D-Mannose Powder – Natural Isolate up to 99% from Birch (Betula pendula)

Betula pendula · Betulaceae

DOCUMENT	PRODUCT CODE	DOCUMENT NO.	REVISION	PRODUCT FORM
Technical Data Sheet	AP0170	TDS-AP0170	1.0 · 24 October 2026	Botanical Isolate

1 Product description

Birch extract is produced from the bark / leaf of Betula pendula (Betulaceae family) and supplied as a high-purity natural isolate of D-Mannose. Available grades: 98%, 99%. Typical sourcing: Finland, Russia. Intended for B2B formulation in nutraceuticals & supplements, cosmetics & personal care, pharmaceutical.

98% 99%

2 Identification

Botanical source	*Betula pendula* (Betulaceae)
Common name(s)	Birch
Plant part used	Leaf, Bark
Typical origin	Finland, Russia
Active substance	D-Mannose (Simple sugars & polyols)
CAS number	3458-28-4
Molecular formula / weight	$C_6H_{12}O_6$ · 180.16 g/mol
Manufacturing process	Solvent extraction, chromatographic purification and crystallisation
Standardisation	98–99% (HPLC)
Assay method	HPLC
Pharmacopoeia & standards	Ph. Eur. (EP), EMA herbal monograph

3 Specification

PARAMETER	SPECIFICATION	METHOD
Appearance	White to off-white crystalline powder	Visual
Odour	Odourless to faint characteristic	Organoleptic
Identification	Conforms to reference standard (retention time / spectrum)	HPLC / IR
Assay – D-Mannose	Not less than the labelled grade (98%, 99%)	HPLC
Loss on drying	≤ 1.0%	USP ‹731›
Residue on ignition	≤ 0.5%	USP ‹281›
Particle size	Report	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	≤ 1,000 cfu/g	USP ‹2021›
Yeasts & moulds	≤ 100 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
98%	AP0170-98	Sample (1 g) · 50 g · 250 g · 1 Kg
99%	AP0170-99	Sample (1 g) · 50 g · 250 g · 1 Kg

5 Packaging

- Samples: food-grade HDPE jar or aluminium-laminate pouch.
- 50 g – 1 Kg: food-grade LDPE bag sealed in an aluminium-laminate pouch.
- 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, Cosmetics & Personal Care, Pharmaceutical
Formulation focus	Skin & Hair Care, Urinary & Kidney Health

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.
- 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-AP0170** for hazard, handling and transport information. Certificates of Analysis are issued per lot and are available on request.