

CERTIFICATE OF ANALYSIS (COA)

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|----------------|----------------------------------|
| Product Name | HAZELNUT OIL |
| Botanical Name | Corylus avellana |
| CAS # | 185630-72-2 ; 84012-21-5 |
| EINECS # | 281-667-7 |
| INCI Name | Corylus avellana (Hazel) Nut Oil |

| | |
|-------------------|-----------------------|
| Part Used | Nuts |
| Extraction Method | Cold Pressed |
| Quality | 100% Pure and Natural |

| <u>PROPERTIES</u> | <u>SPECIFICATIONS</u> | <u>RESULTS</u> |
|---|--|----------------|
| Appearance | Pale yellow to bright golden colored liquid | CONFORMS |
| Odour | Almost odourless | CONFORMS |
| Refractive Index | 1.462 - 1.472 @ 20°C | 1.467 |
| Specific Gravity (g/mL) | 0.910 - 0.925 @ 20°C | 0.917 |
| Saponification Value (mgKOH/g) | 187 - 197 | 192 |
| Peroxide Value (meq O ₂ /kg) | Less than 5.0 | CONFORMS |
| Iodine Value (g I ₂ /100g) | 85 - 105 | 90 |
| Acid Value (mgKOH/g) | Less than 0.50 | 0.2 |
| Free Fatty Acids (% oleic) | Less than 0.25 | 0.1 |
| Solubility | Soluble in cosmetic esters and fixed oils; Insoluble in water | CONFORMS |

FREE ACID COMPOSITION

| FATTY ACID | C-CHAIN | SPECIFICATIONS (%) | <u>RESULTS</u> |
|----------------------|-------------|--------------------|----------------|
| Palmitic Acid | C16:0 | 4.00 - 9.00 | 4.30 |
| Palmitoleic Acid | C16:1 | Maximum 1.00 | 0.30 |
| Stearic Acid | C18:0 | 1.00 - 4.00 | 2.00 |
| Oleic Acid | C18:1 (n-9) | 68.00 - 85.00 | 78.90 |
| Linoleic Acid | C18:2 (n-6) | 8.00 - 15.00 | 13.40 |
| Alpha-Linolenic Acid | C18:3 (n-3) | Maximum 1.50 | 0.30 |

| 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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