

CHITOSAN

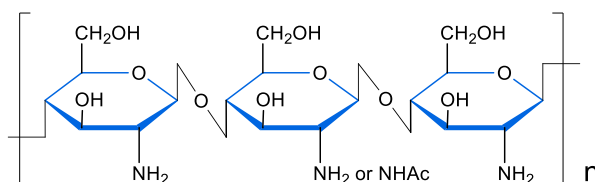
Catalog Number:	C-CHITOSAN97-10G	Quantity: 10 g
	C-CHITOSAN97-30G	Quantity: 50 g
	C-CHITOSAN99-2G	Quantity: 2 g
	C-CHITOSAN99-5G	Quantity: 5 g

Synonyms: Deacetylated chitin, poly(β -1,4-glucosamine)

CAS Number: 9012-76-4

Source: Alaska snow crab

Product Description: Chitosan, derived from chitin by deacetylation, is a cationic polysaccharide consisting of linear β -1,4-linked glucosamine units, and soluble in acidic solvents¹. Because of its well-known biocompatibility and biodegradability, chitosan has been widely used in drug delivery, tissue regeneration, wound healing, blood coagulation, and immunostimulation^{2,3}. Meanwhile, the degree of deacetylation (DDA) in chitosan, i. e. the content of amino in molecular chain, has been founded to be related to its biological activities directly⁴.



Specifications:

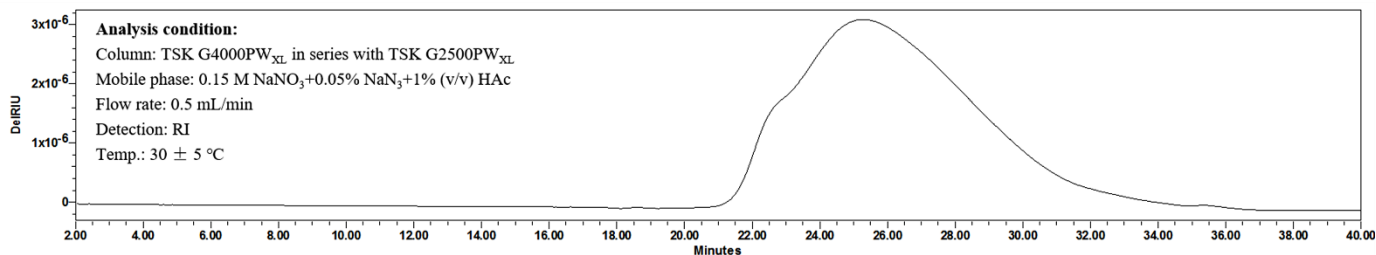
Purity	$\geq 98\%$	High-performance gel permeation chromatography (HPGPC)
Degree of Deacetylation	$\geq 97/99\%$	^1H -NMR spectrum ⁵
Structure Analysis	Pass	^1H - and ^{13}C -NMR spectra
Molecular weight (Mw, kDa)	~ 200 -300	HPGPC-MALLS
Solubility, 30 mg/mL, 1%(v/v) acetic acid	Clear, Colorless to faint yellow	
Appearance	White to off white powder	

Storage/Stability: Store at room temperature in a dry and dark place until opened. Following reconstitution, aliquot and freeze at -20°C to -80°C for long-term storage or refrigerate at 2°C - 8°C for short-term storage.

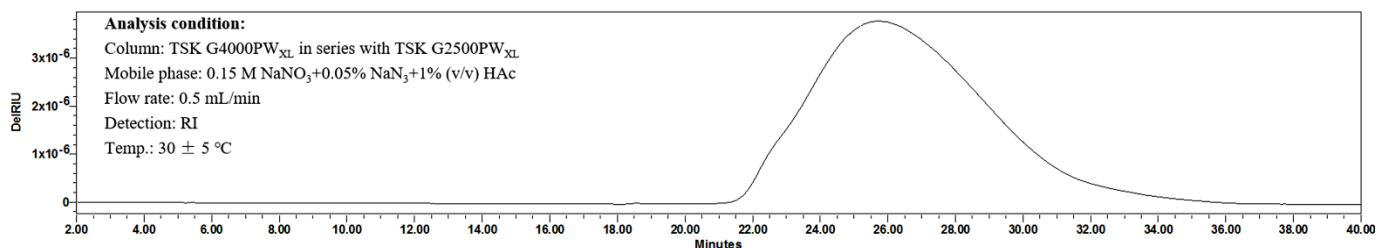
Related Products:

Product	Catalog Number
K5 Polysaccharide	C-K5PS
Curdlan	C-CURDLAN
Heparin Sodium from Porcine Intestinal Mucosa	C-HEPPIM
Heparin Sodium from Bovine Lung	C-HEPBL
Low-Molecular-Weight Konjac Glucomannan	C-LKGM
Hyaluronic Acid Sodium	C-HA

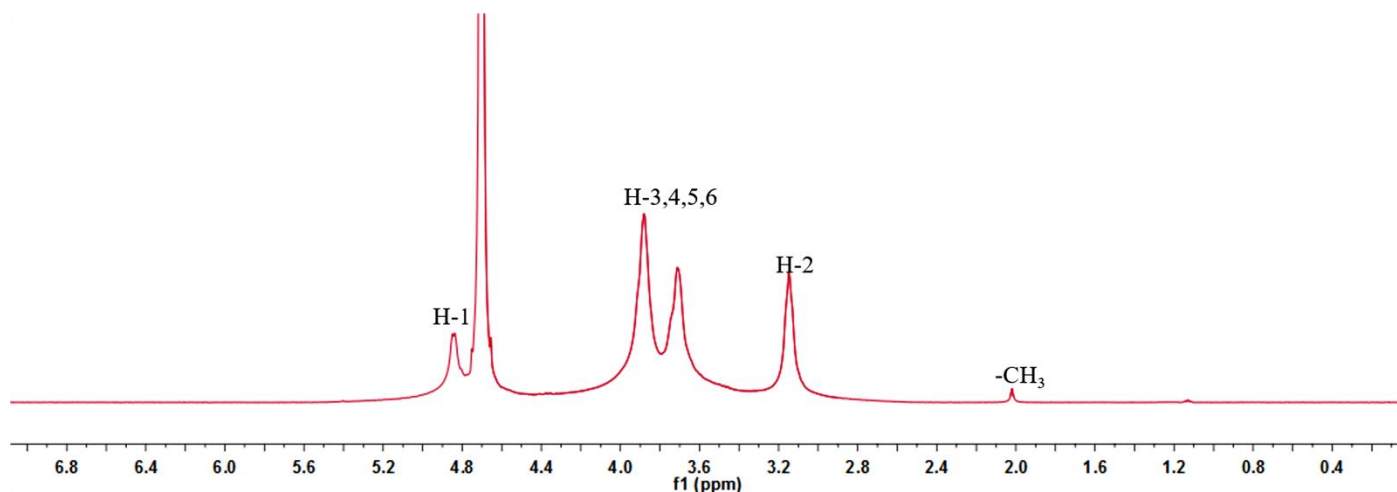
1. Purity analysis of chitosan(C-CHITOSAN97) by HPGPC



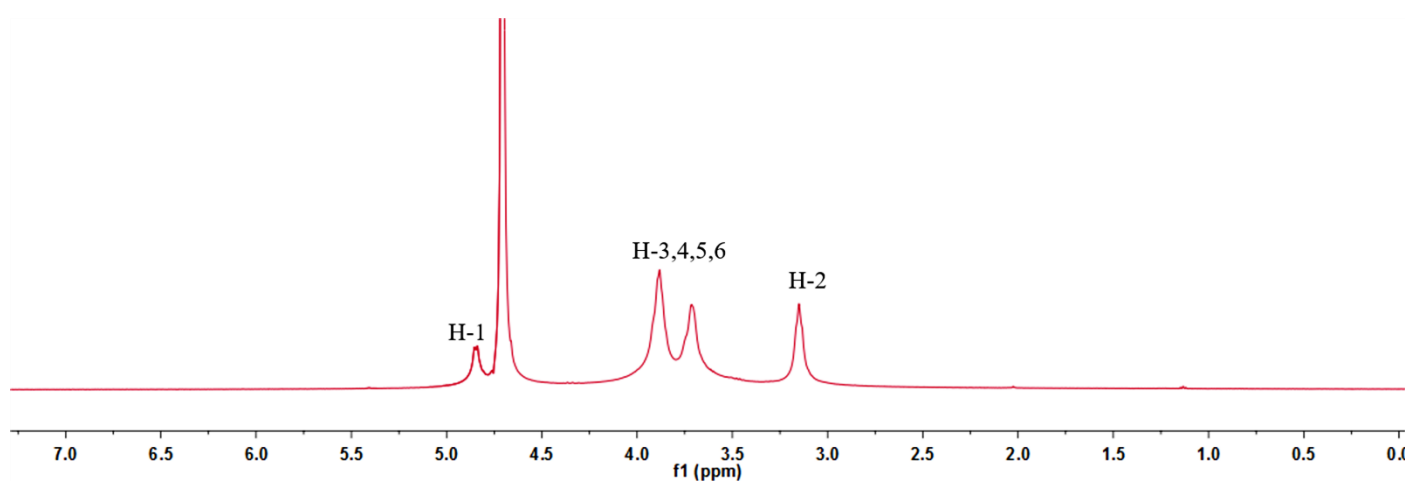
2. Purity analysis of chitosan(C-CHITOSAN99) by HPGPC



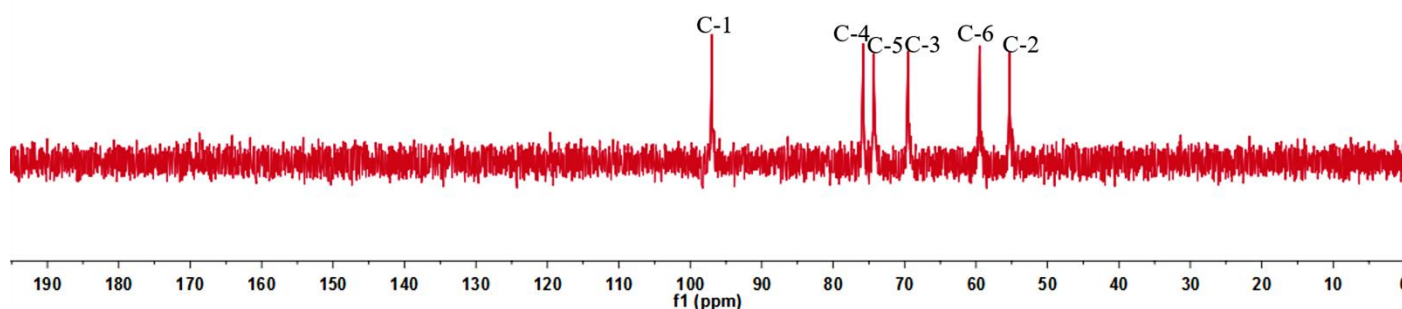
3. The ¹H-NMR spectrum of chitosan(C-CHITOSAN97)⁶



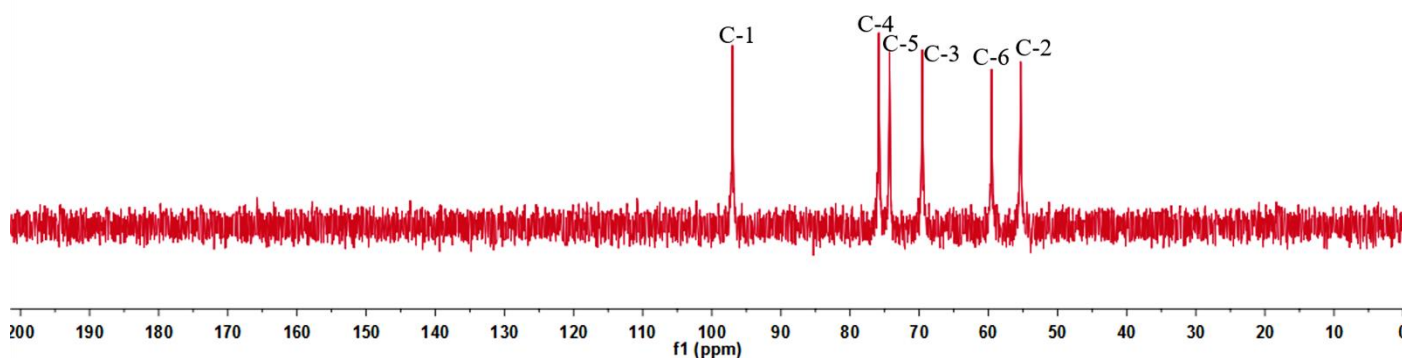
4. The ¹H-NMR spectrum of chitosan(C-CHITOSAN99)⁶



5. The ¹³C-NMR spectrum chitosan(C-CHITOSAN97)⁷



6. The ^{13}C -NMR spectrum chitosan(C-CHITOSAN99)⁷



References:

1. Peter, M.G., *Journal of Macromolecular Science, Part A*, **32**(4): p. 629-640 (1995).
2. Chen, M.-C., *et al.*, **243**: p. 185-230 (2011).
3. Anitha, A., *et al.*, *Progress in Polymer Science*, **39**(9): p. 1644-1667 (2014).
4. Tolaimate, A., *et al.*, *Polymer*, **44**(26): p. 7939-7952 (2003).
5. Kasaai, M.R., *Carbohydrate Polymers*, **79**(4): p. 801-810 (2010).
6. Hirai, A., H. Odani, and A. Nakajima, *Polymer Bulletin*, **26**(1): p. 87-94 (1991).
7. Saito, H., R. Tabeta, and K. Ogawa, *Macromolecules*(10): p. 2424-2430 (1987).