

**CERTIFICATE OF ANALYSIS (COA)**

Product Name	HOPS ESSENTIAL OIL
Botanical Name	Humulus lupulus
CAS #	8007-04-3 ; 8060-28-4
EINECS #	232-504-3
INCI Name	Humulus Lupulus (Hops) Oil

Part Used	Cones
Extraction Method	Steam Distilled Essential Oil
Quality	100% Pure and Natural
Note Classification	Top to Middle Note

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULT</u>
Appearance	Colorless to greenish-yellow, slightly viscous liquid	CONFORMS
Odour	Woody, floral, herbaceous odour	CONFORMS
Refractive Index	1.470 - 1.494 @ 20°C	1.485
Specific Gravity (g/mL)	0.825 - 0.926 @ 20°C	0.876
Optical Rotation (°)	-2.5° to +2.5°	CONFORMS
Solubility	Soluble in alcohols and fixed oils; Insoluble in water	CONFORMS

<u>MICROBIAL ANALYSIS</u>	<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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