

PRODUCTION OF ANTIBACTERIAL PRODUCTS FROM SEA SPONGES



Description of the Invention

The invention involves the isolation of epibiotic bacteria from sea sponges and the extraction of antibacterial compounds from these bacteria. The process entails the production of metabolites with antibacterial properties. This invention enables the utilization of antibacterial metabolites, derived from the bacteria, as effective antibacterial agents in various industries. These metabolites can be utilized in the form of powder, granules, or liquids, providing versatile applications in different sectors.



Applicant İstanbul University



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Country

Türkiye

Application Number

2016/14786

Status

Examination/Licensed

Advantages

- **Environmentally Friendly Production:** The production of the invention's product involves isolating bacteria from sea sponges as raw materials. This approach minimizes the negative environmental impact associated with production processes.
- **Enhanced Antibacterial Properties:** The utilization of metabolites obtained from isolated epibiotic bacteria imparts strong antibacterial properties to the final product.
- **Cost-Efficient Production:** The preferred use of sea sponge bacteria as raw materials in the product's production process leads to cost efficiency. The availability and accessibility of these resources contribute to lower production costs, making the invention economically advantageous.
- **High Production Capacity:** The abundance of raw material resources, namely sea sponges, ensures a high production capacity for the invention's product.

Market Information

The global market size of antibacterial products was valued at USD 25.1 billion in 2021. Based on projections, it is expected to reach USD 32.3 billion by 2028, with a compound annual growth rate (CAGR) of 3.7%. The increasing prevalence of epidemic diseases, particularly during pandemic periods, has significantly contributed to the growing demand for antibacterial products.

Target Audience

The target market for the invention's antibacterial product primarily includes companies operating within specific NACE codes that are engaged in the production of antibacterial products. This encompasses companies that are either entering the market or already established in the industry. The target market comprises a wide range of companies involved in the manufacturing and production of antibacterial products, regardless of their size or geographical location.

Areas of Use

The invention has the potential to be utilized in a diverse array of products, including maintenance towels for medical devices, hygiene and sanitation solutions, antibacterial wet wipes, antibacterial cleaning products, and antibacterial cosmetic products.



Nace Code

Activity

20.42.01

Oral and dental care products (toothpaste, and so on. pastes and powders to keep the denture fixatives and dental floss included)

20.20.15

Manufacture of disinfectants for agricultural and other uses

Expectation

The applicant of this invention, which is applied by İstanbul University, has been licensed to Biyotek15 company on 30.12.2022. Biyotek15 also holds the right to sub-license the invention. The aim is to establish collaborations with stakeholders capable of manufacturing the product and identified as the target market. Collaborations can take the form of industry-industry partnerships or business associations, where sub-licensing can be utilized. Moreover, potential collaborations with national/international funding sources and industry stakeholders' equity will be sought to support and expedite the productization process. These efforts are expected to enhance the commercialization prospects of the invention.

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