

Product Name: Chitin - Premium Grade (High MW, ionic liquid extracted, made in the USA)

Catalog number: H-10CH

Product Description: Chitin from shrimp shells, unbleached brownish powder

Molecular Formula: $(C_8H_{13}NO_5)_n$

MW: >10,000 kDa

CAS: 1398-61-4

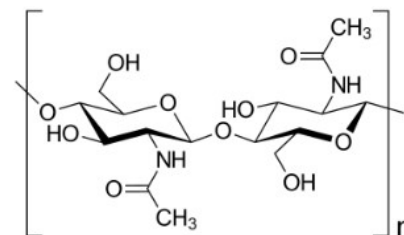
Alternate Name: Poly-(1-4)- β -N-acetyl-D-glucosamine

Solubility: Not soluble in water, soluble only in designer solvent

Storage and Handling: Store dry at room temperature protected from excessive direct light

Background: Chitin is one of the most abundant organic polymers found in nature primarily in the exoskeletons of arthropods (shrimp, crab, lobster, insects).

References: 1. King, C.; Shamshina, J.; Gurau, G.; Berton, P.; Khan, N. F. A. F.; Rogers, R. D. "A platform for more sustainable chitin films from an ionic liquid process," *Green Chem.* 2016, 19, 117-126, DOI: 10.1039/C6GC02201D.
2. Shen, X.; Shamshina, J. L.; Berton, P.; Gurau, G.; Rogers, R. D. "Critical Review: Hydrogels Based on Cellulose and Chitin: Fabrication, Properties, and Applications", *Critical Review. Green Chem.*, 2016, 18, 53-75. DOI: 10.1039/C5GC02396C.
3. Shen, X.; Shamshina, J.; Berton, P.; Bandomir, J.; Wang, H.; Gurau, G.; Rogers, R. D. "Comparison of Hydrogels Prepared with Ionic Liquid-Isolated vs. Commercial Chitin and Cellulose", *ACS Sustainable Chem. Eng.* 2016, 4, 471-480. DOI: 10.1021/acssuschemeng.5b01400.
4. Barber, P. S.; Shamshina, J. L.; Rogers, R. D.; "A 'Green' Industrial Revolution: Using Chitin towards Transformative Technologies," *Pure Appl. Chem.* 2013, 85, 1693-1701. DOI: 10.1351/PAC-CON-12-10-14.



Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.