

Nutmeg Oleoresin (*Myristica fragrans*) – Volatile Oil 20–40%

Myristica fragrans · *Myristicaceae*

DOCUMENT Technical Data Sheet	PRODUCT CODE AP0798	DOCUMENT NO. TDS-AP0798	REVISION 1.0 · 24 October 2026	PRODUCT FORM Oleoresin
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1 Product description

Nutmeg extract is produced from the seed / aril of *Myristica fragrans* (*Myristicaceae* family) and supplied as an oleoresin, standardized to Volatile oil. Available grades: Typical 20–40%. Typical sourcing: Indonesia, India. Intended for B2B formulation in nutraceuticals & supplements, cosmetics & personal care, food & beverage.

2 Identification

Botanical source	<i>Myristica fragrans</i> (<i>Myristicaceae</i>)
Common name(s)	Nutmeg, Mace
Plant part used	Seed
Typical origin	Indonesia, India
Marker compound	Volatile oil (Monoterpenes & aromatic volatiles)
Manufacturing process	Extraction with food-grade solvents; solvent removed to JECFA residual-solvent limits
Standardisation	20–40% (Clevenger (volatile oil))
Assay method	Clevenger (volatile oil)
Pharmacopoeia & standards	Ph. Eur. (EP), Ayurvedic Pharmacopoeia of India

3 Specification

PARAMETER	SPECIFICATION	METHOD
Appearance	Viscous liquid to paste; brown to greenish-brown (characteristic)	Visual
Odour	Characteristic	Organoleptic
Identification	Conforms (GC fingerprint vs. reference)	GC / GC-MS
Content – Volatile oil	Not more than 40% (typical 20–40%)	GC
Safrole content	Not more than 1% (basis of the SDS classification)	GC-MS
Relative density (20 °C)	Report (lot value on CoA)	ISO 279 / USP <841>
Refractive index (20 °C)	Report (lot value on CoA)	ISO 280 / USP <831>
Acid value	Report (lot value on CoA)	AOCS Cd 3d-63 / Ph. Eur. 2.5.1
Peroxide value	≤ 10 meq O ₂ /kg	AOCS Cd 8b-90 / Ph. Eur. 2.5.5
Water (Karl Fischer)	≤ 1.0%	USP <921>
Residual solvents	Complies with JECFA limits for oleoresins (e.g. acetone ≤ 30 mg/kg, hexane ≤ 25 mg/kg)	GC-HS
Lead (Pb)	≤ 3.0 mg/kg	ICP-MS
Arsenic (As)	≤ 2.0 mg/kg	ICP-MS
Cadmium (Cd)	≤ 1.0 mg/kg	ICP-MS
Mercury (Hg)	≤ 0.1 mg/kg	ICP-MS
Pesticide residues	Complies with USP <561> and Regulation (EC) No 396/2005	GC-MS/MS, LC-MS/MS
Aflatoxins	B1 ≤ 2 µg/kg; sum of B1, B2, G1, G2 ≤ 4 µg/kg	HPLC-FLD

Microbiology	Not applicable (anhydrous product); tested on request	—
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Limits above are the standard release specification for this product class. Each lot is released against its Certificate of Analysis, which is the governing document and is available on request.

4 Grades & pack sizes

GRADE	SKU PREFIX	PACK SIZES
Typical 20–40%	AP0798-T2040	Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg

5 Packaging

- Samples: amber glass bottle with tamper-evident closure.
- Up to 1 Kg: nitrogen-flushed amber glass, aluminium or HDPE bottle.
- 5 Kg and above: HDPE jerrycan or lacquered steel drum.
- Packaging may vary by lot and is stated on the packing list.

6 Storage & shelf life

- Shelf life: 24 months from date of manufacture in the original, unopened packaging.
- Store tightly closed below 25 °C, protected from light and heat.
- After opening, blanket with nitrogen and use promptly to limit oxidation.

7 Applications

Industries	Nutraceuticals & Supplements, Cosmetics & Personal Care, Food & Beverage
Formulation focus	Flavour & Fragrance, Stress & Sleep Support, Digestive & Gut Health, Oral & Dental Care
Traditional systems	Ayurveda

Use levels depend on the finished product and the target market. The customer is responsible for establishing safe and permitted use levels and for any claims made on finished products.

8 Regulatory & compliance

- Pharmacopoeia / standard references: Ph. Eur. (EP), Ayurvedic Pharmacopoeia of India.
- **EU flavourings:** Safrrole must not be added as such to food; maximum levels apply in foods containing flavourings or food ingredients with flavouring properties (Regulation (EC) No 1334/2008, Annex III).
- **EU cosmetics:** safrrole is listed in Annex II of Regulation (EC) No 1223/2009, except as normal content of natural essences used, at no more than 100 ppm in the finished product.
- **CMR 1A/1B:** must not be supplied to the general public (REACH Annex XVII, entries 28–30). CMR substances are prohibited as cosmetic ingredients (Regulation (EC) No 1223/2009, Article 15); use in cosmetics is limited to the Annex II allowance for safrrole as normal content of natural essences.
- **California Proposition 65:** Safrrole (cancer) — listed by the State of California. WARNING: this product can expose you to a listed chemical. www.P65Warnings.ca.gov.
- Allergen information: not derived from a source listed in Annex II of Regulation (EU) No 1169/2011.
- Regulatory status for food, supplement, cosmetic or pharmaceutical use (e.g. EU novel food, US NDI/GRAS, FSSAI) must be confirmed by the customer for the intended market and use.

This Technical Data Sheet is issued by CHOLAD PRIVATE LIMITED (trading as Extrakte), C 22/4, 2nd & 3rd Floor, Sector-57, Noida-201301, Uttar Pradesh, India · +91 817 8117 600 · choladco@gmail.com · extrakte.com. The information is given in good faith and reflects our current knowledge of the product; it does not constitute a warranty of properties for any specific application. Refer to the Safety Data Sheet **SDS-AP0798** for hazard, handling and transport information. Certificates of Analysis are issued per lot and are available on request.