

CERTIFICATE OF ANALYSIS (COA)

Product Name	CHAULMOOGRA OIL
Botanical Name	Hydnocarpus wightiana
CAS #	8001-74-9
EINECS #	-
INCI Name	Hydnocarpus wightiana (Chaulmoogra) Oil

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULT</u>
Appearance	pale yellow to viscous liquid	CONFORMS
Odour	Characteristic mild odour	CONFORMS
Refractive Index	1.472 - 1.476 @ 20°C	1.473
Specific Gravity (g/mL)	0.950 - 0.960 @ 20°C	0.955
Saponification Value (mgKOH/g)	195 - 205	198
Peroxide Value (meq O ₂ /kg)	Less than 5.0	CONFORMS
Iodine Value (g I ₂ /100g)	98 - 103	101
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

FATTY ACID COMPOSITION:

FATTY ACID	<u>C-CHAIN</u>	<u>SPECIFICATIONS (%)</u>	<u>RESULTS</u>
Myristic Acid	<u>C14:0</u>	<u>Maximum 1.0</u>	<u>0.30</u>
Palmitic Acid	<u>C16:0</u>	<u>4.00 – 12.00</u>	<u>7.60</u>
Palmitoleic Acid	<u>C16:1 (n-7)</u>	<u>4.00 – 10.00</u>	<u>5.70</u>
Oleic Acid	<u>C18:1 (n-9)</u>	<u>3.00 – 8.00</u>	<u>6.30</u>
Linoleic Acid	<u>C18:2 (n-6)</u>	<u>1.00 – 3.00</u>	<u>2.20</u>
Hydnocarpic Acid	=	<u>15.00 – 30.00</u>	<u>23.00</u>
Chaulmoogri Acid	=	<u>20.00 – 40.00</u>	<u>29.20</u>
Gorlic Acid	=	<u>20.00 – 35.00</u>	<u>25.40</u>

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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