

Laboratory	Regional Agmark Laboratory (RAL), B3, A & B, Rajaji Bhavan, C.G.O. Complex, Besant Nagar, Chennai, Tamil Nadu		
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
1.	FOOD & AGRICULTURAL PRODUCTS			
1.	Oil, Fats and Related Products			
a.	Mustard Oil	Moisture Content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.40 %
		Specific gravity at 30°C/30°C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.905 to 0.915
		Refractive Index @40°C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4630 to 1.4670
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	165 to 185
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	95 to 115
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.5 % to 4.0 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	1.00 to 5.00
		Allyl isothiocyanate	IS 548 (Part I): 1964 (RA 2010) Clause 17	0.02 % to 0.60 %
		Bellier Turbidity temperature Test	IS 548 (Part II): 1964 (RA 2010) Clause 13	21°C to 30 °C
		Test for presence of Argemone oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative

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		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2	Qualitative
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for presence of Hydrocyanic Acid (HCN)	IS 548 (Part II): 1976 (RA 2010) Clause 11.2	Qualitative
		Test for presence of Linseed Oil (HBR)	IS 548 (Part II): 1976 (RA 2010) Clause 8	Qualitative
		Test for presence of added colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
b.	Groundnut Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.50 %
		Specific gravity at 30°C/30°C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.905 to 0.918
		Refractive Index @40°C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4615 to 1.4700
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	180 to 200
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	84 to 100
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.50 % to 1.50 %

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		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.01 % to 5.0 %
		Bellier Turbidity temperature Test	IS 548 (Part II): 1976 (RA 2010) Clause 13	35°C to 45 °C
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for Added colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone Oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative
c.	Sesame Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.50 %
		Specific gravity @ 30 °C/30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.912 to 0.925
		Refractive Index @ 40 °C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4626 to 1.4700
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	185 to 200
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	100 to 120

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.5 % to 2.0 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.05 to 8.00
		Bellier's Turbidity temperature Test	IS 548 (Part II): 1976 (RA 2010) Clause 13	18 °C to 24 °C
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for presence of cotton seed oil (HT)	IS 548 (Part II): 1976 (RA 2010) Clause 7	Qualitative
		Test for Added Colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative
d.	Coconut Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.50 %
		Specific gravity @ 30 °C/ 30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.910 to 0.925
		Refractive Index @ 40 °C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4474 to 1.4502

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		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	245 to 270
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	6.5 to 14.0
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.05 % to 1.0 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.01 to 8.0
		Polenske Value	IS 548 (Part I): 1964 (RA 2010) Clause 19	7.0 to 20.0
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for Added Colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative

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e.	Sunflower Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.30 %
		Specific gravity @ 30 °C/30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.910 to 0920
		Refractive Index @ 40 °C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4635 to 1.4850
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	185 to 198
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	95 to 145
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.50 % to 2.00 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.05 to 5.00
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for Added color	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative

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f.	Soyabean Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.01 % to 0.20 %
		Specific gravity @ 30 °C/ 30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.915 to 0.925
		Refractive Index @ 40°C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4630 to 1.4730
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	185 to 200
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	115 to 145
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.2 % to 2.0 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.05 to 1.00
		Test for presence of castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative
		Test for presence of linseed oil (HBR)	IS 548 (Part II): 1976 (RA 2010) Clause 8	Qualitative
		Test for Added color	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone Oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative

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g.	Ricebran Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.20 %
		Specific gravity @ 30 °C/ 30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.908 to 0.922
		Refractive Index @ 40 °C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4550 to 1.4730
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	175 to 200
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	85 to 110
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.5 % to 6.0 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.05 to 1.00
		Test for Added colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone Oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative

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h.	Castor Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 1.25 %
		Specific gravity @ 30 °C/ 30 °C	IS 548 (Part I): 1964 (RA 2010) Clause 11.3	0.940 to 0.970
		Refractive Index @ 40 °C	IS 548 (Part I): 1964 (RA 2010) Clause 10	1.4680 to 1.4770
		Saponification value	IS 548 (Part I): 1964 (RA 2010) Clause 15	170 to 195
		Iodine Value (Wijs)	IS 548 (Part I): 1964 (RA 2010) Clause 14	80 to 95
		Acetyl Value	IS 548 (Part I): 1964 (RA 2010) Clause 16.1	140 to 155
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.05 to 7.00
i	Blended Edible Oil	Moisture content	IS 548 (Part I): 1964 (RA 2010) Clause 5.1	0.05 % to 0.50 %
		Unsaponifiable matter	IS 548 (Part I): 1964 (RA 2010) Clause 8	0.30 % to 4.50 %
		Acid Value	IS 548 (Part I): 1964 (RA 2010) Clause 7	0.01 to 8.00
		Test for presence of Castor Oil (AMT)	IS 548 (Part II): 1976 (RA 2010) Clause 15.1	Qualitative

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		Test for presence of linseed oil (HBR)	IS 548 (Part II): 1976 (RA 2010) Clause 8	Qualitative
		Test for presence of Hydrocyanic acid (HCN)	IS 548 (Part II): 1976 (RA 2010) Clause 11.2	Qualitative
		Test for Added colour	IS 548 (Part II): 1976 (RA 2010) Clause 19	Qualitative
		Test for presence of Argemone Oil	IS 548 (Part II): 1976 (RA 2010) Clause 10	Qualitative
		Test for presence of Mineral Oil	IS 548 (Part II): 1976 (RA 2010) Clause 12.2 (by TLC)	Qualitative

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