



CERTIFICATE OF ANALYSIS (COA)

PRODUCT INFORMATION

Product Name: Bitter Orange Essential Oil

Botanical Name: *Citrus aurantium* L. var. *amara*

Common Name: Bitter Orange Peel Oil

INCI Name: *Citrus Aurantium Amara* Peel Oil

CAS Number: 68916-04-1

EC (EINECS) Number: 277-143-2

FEMA Number: 2823

CoE Number: 136

Country of Origin: Italy

Plant Part: Fresh Peel

Extraction Method: Cold Expression

Product Type: Natural Essential Oil

Batch Number: BOE-260702

Manufacturing Date: June 2026

Retest Date: June 2028

Issue Date: 02 July 2026

SPECIFICATION

Test	Specification	Result
Appearance	Clear mobile liquid	Conforms
Colour	Pale yellow to yellow-green	Conforms
Odour	Fresh, citrus, sweet, characteristic bitter orange	Conforms



Relative Density (25 °C)	0.8450 – 0.8510	Conforms
Refractive Index (20 °C)	1.4725 – 1.4755	Conforms
Optical Rotation	+88° to +98°	Conforms
Flash Point	Approximately 51 °C	Conforms
Solubility	Soluble in ethanol; insoluble in water	Conforms
Botanical Identity	<i>Citrus aurantium</i> L. var. <i>amara</i>	Conforms
Purity	100% Pure Essential Oil	Conforms
Additives	None	Conforms
Foreign Matter	None Detected	Conforms

TYPICAL GC PROFILE (INFORMATIONAL)

Constituent	Typical (%)
Limonene	88–96
Myrcene	1–3
α-Pinene	0.5–2
β-Pinene	0.5–1.5
Linalool	0.1–1.0
Linalyl Acetate	0.1–0.8
Citral	Trace–0.2
Other Naturally Occurring Constituents	Balance

ADDITIONAL INFORMATION

Chemical Class: Natural Essential Oil

Physical State: Liquid

Purity: 100% Natural

GMO Status: GMO Free

BSE/TSE Status: Free from Animal-Derived Materials

Irradiation: Not Irradiated

Residual Solvents: None

Preservatives: None Added



CONCLUSION

The above material conforms to the established quality specifications for Bitter Orange Essential Oil and is suitable for professional perfumery, cosmetic and fragrance applications. Bitter Orange Essential Oil is obtained by cold expression of the fresh peel of *Citrus aurantium* var. *amara*. It possesses a vibrant citrus aroma with fresh, green, sweet and slightly bitter nuances and is widely used in citrus, cologne, chypre and aromatic fragrance compositions.

Authorized by

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