

Sunflower Oil Specification

PRODUCT SPECIFICATION			
PRODUCT	SUNFLOWER OIL	20.05.2023	Page 1/3

1. GENERAL PRINCIPLES

- 1.1 Our basic mission is production of the healthiest and best quality oils and presenting them to our consumers.
- 1.2 All our productions are consistent with related Food Codexes and regulations.
- 1.3 All our products are produced according to the principles of ISO 9000 Quality Management System and ISO 22000 Food Safety Management System.
- 1.4 Customer satisfaction is our basic principle

2. PROPERTIES of THE PRODUCT

Definition of the Product

Refined, Bleached, Deodorized and Winterized (RBDW) Sunflower Oil.

2.1 PHYSICAL and CHEMICAL PROPERTIES

Parameters	Limits	Methods of Analysis
Appearance	Clear	-
Taste	Characteristic	-
Odour	Characteristic	-
Moisture and Volatile Matter, %	max 0,2	AOCS Ca 2e-84
Colour, Lovibond. Red. 5 ¹⁴	max 1,3	AOCS Cc 13b-45
Refractive Index, 40°C	1,461 – 1,471	AOCS Cc 7-25
Relative Density, 20°C	0,914 – 0,923	TS 4959
Free Fatty Acid, % (as oleic acid)	max 0,1	AOCS Ca 5a-40
Acid Value, mgKOH/g	max 0,6	AOCS Cd 3d-63
Peroxide, Meq O ₂ /kg. in bottling process	max 0,5	AOCS Cd 8-53
Peroxide, Meq O ₂ /kg. on expiry date	max 10	AOCS Cd 8-53
Iodine Value (Wijs Method)	94-141	AOCS Cd 1-25
Wax, ppm	max 50	All Method 4031 E228
Soap, ppm	max 3,5	AOCS Cc 17-95
Saponifiable Matter, mgKOH/g	188-194	AOCS Cd 3-25
Unsaponifiable Matter, g/kg	max 15	AOCS Ca 6a-40
Cold Test, hours	min 5,5	AOCS Cc 11-53
Mineral Oil	Not Available	TS 5039
Cottonseed Oil (Halphen Test)	Not Available	AOCS Cb 1-25

NOTES:

- a. The products is compliant with Turkish Food Codex Communiqué Edible Oil called by Plant Names.
- b. The contaminant amounts and solvent residue are compliant with Turkish Food Codex.
- c. The product is consistent with Turkish Food Codex Regulations and does not contain Genetically Organism (GMO). Also, The product is not produced with any raw material ingredient consisting of GMO.



Sunflower Oil Specification

PRODUCT SPECIFICATION		
PRODUCT	SUNFLOWER OIL	20.05.2023 Page 2/3

2.2 PHYSICAL and CHEMICAL PROPERTIES

Fatty Acid	Limits	Methods of Analysis
Caproic Acid, C6:0, %	BDL	AOCS Ce 2-66
Caprylic Acid, C8:0, %	BDL	
Capric Acid, C10:0, %	BDL	
Lauric Acid, C12:0, %	BDL-0,1	
Myristic Acid, C14:0, %	BDL-0,1	
Palmitic Acid, C16:0, %	4,0-7,6	
Palmitoleic Acid, C16:1, %	BDL-0,3	
Margaric Acid, C17:0, %	BDL-0,2	
Heptadecenoic Acid, C17:1, %	BDL-0,1	
Stearic Acid, C18:0, %	2,1-6,5	
Oleic Acid, C18:1, %	14,0-71,8	
Linoleic Acid, C18:2, %	18,7-74,0	
Linolenic Acid, C18:3, %	BDL-0,5	
Arachidic Acid, C20:0, %	0,1-0,5	
Eicosenoic Acid, C20:1, %	BDL-0,3	
Eicosadienoic Acid, C20:2, %	BDL	
Behenic Acid, C22:0, %	0,3-1,5	
Erucic Acid, C22:1, %	BDL-0,3	
Erucic Acid, C22:2, %	BDL-0,3	
Lignoceric Acid, C24:0, %	BDL-0,5	
Nervonic Acid, C24:1, %	BDL	

BDL : Below Detection Limit. $\leq 0,05$

2.3 STEROL COMPOSITION (as total sterol percentage)

Sterol	Limits
Cholesterol	BDL-0,7
Brassicasterol	BDL-0,2
Campesterol	6,5-13,0
Stigmasterol	6,0-13,0
Beta-sitosterol	50,0-70,0
Delta-5 Avenasterol	BDL-6,9
Delta-7 Stigmastenol	6,5-24,0
Delta-7 Avenasterol	3,0-7,5
Total sterol (mg/kg)	2400-5000

BDL : Below Detection Limit. $\leq 0,05$

2.4 HEAVY METAL PROPERTIES

Parameters	Limits	Methods of Analysis
Iron, Fe, mg/kg	max 1,5	AOCS Ca 18b-91
Copper, Cu, mg/kg	max 0,4	AOCS Ca 18b-91
Lead, Pb, mg/kg	max 0,1	AOCS Ca 18b-91
Arsenic, As, mg/kg	max 0,1	TS 3606



Sunflower Oil Specification

PRODUCT SPECIFICATION			
PRODUCT	SUNFLOWER OIL	20.05.2023	Page 3/3

3. TRANSPORTATION and STORAGE

3.1 Transportation Conditions

Product are transported in 0,5l, 1l, 2l, 3l, 4l and 5l plastic bottles and 4l, 5l, 10l and 18l tin packages. Also, product can be transported in bulk (20-30 tonnes) with closed and sealed tanks. During bulk transportation the temperature should not exceed 40°C.

3.2 Storage and Shelf Life

The products must be kept away from sunlight. The products must be stored in an odorless and dry place. The temperature must be below 40°C. The shelf life is 24 months.

