

Certificate of Analysis

Promecens Entosystems Private Limited

Phosphorylated Chitosan (PCh)

Product Identification

- **Product Name:** Phosphorylated Chitosan
- **Batch No:** PCh/01/2025
- **Synonyms:** Phospho-chitosan, P-Ch
- **CAS Number:** 9012-76-4
- **Average Molecular Weight:** 240.12 kDa (Customizable)
- **Degree of Substitution (DS):** 0.93
- **Phosphorus Content:** 4.3% (w/w)
- **Date of Manufacture:** June 2025
- **Expiry Date:** May 2028
- **Manufacturer:** Promecens Entosystems Private Limited

Analytical Test Results

Sr. No.	Test Parameter	Specification	Result
1	Appearance	Off-white to pale yellow powder	Conforms (Pale yellow fine powder)
2	Odor	Odorless	Conforms
3	Solubility in Water	Fully soluble	Passes
4	Purity (on dry basis)	≥ 99.0%	99.1%
5	Phosphorus Content (w/w)	2.0 – 6.0%	4.3%
6	pH (1% aqueous solution)	4.5 – 6.5	5.2
7	Moisture Content (Karl Fischer)	≤ 10%	7.6%
8	Insoluble Matter	≤ 1.0%	0.21%
9	Heavy Metals (as Pb, ppm)	≤ 10 ppm	Not detected (NIL)
10	Degree of Substitution (DS)	0.3 – 1.0	0.73
11	Bulk Density	0.3 – 0.6 g/cm ³	0.48 g/cm ³
12	Residual Ash	≤ 1.5%	0.93%

This batch of **Phosphorylated Chitosan (Batch No. PCh/01/2025)** has been manufactured and tested in accordance with internal SOPs and international quality standards. It complies with all critical specifications required for its use in high-performance applications across pharmaceutical, cosmetic, biomedical, and agricultural industries.

Issued on behalf of **Promecens Entosystems Private Limited**