

### CERTIFICATE OF ANALYSIS (COA)

Product Name	GRAPESEED OIL
Botanical Name	Vitis vinifera
CAS #	8024-22-4 ; 84929-27-1
EINECS #	287-896-9 ; 284-511-6
INCI Name	Vitis vinifera (Grape) Seed Oil

Part Used	Seeds
Extraction Method	Cold Pressed
Quality	100% Pure and Natural

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Pale yellow to light green colored liquid	CONFORMS
Odour	Characteristic mild odour	CONFORMS
Refractive Index	1.472 - 1.477 @ 20°C	1.475
Specific Gravity (g/mL)	0.910 - 0.930 @ 20°C	0.922
Saponification Value (mgKOH/g)	180 - 200	190
Peroxide Value (meq O <sub>2</sub> /kg)	Less than 5.0	CONFORMS
Iodine Value (g I <sub>2</sub> /100g)	115 - 145	125
Free Fatty Acids (% oleic)	Less than 0.5	CONFORMS
Acid Value (mgKOH/g)	Less than 1.0	CONFORMS
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

### FREE ACID COMPOSITION

FATTY ACID	C-CHAIN	SPECIFICATIONS (%)	RESULTS (%)
Palmitic Acid	C16:0	5.50 - 11.00	6.20
Palmitoleic Acid	C16:1 (n-7)	Maximum 1.20	0.60
Stearic Acid	C18:0	3.00 - 6.00	3.70
Oleic Acid	C18:1 (n-9)	12.00 - 28.00	19.40
Linoleic Acid	C18:2 (n-6)	58.00 - 78.00	69.20
Alpha-Linolenic Acid	C18:3 (n-3)	Maximum 1.00	0.20

MICROBIAL ANALYSIS	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Aerobic Mesophilic Bacterial Count	< 100 CFU/g	ISO 21149	CONFORMS
Yeast and Mould	< 10 CFU/g	ISO 16212	CONFORMS
Candida albicans	ABSENT / 1g	ISO 18416	CONFORMS
Escherichia coli	ABSENT / 1g	ISO 21150	CONFORMS
Pseudomonas aeruginosa	ABSENT / 1g	ISO 22717	CONFORMS
Staphylococcus aureus	ABSENT / 1g	ISO 22718	CONFORMS

<u>HEAVY METAL TESTS</u>	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Lead: Pb (mg/kg or ppm)	< 10 ppm	na	CONFORMS
Arsenic: As (mg/kg or ppm)	< 2 ppm	na	CONFORMS
Mercury: Hg (mg/kg or ppm)	< 1 ppm	na	CONFORMS

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