

## **CERTIFICATE OF ANALYSIS**

<b>Product Name</b>	<b>NEEM OIL</b>
<b>Botanical Name</b>	Azadirachta indica
<b>Product Code</b>	PCO4061
<b>CAS #</b>	8002-65-1 ; 90063-92-6
<b>EINECS #</b>	290-052-2
<b>INCI Name</b>	Melia Azadirachta (Neem) Seed Oil

<b>Batch #</b>	40612312
<b>Manufacturing Date</b>	NOVEMBER 2023
<b>Best Before Date</b>	NOVEMBER 2025

<b>Part Used</b>	Seeds
<b>Extraction Method</b>	Cold Pressed
<b>Quality</b>	100% Pure and Natural

<b><u>PROPERTIES</u></b>	<b><u>SPECIFICATIONS</u></b>	<b><u>RESULTS</u></b>
<b>Appearance</b>	Golden yellow to reddish brown colored liquid	CONFORMS
<b>Odour</b>	Characteristic herbaceous, bitter odour	CONFORMS
<b>Refractive Index</b>	1.461 - 1.471 @ 40°C	1.470
<b>Specific Gravity (g/mL)</b>	0.910 - 0.950 @ 20°C	0.941
<b>Saponification Value (mgKOH/g)</b>	175 - 205	201
<b>Peroxide Value (meq O2/kg)</b>	Less than 20.0	CONFORMS
<b>Iodine Value (g I2/100g)</b>	65 - 80	66
<b>Azadirachtin Content (ppm)</b>	Greater than 1000	CONFORMS
<b>Acid Value (mgKOH/g)</b>	Less than 15.0	CONFORMS
<b>Solubility</b>	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

Shelf life is guaranteed for three years from the date of production if the product is stored in the unopened original container between 15°C - 30°C, protected from light. Because this material is sensitive to oxidation, it is saturated with nitrogen and sealed with nitrogen atmosphere for protection. If containers are opened for sampling, be sure to refill atmosphere with nitrogen. Containers that have been opened should be tested at least yearly to ensure potency. Although we believe the above information to be accurate based on the information available to Avena Lab, it is the responsibility of the customer and user of the material to perform its own investigation and due diligence prior to use to verify that the product purchased from Avena Lab meets their quality requirements and is appropriate for the use to which the product is to be put. The information provided above shall be considered effective only for the lot with which the information is being provided. Use and purchase of this material is subject to Avena Lab standard terms and conditions, which supersede any conflicting terms contained on Buyer's purchase order or any document or instrument supplied by Buyer.

### **FATTY ACID COMPOSITION:**

<b><u>FATTY ACID</u></b>	<b><u>C-CHAIN</u></b>	<b><u>SPECIFICATIONS (%)</u></b>	<b><u>RESULTS (%)</u></b>
<b>Palmitic Acid</b>	C16:0	14.00 – 34.00	22.80
<b>Stearic Acid</b>	C18:0	6.00 – 24.00	12.60
<b>Oleic Acid</b>	C18:1 (n-9)	25.00 – 58.00	43.20
<b>Linoleic Acid</b>	C18:2 (n-6)	6.00 – 17.00	14.50
<b>Arachidic Acid</b>	C20:0	Maximum 5.0	2.30

<b><u>MICROBIAL ANALYSIS</u></b>	<b><u>SPECIFICATIONS</u></b>	<b><u>STANDARDS</u></b>	<b><u>RESULTS</u></b>
<b>Aerobic Mesophilic Bacterial Count</b>	< 100 CFU/g	ISO 21149	CONFORMS
<b>Yeast and Mould</b>	< 10 CFU/g	ISO 16212	CONFORMS
<b>Candida albicans</b>	ABSENT / 1g	ISO 18416	CONFORMS
<b>Escherichia coli</b>	ABSENT / 1g	ISO 21150	CONFORMS
<b>Pseudomonas aeruginosa</b>	ABSENT / 1g	ISO 22717	CONFORMS
<b>Staphylococcus aureus</b>	ABSENT / 1g	ISO 22718	CONFORMS

<b><u>HEAVY METAL TESTS</u></b>	<b><u>SPECIFICATIONS</u></b>	<b><u>STANDARDS</u></b>	<b><u>RESULTS</u></b>
<b>Lead: Pb (mg/kg or ppm)</b>	< 10 ppm	na	CONFORMS
<b>Arsenic: As (mg/kg or ppm)</b>	< 2 ppm	na	CONFORMS
<b>Mercury: Hg (mg/kg or ppm)</b>	< 1 ppm	na	CONFORMS

### **STABILITY AND STORAGE:**

Keep in tightly closed container in a cool and dry place, protected from sunlight. When stored for more than 24 months, quality should be checked before use.

**As it is electronically generated document, hence no signature required.**

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