

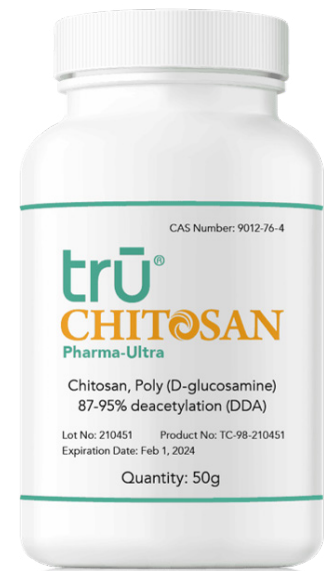
Pharma-Ultra

Premium Chitosan from Shrimp

High DDA, Low Molecular Weight

USP-NF Conforming chitosan + undetectable endotoxins.

The gold standard for medical-grade chitosan, trū Chitosan adheres to the highest standards of quality and is produced entirely within the United States through a fully traceable supply chain. Formulated exclusively from shrimp raised in a controlled environment free from pollution, disease or antibiotics, trū Chitosan delivers the unsurpassed quality and batch consistency required by medical professionals and researchers alike. Because when it comes to chitosan, it can't just be good; it's got to be trū.



USP-NF conforming
Meets all monograph requirements set for the U.S. Pharmacopeia



GMP compliant
Adheres to manufacturing processes required by the U.S. FDA



Single-source
Consistent, traceable supply with included Certificate of Origin



Certified quality
Made from premium shrimp with included Certificate of Authenticity



FDA-registered facility
Meets International Organization for Standards requirements (ISO 9001)



Domestic production
Every step in the shrimp-to-chitosan process occurs in the U.S.

CHITOSAN MADE FROM A CONTROLLED SHRIMP PRODUCTION PROCESS.

Enabled by breakthrough Tidal Basin® indoor aquaculture technology, our medical-grade chitosan is derived from pristine shrimp peels/shells with unprecedented quality and traceability. Our precisely controlled environment yields superior shrimp to produce superior chitosan that is naturally low in heavy metals and other impurities making trū Chitosan the best choice for your chitosan research or application.

330 3rd Street | Balaton, MN 56115 | truchitosan.com

trū CHITOSAN
an iterro® brand



Hawkins is a key distributor trū® Chitosan. Please contact us at: pharmcs@hawkinsinc.com or call 800.328.5460.

Product	trū Chitosan PHARMA
Appearance	Neat, micronized powder
Color	White or slightly off-white
FITR	Comparable to standard
USP ID B	Forms a gelatin mass (197)
Solubility*	1% loading (in 1% acetic acid)
Appearance in solution*	Clear (in 1% acetic acid)

Parameter	USP
Degree of deacetylation	70–95%
Molecular weight	Report

METALS

Substance	USP (ppm)
Lead (Pb)	≤ 0.50
Mercury (Hg)	≤ 0.20
Cadmium (Cd)	≤ 0.20
Arsenic (As)	≤ 0.50

Substance	USP (ppm)
Chromium (Cr)	≤ 1.00 ✓
Nickel (Ni)	≤ 1.00 ✓
Iron (Fe)	≤ 10.0 ✓

IMPURITIES

Substance	USP (%)
Residue on ignition	≤ 1.0
Loss on drying	≤ 5.0
Residual protein	≤ 0.2

Substance	Value* (ppm)
Tropomyosin content	≤ 10

BIOLOGICAL TESTING

Substance	USP
Endotoxins	≤ LOD
P. aeruginosa	Absent
S. aureus	Absent

Substance	Value* (ppm)
Aerobic plate count	≤ 2000 ✓
Mold & yeast	≤ 200 ✓

Testing and analysis performed by Parimer Scientific.
 Unique Certificates of Analysis (COA) and Certificates of
 Origin (COO) are included with each shipment.

PARIMER
 — SCIENTIFIC —

*denotes non-USP testing standard



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