

CERTIFICATE OF ANALYSIS (COA)

Product Name	AMARANTH SEED OIL		
Botanical Name	Amaranthus caudatus		
CAS #	223747-79-3		
INCI Name	Amaranthus Caudatus Seed Oil		
Part Used	Seeds		
Extraction Method	Supercritical CO2 Extraction		
Quality	100% Pure and Natural		

<u>PROPERTIES</u>	SPECIFICATIONS	RESULT
Appearance	Pale yellow to golden colored liquid	CONFORMS
Odour	Characteristic mild odour	CONFORMS
Refractive Index	1.450 - 1.490 @ 20°C	1.473
Specific Gravity (g/mL)	0.900 - 0.945 @ 20°	0.929
Saponification Value (mgKOH/g)	135 - 200	167
Peroxide Value (meq O2/kg)	Less than 10.0	CONFORMS
Iodine Value (g I2/100g)	100 - 140	CONFORMS
Squalene (%)	5.0 - 8.0	CONFORMS
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

FATTY ACID COMPOSITION:

FATTY ACID	C-CHAIN	SPECIFICATIONS (%)	RESULTS
Palmitic Acid	<u>C16:0</u>	<u>15.00 – 25.00</u>	<u>17.90</u>
Stearic Acid	<u>C18:0</u>	<u>2.00 – 5.00</u>	<u>3.10</u>
Oleic Acid	C18:1 (n-9)	<u>15.00 – 30.00</u>	28.80
Linoleic Acid	C18:2 (n-6)	40.00 - 50.00	49.40

MICROBIAL ANALYSIS	SPECIFICATIONS	<u>STANDARDS</u>	RESULTS
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

HEAVY METAL TESTS	SPECIFICATIONS	<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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