

CERTIFICATE OF ANALYSIS (COA)

Product Name	SEABUCKTHORN SEED OIL
Botanical Name	Hippophae rhamnoides
CAS #	90106-68-6 ; 225234-03-7
EINECS #	290-292-8
INCI Name	Hippophae Rhamnoides (Sea Buckthorn) 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 orange yellow to reddish orange colored liquid	CONFORMS
Odour	Characteristic sweet, subtle odour	CONFORMS
Refractive Index	1.470 - 1.490 @ 20°C	1.478
Specific Gravity (g/mL)	0.910 - 0.940 @ 20°C	0.924
Saponification Value (mgKOH/g)	180 - 210	188
Peroxide Value (meq O ₂ /kg)	Less than 5.0	CONFORMS
Iodine Value (g I ₂ /100g)	140 - 180	153
Acid Value (mgKOH/g)	Less than 10.0	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 - 12.00	7.60
Palmitoleic Acid	C16:1 (n-7)	Maximum 5.00	2.00
Stearic Acid	C18:0	1.5.00 - 5.00	1.90
Oleic Acid (including Vaccenic acid)	C18:1	14.00 - 25.00	23.90
Linoleic Acid	C18:2 (n-6)	30.00 - 39.00	35.80
Alpha-Linolenic Acid	C18:3 (n-3)	23.00 - 32.00	27.40

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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