

## CERTIFICATE OF ANALYSIS (COA)

Product Name	HAZELNUT OIL
Botanical Name	Corylus avellana
CAS #	185630-72-2 ; 84012-21-5
EINECS #	281-667-7
INCI Name	Corylus avellana (Hazel) Nut Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Pale yellow to bright golden colored liquid	CONFORMS
Odour	Almost odourless	CONFORMS
Refractive Index	1.460 – 1.475 @ 20°C	1.467
Specific Gravity (g/mL)	0.907 – 0.922 @ 20°C	0.915
Saponification Value (mgKOH/g)	186-200	191.28
Peroxide Value (meq O <sub>2</sub> /kg)	max 10.0	0.29
Iodine Value (g I <sub>2</sub> /100g)	75 – 120	86.93
Acid Value (mgKOH/g)	MAX 2.0	0.2
Free Fatty Acids (% oleic)	Less than 0.25	0.6
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	4.00 – 11.0	4.17
Palmitoleic Acid	C16:1	Maximum 1.00	0.30
Stearic Acid	C18:0	0.5 – 4.0	2.92
Oleic Acid	C18:1 (n-9)	60.0 – 83.0	72.96
Linoleic Acid	C18:2 (n-6)	3.50 – 21.0	8.66
Alpha-Linolenic Acid	C18:3 (n-3)	Maximum 1.50	0.30

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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