

TECHNICAL DATA SHEET

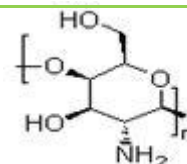
Chitosan

Chemical Properties

Synonym: Poly (beta-(1,4)-2-amino-2-deoxy-D-glucose);
Poly (beta-(1,4)-D-glucosamine).

CAS NO.: 9012-76-4

Molecular Formula: $(C_6H_{11}NO_4)_n$



Description

Chitosan is a linear polysaccharide composed of randomly distributed β -(1-4)-linked D-glucosamine (deacetylated unit) and N-acetyl-D-glucosamine (acetylated unit). It is made by treating shrimp and other crustacean shells with the alkali sodium hydroxide.

Solubility

It's soluble in dilute aqueous acid.

Specification

Item	Specification	Test Method
Appearance	Off-white powder	Visual
Odor	Odorless	Organoleptic
Identification	Positive by FTIR	FITR
Deacetylated Degree	Min 90.0%	GB 29941
Density	Min 0.25g/ml	In-house
Viscosity	According to business requirement (determined by 1% chitosan dissolved in 1% Acetic Acid Solution at 20°C)	GB 29941
Particle size	Min 95% through 40 mesh	In-house
Moisture	Max 10.0%	GB 5009.3
Ash	Max 1.0%	GB 5009.4
Heavy Metals	Max 10 ppm	In-house
Iron	Max 50 ppm	In-house
Total Plate Count	Max 1,000cfu/g	In-house
Total yeast & mold	Max 100cfu/g	In-house
<i>Enterobacteriaceae</i>	Max 100 cfu/g	In-house
<i>E. Coli.</i>	Negative/g	In-house
<i>Salmonella</i>	Negative/10g	In-house

Ingredients

Chitosan min 90%.

Labeling

In the United States and the European Union: Chitosan

Functions

1. Chitosan is useful in promoting tissue growth in tissue repair and accelerating wound-healing and bone regeneration.
2. Chitosan also can be incorporated into hydrogels and microspheres which demonstrate large potential in delivery systems for drugs, proteins or genes.
3. Chitosan has a strong positive charge helps it bind to fats and cholesterol and initiates clotting of red blood cells.
4. Chitosan is an ecologically friendly biopesticide substance that boosts the innate ability of plants to defend themselves against fungal infections, also can be used as soil improvement agent, seed treatment and plant growth enhancer.
5. Chitosan's strong positive charge allows it to bind to negatively charged surfaces such as hair and skin which makes it a useful ingredient in hair and skin products.

Applications

Applied in medicine, health care products, agriculture, and cosmetic industry.

Safety

This product is safe for the intended use. Avoid ingestion, inhalation of dust or direct contact by applying suitable protective measures and personal hygiene. See Material Safety Data Sheet for full safety information.

Handling recommendations

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatible such as oxidizing agents, acids, alkalis.

Packaging, Storage & Shelf Life

Package	25kg/drum, pack in paper-drums and two plastic-bags inside; or according to customers' requirements.
Storage	In cool & dry place. Keep away from strong light and heat.
Shelf life	2 years if sealed and stored properly.