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CERTIFICATE OF ANALYSIS (COA)

Product Name	GARLIC OIL
Botanical Name	Allium sativum
CAS #	8000-78-0
EINECS #	616-782-7
INCI Name	Allium Sativum (Garlic) Seed Oil

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

PROPERTIES	SPECIFICATIONS	RESULTS
Appearance	Pale yellow to golden colored liquid	CONFORMS
Odour	Slightly pungent, characteristic garlic aroma	CONFORMS
Refractive Index	1.455 - 1.480 @ 20°C	1.465
Specific Gravity (g/mL)	0.905 - 0.935 @ 30°C	0.925
Saponification Value (mgKOH/g)	180 – 200	188
Peroxide Value (meq O2/kg)	Less than 5.0	CONFORMS
Iodine Value (g I2/100g)	100 – 145	109
Free Fatty Acids (% oleic)	Less than 1.5	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	6.00 – 13.00	9.30
Stearic Acid	C18:0	2.00 – 5.00	2.60

Oleic Acid	C18:1 (n-9)	22.00 – 34.00	29.90
Linoleic Acid	C18:2 (n-6)	45.00 – 60.00	54.80
Erucic Acid	C22:1 (n-9)	1.00 – 5.00	2.50
Allicin		65-80	83

MICROBIAL ANALYSIS	SPECIFICATIONS	STANDARDS	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	STANDARDS	RESULTS
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