

## **Microbial Cellulose Market Forecast to 2028 - COVID-19 Impact and Global Analysis by Application (Food & Beverages, Food Packaging, Biomedical, Cosmetics, and Others)**

Market Report | 2023-06-08 | 123 pages | The Insight Partners

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### **Report description:**

The microbial cellulose market size is expected to grow from US\$ 20.84 million in 2022 to US\$ 41.32 million by 2028; it is estimated to register a CAGR of 12.1% from 2022 to 2028.

Microbial cellulose also known as bacterial cellulose (BC) is a versatile, multifaceted biomaterial with numerous applications. It is synthesized by a group of micro-organisms such as bacteria or fungi in the presence of competent culture media. Microbial cellulose has a three-dimensional, uniaxially oriented structure of nanofibers which impacts its high mechanical strength, high crystallinity, and excellent water holding capacity. Owing to all these properties, microbial cellulose is used in various applications such as food packaging, food & beverage processing, cement additives, wound dressing and cosmetics. This factor is significantly driving the microbial cellulose market growth.

Based on application, the global microbial cellulose market is segmented into food & beverages, food packaging, biomedical, cosmetics, and others. The cosmetics segment is expected to share the highest CAGR of the global microbial cellulose market in 2021. Bacterial cellulose is increasingly used in the cosmetic industry owing to its high-water retention rate and overall texture. The component materials used in cosmetic and personal care products should be biocompatible and nontoxic. Thus, natural product with high safety and purity is favored by customers. Microbial cellulose is a natural product produced via microbial fermentation, which has been demonstrated to be highly biocompatible. In personal care products, bacterial cellulose pellicles harvested from static fermentation have been used as raw materials for face masks. Compared with non-woven cellulose or silk face masks, bacterial cellulose-composed face masks have high water-holding capability. It is also gaining popularity in skin care products such as moisturizers and anti-ageing products. These factors are expected to drive the segment's growth in the forecast period.

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Europe is expected to register the highest CAGR in the global microbial cellulose market over the forecast period. Microbial cellulose has proven to be a biomaterial and can be used in various applications, such as paper products, food & beverages, cosmetics, healthcare applications, and biomedical devices. The market growth in Europe is ascribed to a well-established personal care industry in European countries. The region is the world's largest cosmetics market with presence of well-established industry players. Bacterial cellulose is used as an emulsion stabilizer or an asset in face masks and skin treatments to deliver skin hydration and an active compound. In 2013, a cosmetic mask produced from microbial cellulose was patented by Amorepacific. Bacterial cellulose is a more sustainable alternative to traditional materials such as petroleum derivatives that are nonrenewable and difficult to degrade. These factors are projected to propel the microbial cellulose market in the region.

Microbial cellulose is a natural additive for numerous medical and tissue-engineered applications due to its nanostructure and properties. A microbial cellulose membrane has been successfully used in wound-healing devices for severely damaged skin and as a small-diameter blood vessel replacement. Thus, biomedical manufacturers in Europe are increasingly utilizing microbial cellulose for various applications.

The key players operating in the global microbial cellulose market include ScobyTec GmbH, BOWIL Biotech SP Zoo, Polybion SL, Bacpolyzyme Biyomuhendislik Ltd, Axcelon Biopolymers Corp, Bioweg UG, Cellulose Lab Inc, Bacterial Cellulose Solutions Inc, Ashland Inc, and BIOINSPIRED MATERIALS SL. These companies are highly involved in research and development activities to launch microbial cellulose at competitive prices. Moreover, these companies are adopting new technologies to scale up their production to meet the rising demand for microbial cellulose across the globe.

The overall global microbial cellulose market size has been derived using both primary and secondary sources. To begin the research process, exhaustive secondary research has been conducted using internal and external sources to obtain qualitative and quantitative information related to the market. Also, multiple primary interviews have been conducted with industry participants to validate the data and gain more analytical insights into the topic. The participants of this process include industry experts such as VPs, business development managers, market intelligence managers, and national sales managers-along with external consultants such as valuation experts, research analysts, and key opinion leaders-specializing in the microbial cellulose market.

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