

Product Analysis				
Name of the product:	Refined Sunflower oil (1L)			
Legal name:	Sunflower oil refined, deodorized and winterized			
Product description : Edible oil For salads and sauces, for deep-fry and regular frying				
Ingredients :	sunflower oil, β -carotene			
Sensory characteristics				
Appearance, colour !lear				
Taste	impersonal flavor oils			
Smell	No smell			
Chemical and physical properties				
Characteristics	unit	Typical values	Limit values	
Free Fatty Acids (FFA)	%	0.03	0.12	DSTU 4350
Moisture and volatile matter content	%	0.02	0.1	DSTU ISO 662, DSTU 4603
Impurities content	%	Absence	Absence	DSTU ISO 663, GOST 5481
Phosphorus content	%	Absence	Absence	GOST 7082
Wax and wax-like sub-es		Absence	Absence	DSTU 4602:2006
Soap content	quality sample	Absence	Absence	GOST 6048
Peroxide value (at loading)	meq O ₂ /kg	0.5-1.0	2.0	DSTU ISO 3960, DSTU 4570
Color index	mg of iodine	2.0	10	DSTU 4568
Flash-point	°C		<234	DSTU 4455
Iodine Value	g I ₂ /100 g		125-145	DSTU 4596
TRANS fatty acids (%)	%	< 0,5	1.0	GOST 30418-96
Stability test (Randmat)	fem		<15	GOST 5472
Mass fraction of unsaponifiables	%		<1,0	DSTU 6050
Vitamine E	mg / kg	600-750	600-750	DSTU EN 12822:2005
β -carotene	mg / kg	0,3-0,35	0,3-0,35	TU U 15.4-00374385-009: 2010 ADDITION, G (MSZ 3649-85)
Fatty acid profile				
Palmitic acid, C 16:0	%	6,0-7,0	3,0-10,0	GOST 30418-96
Stearic acid, C 18:0	%	3,0-4,0	1,0-10,0	GOST 30418-96
Oleic acid, C 18:1	%	26,0-30,0	14,0-35,0	GOST 30418-96
Linoleic acid, C 18:2	%	58,0-64,0	50,0-75,0	GOST 30418-96
Arachic acid, C 20:0	%	0,1-0,2	less 1,5	GOST 30418-96
Behenic acid, C 22:0	%	0,2-0,8	less 1,5	GOST 30418-96
Microbiological values				
Not determined for this type of oil				
Contaminants, undesirable substances				
Characteristics	unit	Typical values	Limit values	Method
Benzo(a)pyrene (ppb)	ppb	< 0,5	2.0	MVV 081/12-0732-11, DSTU 4689:2006
PAH (4)	ppb			
Dioxins (PCDD+PCDF)	ng/g	0.158	<0.75	EU directive 2006/13/EC (HRGCMS)
Sum of dioxins and dl PCBs	ng/g	0.272	<1.5	EU directive 2006/13/EC (HRGCMS)
Mineral oil (C10-C56)	ppm	< 10,0	50.0	MVV 17/41-08
Copper (Cu)	ppm	0,1-0,2	0.5	MVV 4/32-00, GOST 26929,30178
Iron (Fe)	ppm	1,0-1,8	5.0	MVV 4/32-00, GOST 26929,30178, DSTU ISO 8294
Lead (Pb)	ppm	0,03-0,06	0.1	MVV 4/32-00, GOST 26929,30178, DSTU ISO 12193
Cadmium (Cd)	ppm	< 0,004	0.05	MVV 4/32-00, GOST 26929,30178
Mercury (Hg)	ppm	< 0,004	0.03	MVV 4/32-00, MU 5178, GOST 26927
Arsenic (As)	ppm	< 0,0025	0.1	MVV 4/32-00, GOST 26930
HCH (hexachloran)	mg / kg	<0,0015	0.05	DSTU EN 1528-1
Heptachlor		Not permissible		DSTU EN 1528-1
DDT		<0,006	0.1	DSTU EN 1528-1
Aflatoxin B1	mg / kg	<0,003	0.005	DSTU EN 12955; MR 2273; MU 4082
Zearalenone	mg / kg	< 0,1	1.0	DSTU EN 12955; MR 2273; MU 4082
Cs-137 (Cesium - 137)	Bc/kg	4	100	MR 5779 [7]
Sr-90 (Strontium - 90)	Bc/kg	1	30	MR 5779 [8]
Micotoxins and pesticide residues limit according to valid EU Reg.				MVV 4/32-96, MU 2273, MR 2964
GMO statement:	The product is not the subject to GM labelling requirements as laid down in Reg 1829/2003 and 1830/2003 (EC).			
Origin:	MAKOLI LLC - UKRAINE			
Allergens (1169/2011/EU Reg, Annex II.):				Yes / No
Peanuts and products thereof				No
Crustaceans and products thereof				No
Fish and products thereof				No
Eggs and products thereof				No
nuts and macadamia nuts)				No
Milk and products thereof				No
Soybean and products thereof				No
strains)				No
Sulphur dioxide and Sulphites (> 10 mg/kg)				No
Celery and products thereof				No

Sesame and products thereof	No
Mustard and products thereof	No
Lupin and products thereof	No
Molluscs and products thereof	No

If YES, details :

Nutritional data per 100 g of product

	unit	100 g	1 portion (10g)
Energy value	kJ/kcal	3761/899	376/89.9
Protein	g	0	0
Carbohydrate	g	0	0
Sugars	g	0	0
Fat	g	99.9	9.9
saturated fatty acids	g	< 12	< 1.2
mono-unsaturated FA	g	14-35	1.4-3.5
poly-unsaturated FA	g	50-75	5.0-7.5
of which -omega-3	g	50-75	5.0-7.5
-omega-6	g	0.1	0.01
trans fatty acids (*)	g	< 1.0	< 0.1
Salt	g	0	0
Vitamin, E	g	60-75	6.0-7.5

(*) for internal information, not to be labelled.

Storage and transport requirements	It's to be stored in closed dark places in recommended temperature interval from +8 °C to + 20 °C. Transportation conditions In a clean, dry and covered transport
Expiration date	12 months from date of manufacture (filling)
Shelf life	on the bottle: PROD DD/MM/YY time EXPY DD/MM/YY 000 (Nº batch)

Traceability data on the box: ROD DD/ /YY EXPY DD/ /YY time

On Behalf of:

MAKOLI LLC

Bud. 44A Vul. Tsentralna S. Karabynivka, 51471 Ukraine.

Web: www.makoli-ua.com / Tel: +380 95 180 39 46

Email: laboratory@makoli-ua.com

NofaLab International Laboratories Ukraine LLC

Director

Prokhorov Mikhail



accreditation method (accreditation 081/12-06-28-09)

The results of the examination refer exclusively to the checked samples. Duplicates even in parts must be authorized by the test laboratory in written form. Additional information concerning characteristics of this analysis such as measurement uncertainty is available upon request.

NofaLab Ukraine LTD
19/5 Artilleriyskaya Str.
54030 Nikolaev

Tel: +38 050 645 2719
Fax: +38 0512 580564

NofaLab has been certified by:

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