

TECHNICAL DATA SHEET

Product Information

**Product Name:** d-Limonene, natural citrus-derived isolate, PN AF-LIMO1TPR

**Scientific name:** *Citrus spp.*

**Parts utilized for extraction:** Citrus peel oil (fractionated)

**Appearance:** Colourless to pale yellow mobile liquid

**Aroma:** Clean, light citrus, characteristic orange-peel top note

**Solubility:** Insoluble in water, miscible with ethanol and fixed oils

Raw Material Specification

| Analysis                    | Method                   | Result                          |
|-----------------------------|--------------------------|---------------------------------|
| Total ash for herb          | Ph. Eur. (2.4.16)        | <5%                             |
| Pesticides                  | GC/MS, LC-MS/MS          | Complies with Ph. Eur. (2.8.13) |
| Aflatoxins (G1, G2, B1, B2) | AOAC 999.07              | Complies with Ph. Eur. (2.8.18) |
| Ochratoxin A                | AOAC 2004.10             | Complies with Ph. Eur. (2.8.22) |
| Benzo(a)pyrene (PAH)        | JOSS 2002 25, pp. 96-100 | <10 ppb                         |

Extract Specification

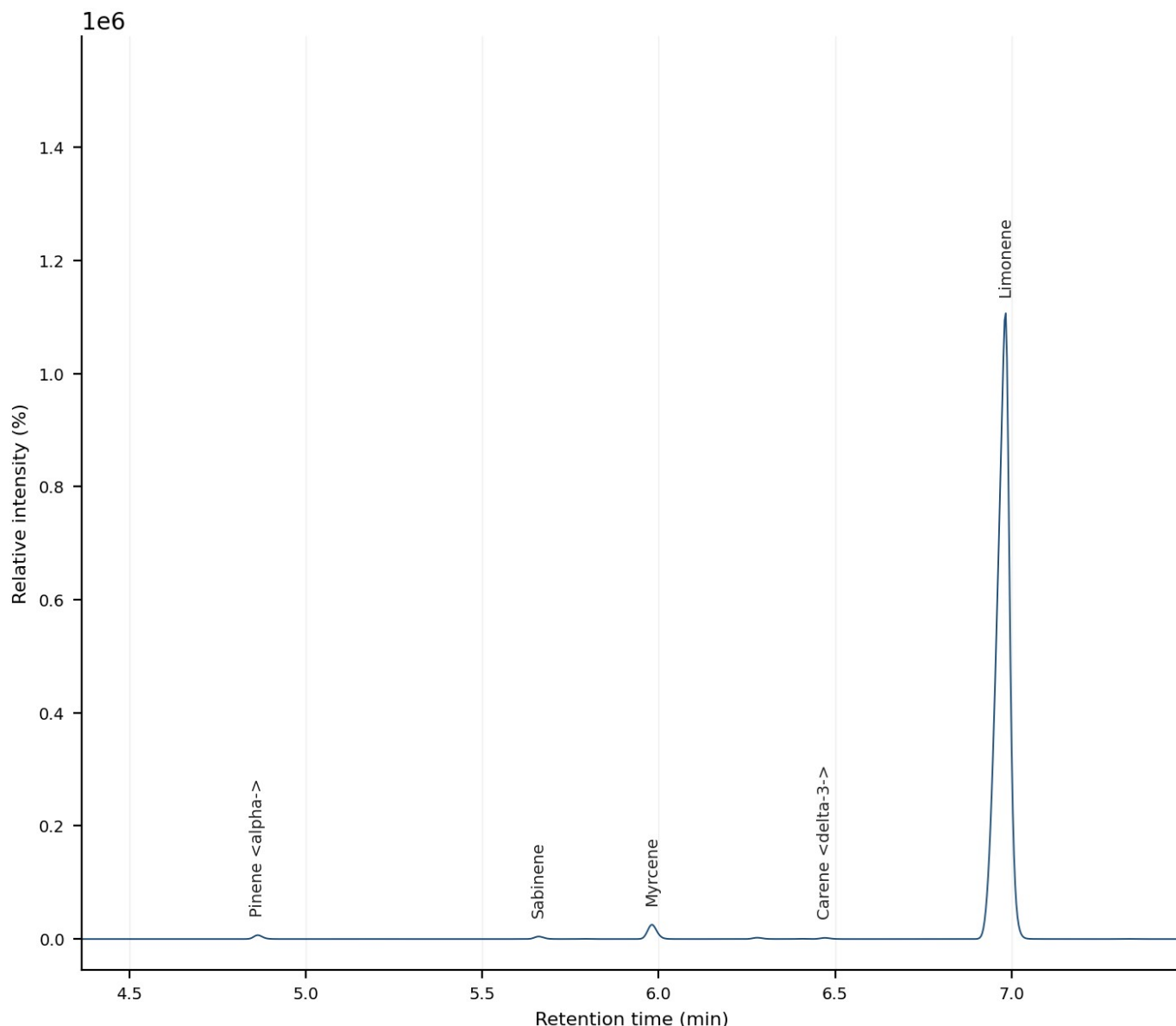
| Analysis                              | Method                    | Specification     | Result         |
|---------------------------------------|---------------------------|-------------------|----------------|
| <b>Major components:</b>              |                           |                   |                |
| Myrcene                               | GC-FID (in-house method)  | >1.5 %            | 1.70 %         |
| Limonene                              |                           | >85.0 %           | 97.24 %        |
| <b>TOTAL</b>                          |                           | <b>&gt;85.0 %</b> | <b>98.94 %</b> |
| Loss on drying (%)                    | Ph. Eur. (2.8.17)         | <5%               | <5%            |
| Arsenic (As)                          | ICP-OES (In-house method) | N.D. (< 1 ppm)    | N.D.           |
| Cadmium (Cd)                          |                           | N.D. (< 3 ppm)    | N.D.           |
| Lead (Pb)                             |                           | N.D. (< 1 ppm)    | N.D.           |
| Mercury (Hg)                          |                           | N.D. (< 0.1 ppm)  | N.D.           |
| Total aerobic microbial count (cfu/g) | ISO 4833-1                | <10000            | Complies       |
| Yeast & mold (cfu/g)                  | ISO 21527-2               | <100              | Complies       |
| <i>Escherichia coli</i>               | ISO 16649-2               | N.D. (in 1 g)     | N.D.           |
| <i>Salmonella</i>                     | ISO 6579                  | N.D. (in 25 g)    | N.D.           |
| <i>Pseudomonas aeruginosa</i>         | ISO 13720                 | N.D. (in 1 g)     | N.D.           |
| <i>Staphylococcus aureus</i>          | ISO 6888-1                | N.D. (in 1 g)     | N.D.           |

**Batch Number:**  
20260611-LIMO1TPR



**Manufactured:**  
11.06.2026

### Chromatogram



### Additional Data

**Storage conditions:** Store in cool and dry place, keep away from intense light and high heat.

**Carrier:** None. This is a distilled natural isolate with no added solvent, antioxidant or diluent.

**Packaging:** 5-25 kg lacquered steel drum; 190 kg drum on request.

**Shelf life:** 12 months

**Dosage and use:** d-Limonene is used as a natural solvent and degreaser in industrial and household cleaning, as a bio-based replacement for chlorinated solvents, and as a citrus flavour and fragrance component where a clean limonene note is wanted without the heavier oxygenated fraction of a whole peel oil. It also serves as a feedstock for carvone and other terpene derivatives. Because limonene autoxidises to sensitising hydroperoxides, store under inert gas where practical and keep cool, dark and well-sealed; check peroxide value before use in skin-contact products.

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Full chromatographic profile (GC-FID)

| Name              | CAS             | Category              | RT (min)     | Content (%)  |
|-------------------|-----------------|-----------------------|--------------|--------------|
| Pinene <alpha->   | 80-56-8         | Monoterpenoids        | 4.864        | 0.44         |
| Sabinene          | 3387-41-5       | Monoterpenoids        | 5.660        | 0.30         |
| <b>Myrcene</b>    | <b>123-35-3</b> | <b>Monoterpenoids</b> | <b>5.981</b> | <b>1.70</b>  |
| Octanal           | 124-13-0        | Ketones & Aldehydes   | 6.279        | 0.17         |
| Carene <delta-3-> | 13466-78-9      | Monoterpenoids        | 6.471        | 0.15         |
| <b>Limonene</b>   | <b>138-86-3</b> | <b>Monoterpenoids</b> | <b>6.982</b> | <b>97.24</b> |