Hops Supercritical CO2 Extract (Humulus lupulus) – Hop Alpha Acids 30–45%

Humulus lupulus · Cannabaceae

DOCUMENT	PRODUCT CODE	DOCUMENT NO.	REVISION	PRODUCT FORM
Technical Data Sheet	AP1515	TDS-AP1515	1.0 · 24 October 2026	Supercritical CO2 Extract

1 Product description

Hops extract is produced from the strobile of Humulus lupulus (Cannabaceae family) and supplied as a solvent-free supercritical CO2 extract, standardized to Hop alpha acids. Available grades: 30%, 45%. Typical sourcing: Germany, Czechia, United States. Intended for B2B formulation in nutraceuticals & supplements.

30% 45%

2 Identification

Botanical source	*Humulus lupulus* (Cannabaceae)
Common name(s)	Hops
Plant part used	Flower
Typical origin	Germany, Czechia, United States
Marker compound	Hop alpha acids (Phloroglucinols)
Manufacturing process	Full-spectrum grade: supercritical carbon dioxide extraction (solvent-free). Standardised % grades: solvent extraction and purification; the solvent is stated on the CoA
Standardisation	30–45% (HPLC)
Assay method	HPLC
Pharmacopoeia & standards	Ph. Eur. (EP), EMA herbal monograph, ESCOP monograph

3 Specification

PARAMETER	SPECIFICATION	METHOD
Appearance	Standardised % grades: fine powder · Full-spectrum grade: viscous supercritical CO2 oil / paste	Visual
Odour	Characteristic	Organoleptic
Identification	Conforms (HPTLC / HPLC fingerprint vs. reference)	HPTLC / HPLC
Assay – Hop alpha acids	Not less than the labelled grade (30%, 45%)	HPLC
Loss on drying (powder grades)	≤ 5.0%	USP ‹731›
Particle size (powder grades)	≥ 95% through 80 mesh (180 µm)	USP ‹786›
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	Full-spectrum grade: none used; % grades: complies with ICH Q3C / Directive 2009/32/EC	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
Total aerobic microbial count (powder grades)	≤ 10,000 cfu/g	USP ‹2021›
Yeasts & moulds (powder grades)	≤ 1,000 cfu/g	USP ‹2021›
E. coli / Salmonella (powder grades)	Absent in 10 g / absent in 25 g	USP ‹2022›
Microbiology (CO2 oil grade)	Not applicable (anhydrous); tested on request	—

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
30%	AP1515-30	Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg
45%	AP1515-45	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.
- May thicken or solidify on cooling; warm gently (≤ 40 °C) and homogenise before use.

7 Applications

Industries	Nutraceuticals & Supplements
Formulation focus	Stress & Sleep Support, Men's Health, Women's Health
Traditional systems	European herbal tradition

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), EMA herbal monograph, ESCOP monograph.
- 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.

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