Technical Data Sheet

Grapeseed Oil

Definition

Oil obtained from grape seeds (Vitis Vinifera L.) cold pressed, bleached, deodorized, deacidified and winterized. The refining process is exclusively physical and mechanical, in no process phase chemical solvents are used.
Its main nutritional value is connected to the high content of linoleic acid, a fatty acid progenitor of the omega-6 series, useful in the reduction of hematic cholesterol levels. Its richness in anti-oxidants, furthermore, contributes to highlighting its protective properties on the overall health of the cardio-vascular system.
The cosmetic industry also exploits its anti-oxidant properties, which protect the skin from early aging, atmospheric agents and free radicals. Grapeseed oil applied directly to the skin also has astringent, toning and stimulating properties.

Authenticity characteristics	Methodology standard	Requirement	Requirement for the Codex Alimentarius*
Relative density at 20°C (g/mL)	UNI EN ISO 6883	0.920-0.926	0.920-0.926
Refraction index at 40°C	UNI EN ISO 6320	1.467-1.477	1.467-1.477 a 25°C
Iodine number (g·L/100 g)	UNI EN ISO 3961	128-150	
Fatty acids	Methodology standard	Requirement	Requirement for the Codex Alimentarius (%)
C4:0 butyric			
C6:0 caproic			n.r.
C8:0 caprylic			n.r.
C10:0 capric			n.r.
C12:0 lauric			n.r.
C14:0 myristic	UNI EN ISO 12966	< 0.3	< 0.3
C16:0 palmitic	UNI EN ISO 12966	5.5-11.0	5.5-11.0
C16:1 palmitoleic	UNI EN ISO 12966	< 1.2	< 1.2
C17:0 eptadecanoic	UNI EN ISO 12966	< 0.2	< 0.2
C17:1 eptadecenoic	UNI EN ISO 12966	< 0.1	< 0.1
C18:0 stearic	UNI EN ISO 12966	3-6.5.0	3-6.5.0
C18:1 oleic	UNI EN ISO 12966	12.0-28.0	12.0-28.0
C18:2 linoleic	UNI EN ISO 12966	65.0-78.0	58.0-78.0
C18:3 linolenic	UNI EN ISO 12966	< 1.0	< 1.0
C20:0 arachidic	UNI EN ISO 12966	< 1.0	< 1.0
C20:1 gadoleic			< 0.3
C20:2 eicosenoic	UNI EN ISO 12966	< 0.3	n.r.
C22:0 behenic	UNI EN ISO 12966	< 0.5	< 0.5
C22:1 erucic	UNI EN ISO 12966	< 0.3	< 0.3
C24:0 lignoceric	UNI EN ISO 12966	< 0.4	

Sterol composition	Methodology standard	Requirement (mg/kg)	Requirement for the Codex Alimentarius (mg/kg)
Choelsterol	UNI EN ISO 12228-1	< 0.5	< 0.5
Brassicasterol	UNI EN ISO 12228-1	< 0.2	< 0.2
24-Methylene-cholesterol	UNI EN ISO 12228-1	-	-
Campesterol	UNI EN ISO 12228-1	7.5-14.0	7.5-14.0
Campestanol	UNI EN ISO 12228-1	-	-
Stigmasterol	UNI EN ISO 12228-1	7.5-12.0	
Δ7-Campesterol	UNI EN ISO 12228-1	-	-
Δ7,23-Stigmastadienol	UNI EN ISO 12228-1	-	-
Clerosterol	UNI EN ISO 12228-1	-	-
B-Sitosterol	UNI EN ISO 12228-1	65.0-75.0	64.0-70.0
Sitostanol	UNI EN ISO 12228-1	-	-
Δ5-Avenasterol	UNI EN ISO 12228-1	1.0-3.5	1.0-3.5
Δ7,9 (11)-Stigmastadienol	UNI EN ISO 12228-1	-	-
Δ5,24-Stigmastadienol	UNI EN ISO 12228-1	-	-
Δ7-Stigmastenol	UNI EN ISO 12228-1	0.5-3.5	0.5-3.5
Δ7-Avenasterol (mg/kg)	UNI EN ISO 12228-1	0.5-1.5	0.5-1.5
Erythrodiol+uvaol (mg/kg)	UNI EN ISO 12228-1	> 2.0	-
Total (mg/kg)	UNI EN ISO 12228-1	1500-4500	

Tocopherol	Methodology standard	Requirement	Requirement for the Codex Alimentarius (mg/kg)
A-Tocopherol			16-38
B-Tocopherol			< 89
Γ-Tocopherol			< 73
Δ-Tocopherol			< 4
A-Tocotrienol			18-107
Γ-Tocotrienol			115-205
Δ-Tocotrienol			< 3.2
Total			240-410

*The requirement for the Codex Alimentarius is reported keeping in mind that the text refers to vegetable oils.

Quality characteristics	Methodology standard	Requirement	Requirement for the Codex Alimentarius
Smell and taste	UNI 22068/2017	Characteristic	Characteristic
Look	UNI 22068/2017	Clear at 20°C	-
Colour	UNI 22068/2017	Abs. UV-Vis 420<0.20 Abs. UV-Vis 453<0.10	-
Acidity (% oleic acid)	UNI EN ISO 660	< 0.5	< 0.6 mg_{KOH}/g_{oil}
Number of peroxides (meq_{O2}/kg)	UNI EN ISO 3960	< 7.0	< 10.0
Impurities (petroleum ether) (%)	UNI EN ISO 663	< 0.05	< 0.05
Soaps (sodium oleate) (mg/kg)	UNI EN ISO 3960	< 10.0	< 0.005%
Saponification number (mg_{KOH}/g)	UNI EN ISO 3657	188-194	188-194
Unsaponifiable (g/kg)	UNI EN ISO 3596	< 20.0	< 20.0
Humidity and volatile substances 105°C (%)	UNI EN ISO 662	< 0.2	< 0.2
Heavy metals			
Fe	UNI EN ISO 8294	< 1.5	< 1.5
Cu	UNI EN ISO 8294	< 0.1	< 0.1
Pb	UNI EN ISO12193	< 0.1	
As		< 0.1	
Solvents (mg/kg)**			
Hexane	UNI EN ISO 9832	< 1.0	

**Since the production process doesn't include hexane, the test to verify if its content is below 1.0 mg/kg isn't normally conducted.

Nutritional values for 100 g of product

Energy value	3700 kJ, 900 kcal
Fats	100 g
of which saturated	12.0 g
of which mono-unsaturated	17.4 g
of which poly-unsaturated	70.6 g
Proteins	absent
Carbohydrates	absent
of which sugar	absent
Vitamin E	40 mg (335% NRV)

HACCP

Our company applies the HACCP self-control system to guarantee the conformity of our products to the relevant laws and to the contract specifications and to prevent hygene and health hazards, in defense of public health.

Declarations

Grapeseed oil doesn't contain the *Allergens* included in Attachment II of European Regulation 1169/2011, neither for additions nor for cross contamination.

The product doesn't contain any trace of *Aflatoxins*, *Dioxins* and *Polycyclic Aromatic Hydrocarbons*, as established by European Regulation 1881/2006, and *Pesticides*, as established by European Regulation 396/2005.

Grapeseed oil and the raw material used for its production don't contain and don't come from *Genetically Modified Organisms* (European Regulation 1829-30/2003).

Grapeseed oil doesn't contain, isn't produced with and doesn't come in contact with *animal origin substances*.

The product is suitable for consumption by *vegans* and *vegetarians*.

Packaging

Grapeseed oil is normally packaged in 200 L or 1000 L tanks; packaging can vary depending upon clients' requests.

Shelf life

Shelf life of Grapeseed oil is 18 months in the original producer's closed packaging.

Storage conditions

Store in a fresh, dry and ventilated environment, protect from physical damage. Keep away from heat sources.