New Uberty

Chitosan - the great choice for antibacterial textiles

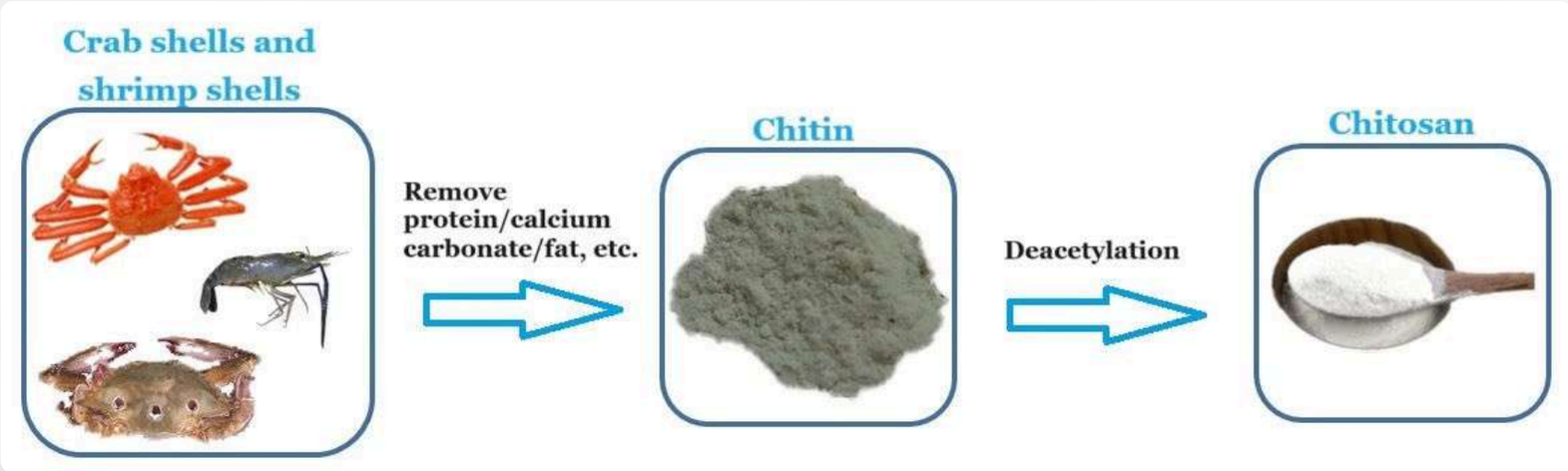


Chitosan - From Food Waste to Natural Antibacterial Material

Chitin is the second most abundant natural biopolymer on Earth after cellulose, widely present in the exoskeletons of crustaceans, mollusks and insects, as well as in the cell walls of algae, fungi and yeasts. Chitin is all around us in our living environment, just like air, water and sunlight.

Shrimp and crab are often the focus of our dining table, and after a hearty meal, millions of tons of shrimp and crab shells are produced each year, some of which are directly dumped back into the sea, and some are buried as waste.

Through professional techniques, the discarded shrimp and crab shells can be extracted to obtain chitosan, turning food waste into a natural antibacterial material.



Chitosan is a Natural Antibacterial Agent

Chitosan has natural antibacterial effects, with a very high broad-spectrum antibacterial rate. More than 90% of common bacteria cannot survive on chitosan fibers.

The antibacterial mechanism of chitosan:

1 Cell Membrane Disruption

The positively charged chitosan molecules interact with the negatively charged bacterial cell membranes, thereby disrupting the integrity of the cell membrane.

2 Metabolic Inhibition

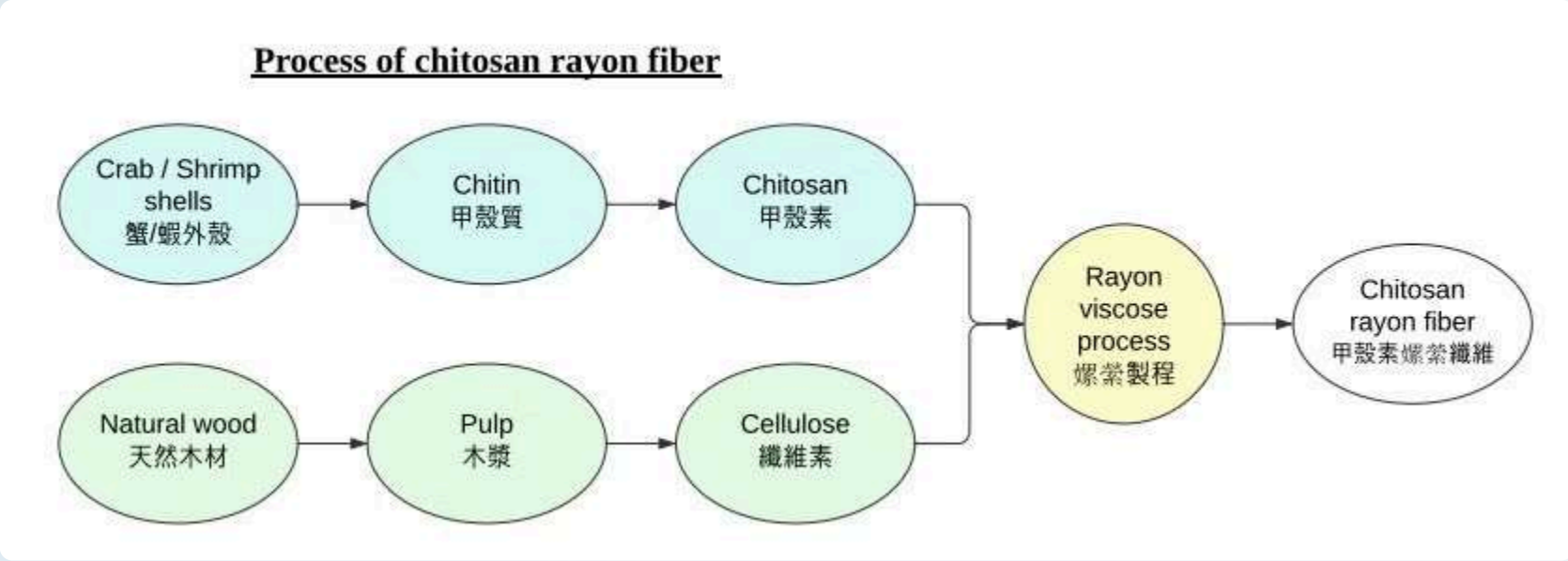
Chitosan can penetrate the bacterial cell membrane, inhibit the metabolic activity of bacteria and induce cell apoptosis.

3 Cell Wall Destruction

Chitosan can prevent the synthesis of the bacterial cell wall, leading to cell lysis.

How is chitosan rayon fiber produced?

New Uberty's chitosan rayon fiber is produced by uniformly adding nanometer-sized chitosan particles into the rayon production process, making it a long-lasting natural antibacterial fiber. Both chitosan and wood pulp are biodegradable materials that can be decomposed by nature after use, making it an environmentally friendly green fiber.



The advantages of chitosan rayon textiles

1 Antibacterial & Odor-resistant

Effectively inhibits the growth of bacteria and fungi, reducing unpleasant odors.

2 Moisture-wicking & Breathable

Chitosan rayon has excellent moisture absorption and ventilation properties, keeping the skin dry and comfortable.

3 Soft & Comfortable

Chitosan rayon is softer and more comfortable compared to synthetic fibers.

4 Eco-friendly

Chitosan rayon is a biodegradable material, environmentally friendly.

New Uberty's chitosan rayon is a long-lasting natural antibacterial fiber. In addition to its original moisture absorption properties, it has superior antibacterial and deodorizing functions. It is non-irritating to the skin, soft, comfortable, antibacterial, skin-friendly, and environmentally friendly. Chitosan rayon is ideal for making baby clothing, underwear, bedding products and more.

baby clothing



underwear



bedding products



You are welcome to contact New Uberty to jointly develop and promote chitosan rayon textiles. Let's work together to create a new era of environmentally friendly, healthy, and comfortable textiles!