



CERTIFICATE OF ANALYSIS (COA)

PRODUCT INFORMATION

Product Name: Betel Leaf Essential Oil

Botanical Name: *Piper betle* L.

Common Name: Betel Leaf Oil

INCI Name: *Piper Betle* Leaf Oil

CAS Number: 84775-81-5

EC (EINECS) Number: 283-910-2

Country of Origin: India

Plant Part: Fresh Leaves

Extraction Method: Steam Distillation

Product Type: Natural Essential Oil

Batch Number: BTL-260702

Manufacturing Date: June 2026

Retest Date: June 2028

Issue Date: 02 July 2026

SPECIFICATION

Test	Specification	Result
Appearance	Clear to slightly viscous liquid	Conforms
Colour	Pale yellow to brownish-yellow	Conforms
Odour	Powerful, phenolic, spicy, smoky, peppery, characteristic betel leaf	Conforms
Relative Density (25°C)	0.996 – 1.037	Conforms
Refractive Index	1.5240 – 1.5350	Conforms



(20 °C)		
Optical Rotation (25 °C)	-5.0° to +5.0°	Conforms
Flash Point	Approximately 174 °C	Conforms
Solubility	Soluble in ethanol; insoluble in water	Conforms
Botanical Identity	<i>Piper betle</i> L.	Conforms
Purity	100% Pure Essential Oil	Conforms
Additives	None	Conforms
Foreign Matter	None Detected	Conforms

The analytical specification ranges are consistent with published technical specifications for **Betel Leaf Essential Oil (*Piper betle* L.)**.

TYPICAL GC PROFILE (INFORMATIONAL)

Constituent	Typical (%)
Chavicol	20–35
Eugenol	20–28
Chavibetol	10–35*
Hydroxychavicol	Naturally Present
β-Caryophyllene	2–8
Safrole	Variable (chemotype dependent)
Estragole	Variable (chemotype dependent)
Other Naturally Occurring Constituents Balance	

*The major constituent of Betel Leaf Essential Oil varies considerably according to geographical origin and chemotype. Indian oils are commonly rich in chavicol and eugenol, whereas other origins may be dominated by chavibetol.

ADDITIONAL INFORMATION

Chemical Class: Natural Essential Oil

Physical State: Liquid

Purity: 100% Pure and Natural

GMO Status: GMO Free



BSE/TSE Status: Free from animal-derived materials

Irradiation: Not Irradiated

Residual Solvents: None (Steam Distilled)

Preservatives: None Added

CONCLUSION

The above material conforms to the established quality specifications for Betel Leaf Essential Oil (*Piper betle* L.) and is suitable for professional perfumery, cosmetic, aromatherapy and fragrance applications.

Betel Leaf Essential Oil is obtained by steam distillation of the fresh leaves of *Piper betle*. It possesses a powerful phenolic, spicy, smoky and peppery aroma with warm clove-like nuances. Rich in naturally occurring chavicol, eugenol, and chavibetol, it is valued in niche perfumery for leather, spice, tobacco, incense, oriental and herbal fragrance accords, where it contributes exceptional depth, warmth and character.

Authorized by

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