



PSYLLIUM HUSK

Psyllium husk is the cleaned, dried seed coat separated by winnowing and thrashing from the seeds of *Plantago ovata* Forssk. (ispaghula). It consists almost entirely of soluble mucilaginous dietary fibre and swells to many times its own volume in water, forming a smooth, stable gel. The material is supplied in 95 % purity as whole husk flakes or milled powder, light brown to pale buff, with a faint odour and bland taste, and is not irradiated.

APPLICATIONS

Gluten-free bakery and dough systems, where the hydrated husk replaces gluten elasticity, improves crumb structure, binds water and extends the fresh-keeping of the baked product.

Fibre supplements, functional foods, nutritional bars and beverages, where psyllium provides soluble dietary fibre with high water-binding capacity and a neutral sensory profile.

PSYLLIUM HUSK 95 % · PH. EUR. / USP QUALITY

Specification:

IDENTITY, PHYSICAL AND CHEMICAL CHARACTERISTICS

ITEM OF TEST	TEST RESULTS	METHOD / REFERENCE
APPEARANCE	Light husk flakes or milled powder, free from visible foreign matter	Visual; supplier specification, Ph. Eur. / USP grade
COLOUR	Light brown to pale buff	Visual; supplier specification
ODOUR, TASTE	Faint characteristic odour, bland taste; free from foreign odours	Organoleptic; supplier specification
BOTANICAL IDENTITY	Cleaned, dried seed coat (episperm and collapsed adjacent layers) of <i>Plantago ovata</i> Forssk.	USP-NF Psyllium Husk monograph; Ph. Eur. monograph 01/2005:1334 Ispaghula husk
PURITY (husk content), min.	95.0 % w/w	USP-NF grade 95 %; supplier specification
SWELLING INDEX, min.	40	Ph. Eur. 2.8.4; Ispaghula husk monograph
SWELL VOLUME, min.	40 ml/g	USP-NF Psyllium Husk
LOSS ON DRYING, max.	12.0 % w/w	USP-NF Psyllium Husk; supplier specification
TOTAL ASH, max.	4.0 % w/w	USP-NF Psyllium Husk; supplier specification
ACID-INSOLUBLE ASH, max.	1.0 % w/w	USP-NF Psyllium Husk; supplier specification
LIGHT EXTRANEEOUS MATTER, max.	5.0 % w/w (95 % grade)	USP-NF grade definition; supplier specification
FOREIGN MATTER, max.	2.0 % w/w; stones, glass and metal absent	Visual; supplier specification
INSECT FRAGMENTS, max.	100 parts per 25 g	Supplier specification, USP grade
PARTICLE SIZE	Whole husk, or powder min. 95 % passing 40, 60, 80 or 100 mesh as agreed per order	Sieve analysis; supplier specification
PH, 1 % w/v aqueous dispersion	5.5 – 7.5	Potentiometry; supplier specification
TOTAL DIETARY FIBRE, min.	80.0 % w/w	Supplier specification; AOAC 985.29
PROTEIN, typical	4.9 g/100 g	Supplier specification (Kjeldahl, N × 6.25)

Identity, swelling index, loss on drying and ash parameters follow the European Pharmacopoeia monograph for Ispaghula husk (01/2005:1334) and the USP-NF Psyllium Husk monograph; purity, extraneous matter, particle size, pH and fibre follow fetched supplier specifications for 95 % USP/Ph. Eur. grade. Individual parameters may be amended per customer agreement provided that product safety is maintained.

RESIDUE LIMITS

ITEM OF TEST	TEST RESULTS	METHOD / REFERENCE
LEAD (Pb), max.	5.0 mg/kg	Ph. Eur. 2.4.27 (herbal drugs); ICP-MS
CADMIUM (Cd), max.	1.0 mg/kg	Ph. Eur. 2.4.27 (herbal drugs); ICP-MS
MERCURY (Hg), max.	0.1 mg/kg	Ph. Eur. 2.4.27 (herbal drugs); cold vapour AAS
ARSENIC (As), max.	0.3 mg/kg	Supplier specification, USP/Ph. Eur. grade; ICP-MS
AFLATOXIN B ₁ , max.	2 µg/kg	Ph. Eur. 2.8.18; HPLC with fluorescence detection
SUM OF AFLATOXINS B ₁ , B ₂ , G ₁ , G ₂ , max.	4 µg/kg	Ph. Eur. 2.8.18 (limit that may be required by the competent authority)
PESTICIDE RESIDUES	Comply with the maximum residue levels of Reg. (EC) No 396/2005	Reg. (EC) No 396/2005; Ph. Eur. 2.8.13; GC-MS / LC-MS/MS
RADIONUCLIDES (¹³⁷ Cs, ⁹⁰ Sr)	On request; determined per batch on customer agreement	Gamma and beta spectrometry

Heavy metal limits are the general acceptance criteria for herbal drugs of European Pharmacopoeia general chapter 2.4.27; the aflatoxin limits are those of Ph. Eur. 2.8.18. Pesticide residues comply with Regulation (EC) No 396/2005. Batch results are reported in the certificate of analysis.

MICROBIOLOGICAL CHARACTERISTICS

ITEM OF TEST	TEST RESULTS	METHOD / REFERENCE
TOTAL AEROBIC MICROBIAL COUNT (TAMC), max.	1 × 10 ⁵ CFU/g	Ph. Eur. 5.1.8, category C; ISO 4833-1
YEASTS AND MOULDS IN TOTAL (TYMC), max.	1 × 10 ⁴ CFU/g	Ph. Eur. 5.1.8, category C; ISO 21527-2
BILE-TOLERANT GRAM-NEGATIVE BACTERIA (<i>Enterobacteriaceae</i>), max.	1 × 10 ⁴ CFU/g	Ph. Eur. 5.1.8, category C; ISO 21528-2
<i>Escherichia coli</i>	Absent in 1 g	Ph. Eur. 5.1.8; ISO 16649-2
<i>Salmonella</i> spp.	Absent in 25 g	Ph. Eur. 5.1.8; ISO 6579-1

Acceptance criteria follow European Pharmacopoeia general chapter 5.1.8 for herbal products for oral use to which boiling water is not added (category C), verified by the ISO reference methods stated.

Botanical name: Plantago ovata Forssk., seed husk (ispaghula husk)

CN / HS code: 1211 90 86

Regulatory status: food raw material and herbal substance; Ph. Eur. monograph Ispaghula husk 01/2005:1334, USP-NF Psyllium Husk

Appearance: light brown to pale buff husk flakes or milled powder

Processing: winnowing and thrashing of cleaned seed; not irradiated, no additives

Applications: gluten-free bakery, fibre supplements and functional foods, nutritional bars, beverages, texturised and clean-label formulations

Packaging: multi-ply paper bags with polyethylene liner, 20 kg and 25 kg net

Storage & transport: closed original packaging in dry, clean, well-ventilated premises, protected from sunlight, moisture and foreign odours; optimum 4 – 15 °C

Shelf life: min. 18 months from production in unopened original packaging; up to 36 months under cool and dry storage

COMPLIANCE & DOCUMENTATION

- The product complies with the European Pharmacopoeia monograph for Ispaghula husk (01/2005:1334) and with the USP-NF monograph for Psyllium Husk in 95 % purity grade.
- Heavy metal and aflatoxin contents comply with Ph. Eur. general chapters 2.4.27 and 2.8.18; pesticide residues comply with Regulation (EC) No 396/2005.
- Microbiological quality corresponds to Ph. Eur. general chapter 5.1.8, category C, for oral herbal products to which boiling water is not added.
- Non-GMO within the meaning of Regulations (EC) No 1829/2003 and (EC) No 1830/2003; not irradiated and free from added preservatives or colours.
- Organic certification under Regulation (EU) 2018/848, kosher and halal statements, allergen declarations and third-party audit certificates of the processing plant are available on request.
- After opening, the packaging should be resealed; storage together with odorous products and materials is not permitted.
- Each consignment is accompanied by a certificate of analysis with batch-specific results.

References: USP-NF Psyllium Husk monograph, doi.usp.org; EMA Community herbal monograph on Plantago ovata Forssk., seminis tegumentum (ispaghula husk), ema.europa.eu; Ph. Eur. 2.4.27 heavy metal limits for herbal drugs (EMA CTD guideline), ema.europa.eu; Ph. Eur. 2.8.18 aflatoxin B₁ in herbal drugs, ehpm.org; Ph. Eur. 5.1.8 microbiological quality of herbal medicinal products, ehpm.org; UNILEC psyllium husk powder data sheet (USP grades), barentz.com.

This specification is issued for information purposes and does not constitute a warranty. Batch-specific values are confirmed in the certificate of analysis accompanying each consignment.