

APPLICATION METHOD OF CHITOSAN-BASED CHEMICAL COMPOSITION TO FABRIC SURFACES



Invention Definition

The invention relates to the field of textiles and entails a chitosan-based chemical composition applied to the fabric surface. This composition enhances the fabric's functionality by providing various beneficial properties such as antimicrobial, anticellulite, antioxidant, antiparasitic, anti-inflammatory, etc.



Applicant

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Country/Region	Publication Number	Status
Türkiye	2020/07691	Searching
Türkiye	2023/000078 (Additional patent)	

Benefits

- The chitosan-based chemical composition enhances the fabric's functionality by incorporating antimicrobial, anticellulite, antioxidant, antiparasitic, anti-inflammatory, anti-bleeding, photoprotective and restorative properties directly onto the fabric surface.
- Its adaptable chemical structure enables effortless application on various types of fabrics, expanding the potential range of products that can benefit from these properties.

Areas of Use

The chitosan-containing chemical composition finds primary application in the realm of technical textile products. Technical textiles encompass various textile categories such as home textiles, medical textiles and industrial textiles among others. This composition can be effectively utilized across a wide range of fabrics, including flannel, hemp, linen, wool, leather, suede, angora, cashmere, rami, jute, satin, nylon, polyester, acetate, acrylic, polar fabrics and yarns. Application of the composition to the fabric surface can be accomplished through various methods such as scarfing, lamination, spraying or electrospinning processes.



Market Information

Based on 2022 data, the global technical textile market is valued at approximately \$188.8 billion. Within this market, the segment of medical textiles, which constitutes the target market for the invention, is projected to reach a valuation of \$26.2 billion, exhibiting a compound annual growth rate (CAGR) of 4.5% from 2021 to 2028.

KİTOSAN	Antimicrobial	Antiselülit	Antiparasitic	Anti-inflammatory
Area of Use	Hospital textile, bandages, diapers, surgical drapes	Sportswear, casual wear	Sportswear, special workwear, sneakers	Medical Clothing, Surgical Clothing

Target Market

The target audience for this invention primarily includes companies involved in the production of technical textiles and medical textiles, with a particular focus on those operating within the specified NACE Code. Additionally, companies engaged in supplying raw materials to fabric manufacturers can also be considered as important target clients for this product.



NACE Code

13.96

Activity

Production of other technical and industrial textiles

Commercialization Exceptions

The expectation is to facilitate the technology transfer of this invention to target clients through patent licensing or transfer. This technology transfer will be supported by industry-industry cooperation projects.

As the invention is currently in the registration process, it aligns with the TÜBİTAK 1702 Patent-Based Technology Transfer Support Program. Given that the relevant patent falls under a high IPC class and the invention aligns with the theme of "Clean and Circular Economy" within the scope of the EU Green Deal, the support rate of TÜBİTAK 1702 is increased. In the event of a successful technology transfer, the customer organization will have the opportunity to recoup 55-75% of the licensing / transferring costs they incur.

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