# Papain

*Papain enzyme preparation · CAS 9001-73-4 · Papain powder from Carica papaya latex*

INDICATIVE SPECIFICATION — CONFIRMED IN WRITING AT QUOTATION

| CHEMICAL FORM | FORMULA | CAS | PRIMARY ASSAY |
|---|---|---|---|
| Papain powder from Carica papaya latex | Papain enzyme preparation | 9001-73-4 | ≥6,000 USP units/mg |
| **METHOD** | **MINIMUM ORDER** | **LEAD TIME** | **STANDARD PACK** |
| USP activity assay | 1 kg | 1–7 days | 1 kg foil pouch |

## SPECIFICATION

| PARAMETER | SPECIFICATION | METHOD / NOTE |
|---|---|---|
| Papain activity | ≥6,000 USP units/mg | Specification |
| Appearance | Off-white to light tan powder | Specification |
| pH (1% solution) | 5.0–7.5 | Specification |
| Loss on drying | ≤8.0% | Specification |
| Heavy metals | Pb ≤3 · As ≤2 · Cd ≤1 · Hg ≤0.1 mg/kg | Specification |
| Microbiology | APC ≤10,000 cfu/g · yeast and mould ≤100 cfu/g · E. coli and Salmonella absent | Specification |
| Particle size | ≥95% through 40 mesh | Sieve |
| Marker set | Papain ≥6,000 USP units/mg | Identity / ratio |
| Appearance | Off-white to light tan, free-flowing powder | Visual |
| Solubility | Soluble in water; the solution is clear to slightly hazy. | Matrix dependent |
| Standard packaging | 1 kg foil pouch · 25 kg fiber drum | Food-grade liner |

## APPLICATIONS

- Enzyme blends
- Powder sticks and drink mixes

## AVAILABLE FORMS

- Powder, 40 mesh
- Lower-activity dilution on request
- Granulated on request

## WHAT TO CONFIRM BEFORE ORDERING

- Name the unit: USP units/mg, TU/mg and FIP units are not interchangeable without the assay definition.
- Ask for activity after the process step you will use, not only on the raw powder.
- Confirm the pH and temperature window; the activity can fall outside it.
- Papain is a known sensitiser; the SDS and the dust controls belong in the file.

**Indicative document.** This sheet describes the grade we can quote; it is not a batch COA and does not confirm a result for a specific lot. Final specification, contaminant limits and documentation are agreed in writing before the order. The form, hydrate state, ligand ratio and method are release parameters, not marketing descriptions.

## DOCUMENTATION RELEASED WITH EACH LOT

| DOCUMENT | CONTENT | SCOPE |
|---|---|---|
| Certificate of analysis | Assay, identity, physical parameters, contaminant panel and the release decision for the lot. | Batch-specific |
| Technical data sheet | Form, hydrate state, CAS, specification ranges, solubility, bulk density, storage and packing. | Product-level |
| Safety data sheet | Sixteen sections covering hazards, handling, storage, transport and emergency response. | Grade-specific |
| Allergen and GMO statements | Major allergens, gluten, animal-derived inputs and GMO status. | Batch-specific |
| Origin and traceability record | Manufacturing site and the link between the lot and the retained sample. | Batch-specific |
| Residual-solvent statement | The crystallisation system and the solvent class, where applicable. | Batch-specific |

## HOW TO REQUEST THIS GRADE

01 · BRIEF

Send the target specification, quantity, dosage form and destination market.

02 · COUNTER-SPEC

We confirm what can be matched and the documents available for the grade.

03 · SAMPLE & QUOTE

A sample with its own COA, followed by packing, lead time and terms in writing.

**No claim is made here.** This sheet does not claim a therapeutic effect, a product certification or a regulatory approval. Health claims belong to the brand that makes them and to the market that authorises them.

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