Indole-3-carbinol (I3C) Powder – Natural Isolate up to 99% from Broccoli (Brassica oleracea var. italica)

Brassica oleracea var. italica · Brassicaceae

DOCUMENT	PRODUCT CODE	DOCUMENT NO.	REVISION	PRODUCT FORM
Technical Data Sheet	AP0193	TDS-AP0193	1.0 · 24 October 2026	Botanical Isolate

1 Product description

Broccoli extract is produced from the seed / sprout of Brassica oleracea var. italica (Brassicaceae family) and supplied as a enriched extract and natural isolate (grade-dependent) of Indole-3-carbinol (I3C). Available grades: 10%, 40%, 95%, 99%. Typical sourcing: United States, China. Intended for B2B formulation in nutraceuticals & supplements, pharmaceutical.

10% 40% 95% 99%

2 Identification

Botanical source	*Brassica oleracea var. italica* (Brassicaceae)
Common name(s)	Broccoli
Plant part used	Seed
Typical origin	United States, China
Marker compound	Indole-3-carbinol (I3C) (Glucosinolates & isothiocyanates)
CAS number	700-06-1
Manufacturing process	Solvent extraction and chromatographic enrichment; grades of 90% and above are further purified by crystallisation
Standardisation	10–99% (HPLC)
Assay method	HPLC
Pharmacopoeia & standards	USP

3 Specification

PARAMETER	SPECIFICATION	METHOD
Appearance	Off-white to light yellow powder; higher grades crystalline	Visual
Odour	Characteristic	Organoleptic
Identification	Conforms (HPTLC / HPLC fingerprint vs. reference)	HPTLC / HPLC
Assay – Indole-3-carbinol (I3C)	Not less than the labelled grade (10%, 40%, 95%, 99%)	HPLC
Grades ≥ 90%	Additionally: loss on drying ≤ 1.0%, residue on ignition ≤ 0.5%	USP ‹731›, ‹281›
Loss on drying	≤ 5.0%	USP ‹731›
Total ash	≤ 5.0%	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
10%	AP0193-10	Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg
40%	AP0193-40	Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg
95%	AP0193-95	Sample (50 g) · 250 g · 1 Kg · 5 Kg · 25 Kg
99%	AP0193-99	Sample (1 g) · 50 g · 250 g · 1 Kg

Made-to-order grades: 10%, 40%.

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, Pharmaceutical
Formulation focus	Liver & Detox, Antioxidant & Healthy Ageing
Traditional systems	North American 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: USP.
- 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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