

CERTIFICATE OF ANALYSIS (COA)

Product Name	ELDERBERRY SEED OIL
Botanical Name	Sambucus nigra
CAS #	68916-55-2 ; 84603-58-7
EINECS #	283-259-4
INCI Name	Sambucus Nigra Seed Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Dark amber colored liquid	CONFORMS
Odour	Characteristic slightly fruity aroma	CONFORMS
Refractive Index	1.475 - 1.485 @ 20°C	1.480
Specific Gravity (g/mL)	0.920 - 0.940 @ 20°C	0.933
Saponification Value (mgKOH/g)	180 - 210	187
Peroxide Value (meq O ₂ /kg)	Less than 10.0	CONFORMS
Iodine Value (g I ₂ /100g)	130 - 190	157
Acid Value (mgKOH/g)	Less than 4.0	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	5.00 – 10.00	6.00
Stearic Acid	C18:0	0.80 – 4.50	1.20
Oleic Acid	C18:1 (n-9)	8.00 – 14.00	12.60
Linoleic Acid	C18:2 (n-6)	37.00 – 45.00	41.90
Alpha-Linolenic Acid	C18:3 (n-3)	28.00 – 45.00	37.40

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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