# Plant-Based Copper from Mustard Seed (Brassica juncea) – 0.1%

*Brassica juncea · Brassicaceae*

| DOCUMENT | PRODUCT CODE | DOCUMENT NO. | REVISION | PRODUCT FORM |
|---|---|---|---|---|
| Technical Data Sheet | AP0186 | TDS-AP0186 | 1.0 · 24 October 2026 | Plant-Derived Vitamin & Mineral |

## 1 Product description

Mustard Seed extract is produced from the seed of Brassica juncea (Brassicaceae family) and supplied as a plant-derived nutrient concentrate, standardized to Copper. Available grades: 0.1%. Typical sourcing: India, Canada. Intended for B2B formulation in nutraceuticals & supplements, food & beverage.

## 2 Identification

| | |
|---|---|
| Botanical source | *Brassica juncea* (Brassicaceae) |
| Common name(s) | Mustard seed |
| Plant part used | Seed |
| Typical origin | India, Canada |
| Marker compound | Copper (Plant-derived minerals) |
| Manufacturing process | Water and/or hydro-alcoholic (ethanol) extraction, concentration and spray-drying; the solvent system for each grade is stated on the CoA |
| Standardisation | 0.1% (ICP / ICP-MS) |
| Assay method | ICP / ICP-MS |

## 3 Specification

| PARAMETER | SPECIFICATION | METHOD |
|---|---|---|
| Appearance | Off-white to light tan powder | Visual |
| Odour | Characteristic | Organoleptic |
| Identification | Conforms (HPTLC / HPLC fingerprint vs. reference) | HPTLC / HPLC |
| Assay – Copper | Not less than the labelled grade (0.1%) | ICP / ICP-MS |
| Loss on drying | ≤ 5.0% | USP ‹731› |
| Total ash | Report | USP ‹561› |
| Particle size | ≥ 95% through 80 mesh (180 µm) | USP ‹786› |
| Bulk density | Report (typically 0.40–0.70 g/mL) | USP ‹616› |
| Residual solvents | Complies with ICH Q3C / USP ‹467› | 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 |
| Total aerobic microbial count | ≤ 10,000 cfu/g | USP ‹2021› |
| Yeasts & moulds | ≤ 1,000 cfu/g | USP ‹2021› |
| Escherichia coli | Absent in 10 g | USP ‹2022› |

| | | |
|---|---|---|
| Salmonella spp. | Absent in 25 g | USP ‹2022› |
| Staphylococcus aureus | Absent in 10 g | USP ‹2022› |

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 |
|---|---|---|
| **0.1%** | AP0186-0P1 | Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg |

## 5 Packaging

- Samples: food-grade HDPE jar or aluminium-laminate pouch.
- 250 g – 1 Kg: food-grade LDPE bag sealed in an aluminium-laminate pouch.
- 5 Kg – 25 Kg: double food-grade LDPE bags in a fibre drum or HDPE pail.
- 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 in a cool (below 25 °C), dry place, protected from light.
- Hygroscopic: reseal immediately after use and minimise exposure to humid air.

## 7 Applications

| | |
|---|---|
| Industries | Nutraceuticals & Supplements, Food & Beverage |
| Formulation focus | Antioxidant & Healthy Ageing |

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

- **Allergen information:** derived from mustard, a source listed in Annex II of Regulation (EU) No 1169/2011. Residual allergen content of the extract has not been determined.
- 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-AP0186** for hazard, handling and transport information. Certificates of Analysis are issued per lot and are available on request.