

CERTIFICATE OF ANALYSIS (COA)

Product Name	MORINGA OIL
Botanical Name	Moringa oleifera
CAS #	93165-54-9
EINECS #	296-941-1
INCI Name	Moringa Oleifera Seed Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Pale yellow to greenish golden colored liquid	CONFORMS
Odour	Characteristic mild, pleasant odour	CONFORMS
Refractive Index	1.460 - 1.480 @ 20°C	1.4696
Specific Gravity (g/mL)	0.910 - 0.920 @ 20°C	0.9110
Saponification Value (mgKOH/g)	180 - 200	189
Peroxide Value (meqO2/kg)	Max 10.0	1.26
Iodine Value (g I2/100g)	80 - 106	88
Acid Value (mgKOH/g)	Max 2.0	0.44
Moisture	Max 0.1	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 – 13.00	11.00
Palmitoleic Acid	C16:1 (n-7)	Maximum 3.5	0.90
Stearic Acid	C18:0	2.00 – 6.00	2.70
Oleic Acid	C18:1 (n-9)	60.00 – 85.00	65.10
Linoleic Acid	C18:2 (n-6)	0.1- 14.00	13.98
Arachidic Acid	C20:0	Maximum 2.0	0.50
Eicosenoic acid	C20:1 (n-9)	Maximum 3.0	0.20
Behenic Acid	C22:0	Maximum 4.0	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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