphen Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
28	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Cotton Seed Oil (Halphen Test)	FSSAI : Manual methods of analysis of food (Oils & Fats): 2016	Qualitative(Present / Absent)
29	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Flash Point (Pensky Martens Closed Cup)	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	105 °C to 300 °C
30	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Insoluble Impurities	IS 548 (Part 1): 1964	0.003 % to 0.10 %
31	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Iodine Value (Wijs Method)	IS 548 (Part 1): 1964	40 to 60
32	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Iodine Value (Wijs Method)	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	40 to 60



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33	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Melting Point (Open Tube Capillary Slip)	IS 548 (Part 1): 1964	30 °C to 42 °C
34	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Melting Point (Open Tube Capillary Slip)	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	30 °C to 42 °C
35	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Mineral Oil (Holde's Test)	FSSAI : Manual methods of analysis of food (Oils & Fats): 2016	Qualitative(Present / Absent)
36	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Mineral Oil (Holde's Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
37	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Moisture and Volatile Matter	IS 548 (Part 1): 1964	0.01 % to 0.50 %
38	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Moisture and Volatile Matter	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	0.01 % to 0.50 %
39	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Peroxide Value	IS 548 (Part 1) : 1964	0.50 meq/1000gms to 10 meq/1000gms
40	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Refractive Index	IS 548 (Part 1): 1964	1.4000 to 1.4700



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41	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Refractive Index	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	1.4000 to 1.4700
42	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Saponification Value	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	188 mg.KOH/g to 220 mg.KOH/g
43	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Saponification Value	IS 548 (Part 1): 1964	188 mg.KOH/g to 220 mg.KOH/g
44	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Sesame Oil	FSSAI : Manual methods of analysis of food (Oils & Fats): 2016	Qualitative(Present / Absent)
45	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Specific Gravity / Density	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	0.8900 g/ml to 0.9100 g/ml
46	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Specific Gravity / Density	IS 548 (Part 1): 1964	0.8900 g/ml to 0.9100 g/ml
47	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Total Carotenoids as beta-carotene	BS 684-2.20: 1977	250 mg/kg to 1500 mg/kg
48	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Total Carotenoids as beta-carotene	FSSAI : Manual methods of analysis of food (Oils & Fats): 2016	250 mg/kg to 1500 mg/kg



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49	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Unsaponifiable Matter	IS 548 (Part 1): 1964	0.10 % to 1.50 %
50	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Palm Oil (CPO)	Unsaponifiable Matter	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	0.10 % to 1.50 %
51	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Oil (CSFO)	Unsaponifiable Matter	IS 548 (Part 1): 1964	0.10 % to 1.50 %
52	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Oil (CSFO)	Unsaponifiable Matter	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	0.10 % to 1.50 %
53	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Acid Value / Free Fatty Acid	IS 548 (Part 1): 1964	0.40 % to 10 %
54	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Acid Value / Free Fatty Acid	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	0.40 % to 10 %
55	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Colour	IS 548 (Part 1): 1964	10 units to 50 units
56	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Colour	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	10 units to 50 units



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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
57	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Cotton Seed Oil (Halphen Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
58	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Cotton Seed Oil (Halphen Test)	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	Qualitative(Present / Absent)
59	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Flash Point (Pensky Martens Closed Cup)	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	105 °C to 300 °C
60	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Insoluble Impurities	IS 548 (Part 1): 1964	0.003 % to 0.10 %
61	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Iodine Value (Wijs Method)	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	95 to 150
62	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Iodine Value (Wijs Method)	IS 548 (Part 1): 1964	95 to 150
63	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Mineral Oil (Holde's Test)	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	Qualitative(Present / Absent)
64	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Mineral Oil (Holde's Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)



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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
65	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Moisture and Volatile Matter	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	0.05 % to 0.50 %
66	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Moisture and Volatile matter	IS 548 (Part 1): 1964	0.05 % to 0.50 %
67	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Peroxide Value	IS 548 (Part 1): 1964	0.50 meq/1000gms to 15 meq/1000gms
68	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Refractive Index	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	1.4400 to 1.4800
69	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Refractive Index	IS 548 (Part 1): 1964	1.4400 to 1.4800
70	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Saponification Value	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	180 mg.KOH/gm to 220 mg.KOH/gm
71	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Saponification Value	IS 548 (Part 1): 1964	180 mg.KOH/gm to 220 mg.KOH/gm
72	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Specific Gravity / Density	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	0.9100 gm/ml to 0.9150 gm/ml



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73	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Specific Gravity / Density	IS 548 (Part 1): 1964	0.9100 gm/ml to 0.9150 gm/ml
74	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Crude Sunflower Seed Oil (CSFO)	Sesame Oil	FSSAI : Manual methods of analysis of foods (Oil & Fats): 2016	Qualitative(Present / Absent)
75	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refine Bleached Deodorized Palmolein(RBD)	Iodine Value (Wijs method)	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	48 to 70
76	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein (RBD)	Moisture and Volatile Matter	IS 548 (Part 1): 1964	0.04 % to 0.50 %
77	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Acid Value / Free Fatty Acid	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.05 % to 10 %
78	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Acid Value / Free Fatty Acid	IS 548 (Part 1): 1964	0.05 % to 10 %
79	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Castor Oil	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	Qualitative(Present / Absent)
80	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Cloud Point	FSSAI : Manual methods of analysis of foods (Oils & Fats): 2016	7 °C to 20 °C



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81	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Colour	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	20 Units to 80 Units
82	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Colour	IS 548 (Part 1): 1964	20 Units to 80 Units
83	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Cotton Seed Oil (Halphen Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
84	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Cotton Seed Oil (Halphen Test)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	Qualitative(Present / Absent)
85	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Flash Point(Pensky Martens Closed Cup)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	105 °C to 300 °C
86	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Hydrocyanic Acid	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
87	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Hydrocyanic Acid	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	Qualitative(Present / Absent)
88	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Insoluble Impurities	IS 548 (Part 1): 1964	0.003 % to 0.10 %



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89	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Iodine Value (Wijs method)	IS 548 (Part 1): 1964	48 to 70
90	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Melting Point (Open Tube Capillary Slip)	IS 548 (Part 1): 1964	20 °C to 40 °C
91	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Melting Point (Open Tube Capillary Test)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	20 °C to 40 °C
92	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Mineral Oil (Holde's Test)	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	Qualitative(Present / Absent)
93	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Mineral Oil (Holde's Test)	IS 548 (Part 2): 1976	Qualitative(Present / Absent)
94	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Moisture and Volatile Matter	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.04 % to 0.50 %
95	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Peroxide Value	IS 548 (Part 1): 1964	0.5 meq/1000gms to 10 meq/1000gms
96	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Refractive Index	IS 548 (Part 1): 1964	1.4500 to 1.4700



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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
97	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Refractive Index	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	1.4500 to 1.4700
98	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Saponification Value	IS 548 (Part 1): 1964	190 mg.KOH/gm to 220 mg.KOH/gm
99	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Saponification Value	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	190 mg.KOH/gm to 220 mg.KOH/gm
100	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Sesame Oil	FSSAI : Manual of methods of analysis of foods (Oils & Fats): 2016	Qualitative(Present / Absent)
101	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Specific Gravity / Density	IS 548 (Part 1): 1964	0.9000 gm/ml to 0.9060 gm/ml
102	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Specific Gravity / Density	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.9000 gm/ml to 0.9060 gm/ml
103	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Unsaponifiable Matter	IS 548 (Part 1): 1964	0.10 % to 1.50 %
104	CHEMICAL- FOOD & AGRICULTURAL PRODUCTS	Refined Bleached Deodorized Palmolein(RBD)	Unsaponifiable matter	FSSAI : Manual of method of analysis of foods (Oils & Fats): 2016	0.10 % to 1.50 %



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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
105	CHEMICAL- ORES & MINERALS	Iron ores	Alumina	ISO 6830 : 1986	0.30 % to 10 %
106	CHEMICAL- ORES & MINERALS	Iron ores	Alumina	IS 1493 (Part - 1): 1981	0.30 % to 10 %
107	CHEMICAL- ORES & MINERALS	Iron ores	Flow Moisture Point (FMP) & Transportable Moisture Limit (TML)	IMSBC CODE -Appx -2 (Flow table method): 2018	5 % to 20 %
108	CHEMICAL- ORES & MINERALS	Iron ores	Loss on Ignition	Chemical & Instrumental Analysis of Ores, Indian Bureau of Mines: 2012	0.50 % to 10 %
109	CHEMICAL- ORES & MINERALS	Iron ores	Phosphorus	IS 1493 : 1959	0.01 % to 0.50 %
110	CHEMICAL- ORES & MINERALS	Iron ores	Phosphorus	ISO 2599: 2003	0.01 % to 0.50 %
111	CHEMICAL- ORES & MINERALS	Iron ores	Silica	ISO 2598 - 1: 1992	0.30 % to 30 %
112	CHEMICAL- ORES & MINERALS	Iron ores	Silica	IS 1493 (Part 1): 1981	0.30 % to 30 %
113	CHEMICAL- ORES & MINERALS	Iron ores	Sulphur	ISO 4689: 1986	0.01 % to 1 %
114	CHEMICAL- ORES & MINERALS	Iron ores	Sulphur	IS 1493 : 1959	0.001 % to 0.30 %
115	CHEMICAL- ORES & MINERALS	Iron ores	Total Iron	IS 1493 (Part 1): 1981	25 % to 70 %
116	CHEMICAL- ORES & MINERALS	Iron ores	Total Iron	ISO 2597 - 1: 2006	25 % to 70 %



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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
117	CHEMICAL- ORES & MINERALS	Limestone	Alumina as Al ₂ O ₃	IS 1760 (Part 3): 1992	0.01 % to 5 %
118	CHEMICAL- ORES & MINERALS	Limestone	Calcium as CaO	IS 1760 (Part 3): 1992	10 % to 56 %
119	CHEMICAL- ORES & MINERALS	Limestone	Iron as Fe ₂ O ₃	IS 1760 (Part 3): 1992	0.005 % to 5 %
120	CHEMICAL- ORES & MINERALS	Limestone	Loss on Ignition	IS 1760 (Part 1): 1991	10 % to 60 %
121	CHEMICAL- ORES & MINERALS	Limestone	Magnesium as MgO	IS 1760 (Part 3): 1992	0.10 % to 5 %
122	CHEMICAL- ORES & MINERALS	Limestone	Silica as SiO ₂	IS 1760 (Part 1): 1991	0.05 % to 10 %
123	CHEMICAL- ORES & MINERALS	Rock phosphate	Calcium as CaO	IS 9386: 1979	10 % to 65 %
124	CHEMICAL- ORES & MINERALS	Rock phosphate	Potassium as K ₂ O	IS 9497: 1980	0.01 % to 1 %
125	CHEMICAL- ORES & MINERALS	Rock phosphate	Silica as SiO ₂	IS 11224: 1985	0.10 % to 20 %
126	CHEMICAL- ORES & MINERALS	Rock phosphate	Sodium as Na ₂ O	IS 9497: 1980	0.05 % to 5 %
127	CHEMICAL- ORES & MINERALS	Rock phosphate	Sulphur Trioxide as SO ₃	IS 1355: 1984	0.05 % to 10 %
128	CHEMICAL- ORES & MINERALS	Rock phosphate	Total Phosphate as P ₂ O ₅	IS 11224: 1985	10 % to 50 %
129	CHEMICAL- SOLID FUELS	Coal	Ash	IS 1350 (Part 1): 1984	1 % to 60 %
130	CHEMICAL- SOLID FUELS	Coal	Ash	ASTM D3174: 2012	1 % to 60 %

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



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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
131	CHEMICAL- SOLID FUELS	Coal	Ash	ISO 1171: 2010	1 % to 60 %
132	CHEMICAL- SOLID FUELS	Coal	Chlorine	IS 1350 (Part 5): 2017	0.005 % to 0.5 %
133	CHEMICAL- SOLID FUELS	Coal	Chlorine	ISO 587: 1997	0.005 % to 0.5 %
134	CHEMICAL- SOLID FUELS	Coal	Fixed Carbon	IS 1350 (Part 1): 1984	Calculated value (By difference)
135	CHEMICAL- SOLID FUELS	Coal	Fixed Carbon	ASTM D3172: 2013	Calculated value (By difference)
136	CHEMICAL- SOLID FUELS	Coal	Fixed Carbon	ISO 17246: 2010	Calculated value (By difference)
137	CHEMICAL- SOLID FUELS	Coal	Gross Calorific Value	ASTM D5865: 2013	1000 Kcal/kg to 8300 Kcal/kg
138	CHEMICAL- SOLID FUELS	Coal	Gross Calorific Value	ISO 1928: 2009	1000 Kcal / kg to 8300 Kcal / kg
139	CHEMICAL- SOLID FUELS	Coal	Gross Calorific Value	IS 1350 (Part 2): 2017	1000 Kcal/kg to 8300 Kcal/kg
140	CHEMICAL- SOLID FUELS	coal	Hardgrove Grindability Index	IS 4433: 1979	30 to 90
141	CHEMICAL- SOLID FUELS	Coal	Hardgrove Grindability Index	ASTM D409/D409M: 2016	30 to 90
142	CHEMICAL- SOLID FUELS	Coal	Moisture in analysis sample / Inherent Moisture	IS 1350 (Part 1): 1984	1 % to 30 %
143	CHEMICAL- SOLID FUELS	Coal	Moisture in analysis sample / Inherent Moisture	ASTM D3173/D3173M: 2017	1 % to 30 %

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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
144	CHEMICAL- SOLID FUELS	Coal	Phosphorus	IS 1350 (Part 5): 2017	0.005 % to 0.5 %
145	CHEMICAL- SOLID FUELS	Coal	Total Sulphur	ISO 334: 2013	0.01 % to 5 %
146	CHEMICAL- SOLID FUELS	Coal	Total Sulphur	IS 1350 (Part 3): 1969	0.01 % to 5 %
147	CHEMICAL- SOLID FUELS	Coal	Volatile Matter	ISO 562: 2010	5 % to 50 %
148	CHEMICAL- SOLID FUELS	Coal	Volatile Matter	IS 1350 (Part 1): 1984	5 % to 50 %
149	CHEMICAL- SOLID FUELS	Coal	Volatile Matter	ASTM D3175: 2017	5 % to 50 %
150	CHEMICAL- SOLID FUELS	Coal & Coke - Fusibility of Ash (Oxidizing)	Softening Temperature, ST	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
151	CHEMICAL- SOLID FUELS	Coal & Coke - Fusibility of Ash (Reducing)	Fluid Temperature, FT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
152	CHEMICAL- SOLID FUELS	Coal & Coke - Fusibility of Ash (Reducing)	Softening Temperature, ST	ASTM D 1857 / D 1857M: 2017	400 °C to 1500 °C
153	CHEMICAL- SOLID FUELS	Coal & Coke - Fusibility of Ash (Reducing)	Hemispherical Temperature, HT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
154	CHEMICAL- SOLID FUELS	Coal & Coke - Fusibility of Ash (Reducing)	Initial Deformation Temperature, IDT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
155	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Alumina	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	5 % to 40 %



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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- SOLID FUELS	Coal & Coke (Ash Composition)	Calcium Oxide	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	0.5 % to 20 %
157	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Ferric Oxide	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	3 % to 40 %
158	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Magnesium Oxide	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	0.5 % to 10 %
159	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Manganous Oxide	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	0.02 % to 3 %
160	CHEMICAL- SOLID FUELS	Coal & Coke (Ash composition)	Phosphorus Pentoxide	IS 1350 (Part 5): 2017	0.1 % to 5 %
161	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Potassium Oxide	Chemical & Instrumental analysis - Indian Bureau of Mines : 2012	0.1 % to 10 %
162	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Silica	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	15 % to 70 %
163	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Sodium Oxide	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	0.1 % to 10 %



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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
164	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Sulphur Trioxide	IS 1355: 1984	0.5 % to 20 %
165	CHEMICAL- SOLID FUELS	Coal & Coke (Ash Composition)	Titania	Chemical & Instrumental Analysis - Indian Bureau of Mines: 2012	0.1 % to 10 %
166	CHEMICAL- SOLID FUELS	Coal & Coke -Fusibility of Ash (Oxidizing)	Hemispherical Temperature, HT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
167	CHEMICAL- SOLID FUELS	Coal & Coke -Fusibility of Ash (Oxidizing)	Initial Deformation Temperature, IDT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
168	CHEMICAL- SOLID FUELS	Coal & Coke-Fusibility of Ash (Oxidizing)	Fluid Temperature, FT	ASTM D1857/D1857M: 2017	400 °C to 1500 °C
169	CHEMICAL- SOLID FUELS	Coal (Ultimate analysis)	Carbon	ASTM D5373: 2016	55 % to 85 %
170	CHEMICAL- SOLID FUELS	Coal (Ultimate analysis)	Hydrogen	ASTM D5373: 2016	3 % to 6 %
171	CHEMICAL- SOLID FUELS	Coal (Ultimate analysis)	Nitrogen	ASTM D5373: 2016	0.5 % to 2 %
172	CHEMICAL- SOLID FUELS	Coke	Ash	IS 1350 (Part 1) : 1984	0.1 % to 50 %
173	CHEMICAL- SOLID FUELS	Coke	Ash	ASTM D3174: 2012	0.1 % to 50 %
174	CHEMICAL- SOLID FUELS	Coke	Fixed Carbon	IS 1350 (Part 1): 1984	Calculated value (By difference)
175	CHEMICAL- SOLID FUELS	Coke	Fixed Carbon	ASTM D3172: 2013	Calculated value (By difference)
176	CHEMICAL- SOLID FUELS	Coke	Gross Calorific Value	IS 1350 (Part 2): 2017	1000 Kcal/kg to 8300 Kcal/kg



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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
177	CHEMICAL- SOLID FUELS	Coke	Gross Calorific Value	ASTM D5865: 2013	1000 Kcal/kg to 8300 Kcal/kg
178	CHEMICAL- SOLID FUELS	Coke	Moisture in analysis sample / Inherent Moisture	IS 1350 (Part 1) : 1984	0.1 % to 10 %
179	CHEMICAL- SOLID FUELS	Coke	Moisture in analysis sample / Inherent Moisture	ASTM D3173/D3173M: 2017	0.1 % to 10 %
180	CHEMICAL- SOLID FUELS	Coke	Total Sulphur	IS 1350 (Part 3): 1969	0.05 % to 5 %
181	CHEMICAL- SOLID FUELS	Coke	Volatile Matter	ASTM D3175: 2017	0.1 % to 10 %
182	CHEMICAL- SOLID FUELS	Coke	Volatile Matter	IS 1350 (Part 1): 1984	0.1 % to 10 %
183	CHEMICAL- SOLID FUELS	Petroleum Coke	Ash	ASTM D4422: 2013	0.01 % to 1.0 %
184	CHEMICAL- SOLID FUELS	Petroleum Coke	Fixed Carbon	ASTM D3172: 2013	Calculated value (By difference)
185	CHEMICAL- SOLID FUELS	Petroleum Coke	Gross Calorific Value	ASTM D5865: 2013	7500 Kcal/kg to 9000 Kcal/kg
186	CHEMICAL- SOLID FUELS	Petroleum Coke	Moisture in Analysis Sample / Inherent Moisture	ASTM D3173/D3173M: 2017	0.10 % to 5 %
187	CHEMICAL- SOLID FUELS	Petroleum Coke	Sulphur	IS 1448 (Part 33): 1991	3 % to 10 %
188	CHEMICAL- SOLID FUELS	Petroleum Coke	Volatile matter	ASTM D6374: 2012	5 % to 20 %



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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
189	CHEMICAL- SOLID FUELS	Petroleum Coke (Ultimate analysis)	Carbon	ASTM D5373: 2016	55 % to 90 %
190	CHEMICAL- SOLID FUELS	Petroleum Coke (Ultimate analysis)	Hydrogen	ASTM D5373: 2016	3 % to 6 %
191	CHEMICAL- SOLID FUELS	Petroleum Coke (Ultimate Analysis)	Nitrogen	ASTM D5373: 2016	0.5 % to 2.0 %