Product specification – Edible Vegetable Oil

Refined Deodorized Bleached Chilled/Winterized (RDBW) Sunflower Oil (Grade P)

Approval Certificate No. 29/22 issued 05.07.2022, expires 04.07.2025.

Product Name	**Vegetable Oil — Refined Sunflower Oil**
Ingredients	100% pure sunflower oil
Product description:	Physically refined edible oil of vegetable origin obtained from seeds of the sunflower plant (*Helianthus annuus*) by pressing. The oil is bleached, chilled, and deodorized.
Primary packaging:	PET bottle, PE cap
Secondary packaging:	corrugated cardboard box
Storage and transport requirements:	To be stored in places protected from precipitation fallout and sunlight
Shelf life:	24 months from the date of bottling, if stored in a dark indoor area within the recommended temperature range from 0°C to 30°C
Regulatory reference:	Quality of the product is in compliance with the requirements of DSTU 4492:2017 "Sunflower Oil. Specifications" (Ukrainian national standard)
Application purpose:	Sunflower oil is used for frying, hot cooking, and hot/cold salad-dressing
Use and application:	This product is fit for direct human consumption.
Sensory characteristics:	
Appearance, color:	Clear oily liquid of a slightly yellowish color, without sediment
Taste:	Neutral, free from any foreign taste
Odor:	Neutral, free from any foreign odors

Physical and chemical properties:

Test item name and unit	***Reference Value***	***Tested Value****
Color number, mg iodine, not more than	10	3
Acid number, mg KOH/g, not more than	0.50	0.09...0.14
Peroxide number, ½ O mmol/kg, not more than	10	0.56...0.58
Content of phosphoric substances in terms of stearooleolecithin, % by weight, not more than	none	none
Non-fat impurity content, % by weight, not more than	none	none
Moisture and volatiles content, % by weight, not more than	0.10	0.02...0.03
Wax and wax-like substances	none	none
Soap (quality test)	none	none

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(continued)

Heavy metals by weight, mg/kg, not more than:		
	Reference Value	***Tested Value****
Lead (Pb)	0.10	0.067
Cadmium (Cd)	0.05	0.0183
Arsenic (As)	0.10	none detected
Mercury (Hg)	0.03	none detected
Copper (Cu)	0.50	0.248
Zinc (Zn)	5.00	2.917
Iron (Fe)	5.00	1.321
Residual pesticides by weight, mg/kg, not more than:		
	Reference Value	***Tested Value****
DDT	0.10	< 0.05
Hexachlorane (HCCH, hexachlorocyclohexane)	0.05	< 0.05
Heptachlorine	0	none detected
Mycotoxins by weight, mg/kg, not more than:		
	Reference Value	***Tested Value****
Aflatoxin B1	0.005	< 0.001
Zearalenone	1.0	< 0.04
Radionuclides, Bq/kg		
	Reference Value	***Tested Value****
Caesium-137 (Cs-137)	< 100	8.21
Strontium-90 (Sr-90)	< 30	3.60
Other		
Trans fatty acids, %	< 1.0	0.038
Benzo(a)pyrene content by weight, µg/kg	< 2.0	0.5
Genetically modified organisms (GMO)		
35S+FMV promotor target sequence (PCR Real-Time)	< 0.1%	none detected
NOS-terminator target sequence (PCR Real-Time)	< 0.1%	none detected
Fatty acid composition, %		
	Reference Value	***Tested Value****
C 16:0	5.0 – 7.6	6.9
C 18:0	2.7 – 6.5	3.9
C 18:1	14.0 – 39.4	27.5
C 18:2	48.3 – 74.0	60.2

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C 20:0	0.1 – 0.5	0.30
C 22:0	0.3 – 1.5	0.80

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