

### CERTIFICATE OF ANALYSIS (COA)

Product Name	LIME SEED OIL
Botanical Name	Citrus aurantifolia
CAS #	-
EINECS #	-
INCI Name	Citrus aurantifolia (Lime) 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 yellow to golden colored liquid	CONFORMS
Odour	Characteristic mild aroma	CONFORMS
Refractive Index	1.460 - 1.480 @ 20°C	1.470
Specific Gravity (g/mL)	0.910 - 0.930 @ 20°C	0.917
Saponification Value (mgKOH/g)	190 - 200	194
Peroxide Value (meqO <sub>2</sub> /kg)	Less than 5.0	CONFORMS
Iodine Value (g I <sub>2</sub> /100g)	105 - 120	113
Acid Value (mgKOH/g)	Less than 1.0	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	12.00 – 25.00	17.50
Stearic Acid	C18:0	2.00 – 6.00	2.60
Oleic Acid	C18:1 (n-9)	26.00 – 38.00	34.50
Linoleic Acid	C18:2 (n-6)	32.00 – 44.00	37.50
Alpha-Linolenic Acid	C18:3 (n-3)	4.00 – 9.00	7.20

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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