Specification for Fortified Soyabean Oil

3.2.1 **Description:**

3.2.1.1 The material shall be obtained from good quality soyabeans from the plant Glycine max (L) Merrill Syn. Glycine soja, sieb and zucc., fam. Legumisonae by a process of solvent extraction.

3.2.1.2 The material shall be clear and free from adulterants, sediment, suspended and other foreign matter, separated water, and added colouring and flavoring substances. The material shall have acceptable test and odour.

3.2.1.3 The clarity of the material shall be judged by the absence of turbidity after keeping the filtered sample at 30°C for 24 hours.

3.3 The material shall also comply with the requirements given in Table-1

Table-1: Requirements for Fortified Soyabean Oil

Sl. No	CHARACTERISTIC	REQUIREMENTS	METHOD OF TEST REF.BDS 1584
1	2	3	4
i)	Moisture and Insoluble impurities, percent by mass, Max	0.1	9 & 10
ii)	Colour ia a 1 inch (2.54 cm) cell on the Lovibond scale expressed as Y+ 5R, not deeper than	7.5	4
iii)	Refractive index at 40°C	1.4650-1.4710	7
iv)	Relative density (20° / 20°C)	0.919 – 0.925	10
v)	Saponification value (as KOH), mg/g	189-195	15
vi)	Iodine value	124-139	19
vii)	Acid value (as KOH), mg/g,Max	0.5	11
viii)	Unsaponiable matter, percent by mass, Max	1.5	17
ix)	Peroxide value, expressed as milliequivalents of as oxygen per kg,Max	5.0	20
x)	Flash point, Pensky-Martins (closed) °C Min.	250	23
xi)	Phosphorus content	To pass the test	No visible break on heating the oil at 250°C
xii)	Vitamin A, mg/kg	15-30	Appendix B or C of BDS1769:2014

3.4 The product shall not contain any of the toxic metals in excess of the quantities prescribed in Table-2.

Table-2 Limits for heavy metals

Sl. No	CHARACTERISTIC	REQUIREMENTS	METHOD OF TEST REF. TO
(1)	(2)	(3)	(4)
i)	Lead (as Pb) , ppm,Max.	0.1	AOAC Method 974.27,1990/2005
ii)	Arsenic (as As) , ppm,Max.	0.1	AOAC Method 986.15,1990/2005
iii)	Cadmium (Cd) , ppm,Max.	1.0	AOAC Method 974.27,1990/2005
iv)	Mercury (total), ppm,Max.	0.25	AOAC Method 971.21,1990/2005
v)	Iron (as Fe), ppm, Max.	1.5	AOAC Method 9920.197,1990/2005/App.D of BDS1769:2014
vi)	Cooper (as Cu), ppm,Max	0.1	AOAC Method 991.11,1990/2005/ App.E of BDS1769:2014

3.5. **PERMITTED FOOD ADDITIVES:**

Additional of the following Food Additives to the materials not exceeding the prescribed levels are permitted:

INS No.	Antioxidants	Maximum Use level
304	Ascorbyl palmitate	500 mg/kg (singly or in combination)
305	Ascorbyl stearate	
307a	Tocopherol,d- alpha	300 mg/kg (singly or in combination)
307b	Tocopherol concentrate, mixed	
307c	Tocopherol,dl-alpha	
310	Propyl gallate	100 mg/kg
319	Trtiary butyl hydroquinone (TBHQ)	120 mg/kg
320	Butylated hydroxyanisole (BHA)	175 mg/kg
321	Butylated hydroxytoluene (BHT)	75 mg/kg
any combination of gallates, BHA, or TBHQ not to exceed 200 mg/kg within individual limits		
389	Dilauryl thiodipropionate	200 mg/kg
330	Citric acid	GMP
331(i)	Sodium dihydrogen citrates	GMP
331(iii)	Trisodium citrates	GMP
384	Isopropyl citrates	100 mg/kg (singly or in combination)
472c	Citric and fatty acid esters of glycerol	
Antifoaming agents (oils for deep frying)		
900a	Polydimethylsiloxane	10 mg/kg