

## 甲殼素抗菌纖維

將甲殼素抗菌劑奈米微粒均勻加入嫫縈製程 (**Viscose Rayon Process**) 中，使具有長效型之純天然抗菌纖維，除原有吸濕性、更有優越之抗菌防臭功能，又無皮膚過敏之缺點，是一種兼具柔軟舒適、抗菌親皮膚及環保的新時代纖維。

### 特殊機能

- 一) 為健康的纖維：具有抗菌功能，可抑制纖維上金黃色葡萄球菌等不良細菌繁殖與生(此纖維經台灣紡織綜合研究所測試，抗菌效果優異-如附試驗報告)，而與皮膚接觸無過敏性反應，適合人們日常生活穿著之內衣褲及其他貼身衣物。
- 二) 為清爽舒適的纖維：具有一般嫫縈棉原有的吸濕作用(其吸濕能力比天然棉多 50%)，加上此纖維之物性柔軟，與皮膚親和力良好，使其織成之內衣褲、休閒衣服穿著清爽舒適。
- 三) 為環保的纖維：兩種原料—木漿及甲殼質，均為生物可分解材料，其應用之產品使用後可易於自然分解，實為綠色環保纖維。

## Chitosan

Chitosan is a product derived from chitin, a compound of natural origin obtained from the shell of crab and shellfish. Chitin is an absolutely “safe” material, with a scientifically proved biocompatibility, and it is used in the medical, health and pharmacological fields too.

The *chitosan*'s structure is very similar to cellulose, so in blends with cotton and viscose the new fiber is extremely versatile and easy to dye.

From the physical resemblance between chitosan and cellulose derive a very high textile easiness for manufacturing, with an excellent dye ability with reactive and direct dyestuff, and a very soft “hand”, who make the blends ideal for use in the textile market.

The antibacterial and antimicrobial performance is given with the inhibition of the bacteria's' growth, so having an anti-smell function too. The high level of comfort, the anallergicity and the high humidity absorption (e.g. sweat) give to the clothes realized with this fiber the capability to be used to direct skin contact, as in underwear, socks, pajamas, and so on.

Due to the fact that it is a blend of *chitosan* and viscose structurally bound, keeps its characteristics permanently during time, not being conditioned neither by washes, nor by abrasion or other external actions.

**The fundamental characteristics of chitosan are:**

- 1. Very strong antibacterial effect**
- 2. Total biodegradability**
- 3. Biocompatibility (anallergicity)**
- 4. High humidity absorption**

### **Applications of Chitosan**

Flocculation	Purifies waste water
Heavy metal adsorption	Adsorbs and removes radioactive substances
Biodegradation	Being an organic material, the chitin/chitosan is degraded by microorganisms
Antimicrobial activity	Inhibits bacterial growth
Immunization	Enhances the body's immunity to disease
Cell activation	Promotes Iysozyme secretion
Body activation	Accelerates wound healing
Acceleration of skin tissue regeneration	Thin non-woven fabric is successfully applied to burns
Salt adsorption	Lowers high blood pressure
Oil absorption inhibition	Helps the body getting rid of excess fat
Lowering of cholesterol	Catch cholesterol and lower its level
Haemostatic action	Bleeding is easily stopped
Slow releasing action	Permits slow and steady release of medicines maximizing the efficacy

### **Applications of Chitosan in Textiles**

uniform, underwear, T-shirt, socks, polo shirt, lady's wear, bedding, pillowcase, towel, mask filter...etc.