



CERTIFICATE OF ANALYSIS (COA)

Product Name	BLACK PEPPER ESSENTIAL OIL
Botanical Name	Piper nigrum
Product Code	GF2020
CAS #	8006-82-4 ; 84929-41-9
FEMA #	2845
EINECS #	284-524-7
INCI Name	Piper Nigrum (Black Pepper) Seed Oil

Batch #	10202603
Manufacturing Date	MARCH 2026
Best Before Date	FEBRUARY 2029

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Colorless to pale yellow green colored liquid	CONFORMS
Odour	Dry-woody, warm, spicy aroma with subtle floral and fruit notes, reminiscent of ground black pepper	CONFORMS
Refractive Index	1.455 - 1.495 @ 20°C	1.468
Specific Gravity (g/mL)	0.850 - 0.890 @ 20°C	0.876
Optical Rotation (°)	-20° to +4°	CONFORMS
Solubility	Soluble in alcohols and fixed oils; Insoluble in water	CONFORMS

Comments	Odour quality is excellent
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<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

STABILITY AND STORAGE:

Keep in tightly closed container in a cool and dry place, protected from sunlight. When stored for more than 36 months, quality should be checked before use.

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

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