

### CERTIFICATE OF ANALYSIS (COA)

Product Name	KARANJA OIL
Botanical Name	Millettia pinnata (syn Pongamia glabra)
CAS #	-
EINECS #	-
INCI Name	Pongamia Glabra Seed Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Amber yellow to brown colored liquid	CONFORMS
Odour	Characteristic mild odour	CONFORMS
Refractive Index	1.473 - 1.479 @ 40°C	1.476
Specific Gravity (g/mL)	0.925 - 0.940 @ 30°C	0.929
Moisture (%)	Maximum 0.25	CONFORMS
Unsaponifiable Matter (%)	Maximum 3.0	CONFORMS
Saponification Value (mgKOH/g)	185 - 195	190
Peroxide Value (meqO <sub>2</sub> /kg)	Less than 10.0	CONFORMS
Iodine Value (g I <sub>2</sub> /100g)	80 - 90	84
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	3.70 – 13.00	9.90
Stearic Acid	C18:0	2.40 – 8.90	6.10
Oleic Acid	C18:1 (n-9)	44.50 – 71.30	55.30
Linoleic Acid	C18:2 (n-6)	10.80 – 18.30	16.60
Alpha-Linolenic Acid	C18:3 (n-3)	1.00 – 5.00	2.90
Arachidic Acid	C20:0	2.20 – 4.70	2.70
Behenic Acid	C22:0	4.20 – 5.30	4.50
Lignoceric Acid	C24:0	1.00 – 3.50	1.30

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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