

## CERTIFICATE OF ANALYSIS (COA)

Product Name	WALNUT OIL
Botanical Name	Juglans regia
CAS #	8024-09-07 ; 84012-43-1
EINECS #	281-688-1
INCI Name	Juglans Regia Seed Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Pale Yellow to light yellow oily liquid.	CONFORMS
Odour	Walnut Oil has very little scent characteristic of most carrier oils.	CONFORMS
Refractive Index	1.450 – 1.475	1.471
Specific Gravity (g/mL)	0.910 – 0.926	0.921
Saponification Value (mgKOH/g)	180 - 200	194
Peroxide Value (meq O <sub>2</sub> /kg)	max 5.0	2.69
Iodine Value (g I <sub>2</sub> /100g)	121 - 141	126.14
Acid Value (mgKOH/g)	2.0 MAX	0.86
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

### FREE ACID COMPOSITION

FATTY ACID	C-CHAIN	SPECIFICATIONS (%)	<u>RESULTS</u>
Palmitic Acid	C16:0	10.00 – 16.00	6.30
Palmitoleic Acid	C16:1 (n-7)	Maximum 1.00	0.30
Stearic Acid	C18:0	1.00 – 3.00	1.60
Oleic Acid	C18:1 (n-9)	13.00 – 26.00	19.20
Linoleic Acid	C18:2 (n-6)	45.00 – 65.00	59.90
Alpha-Linolenic Acid	C18:3 (n-3)	9.00 – 15.00	12.00

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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