

Chitosan Market Report and Forecast 2025-2034

Market Report | 2025-08-13 | 176 pages | EMR Inc.

AVAILABLE LICENSES:

- Single User License \$3599.00
- Five User License \$4249.00
- Corporate License \$5099.00

Report description:

The global chitosan market stood at a value of around USD 14.47 Billion in 2024. The market is further expected to grow in the forecast period of 2025-2034 at a CAGR of 20.90%, to reach USD 96.55 Billion by 2034, driven by the increasing product demand for treating wastewater.

Chitosan is a linear polysaccharide, which has a number of commercial and possible biomedical uses. It is a natural polymer derived from chitin, found mainly in the shells of crustaceans like shrimp and crabs. It's known for its biocompatibility, biodegradability, and non-toxicity. In various end-use sectors, chitosan is used for its ability to form films, its antimicrobial properties, and its capacity to chelate heavy metals.

The abundant raw material availability, emerging applications across key end-use sectors, and growing awareness among manufacturers regarding the benefits of chitosan are the significant factors propelling the global chitosan market growth. The growing pharmaceutical sector is also likely to boost the demand for the product, whereas the high production cost of chitosan may affect the market growth in the coming years. Chitosan is also highly valued in water treatment processes due to its ability to bind with contaminants and heavy metals, promoting their removal from water. As global concerns over water purity and conservation rise, so does the demand for chitosan in water treatment facilities.

Key Trends and Developments

Expansion in the food and beverage sector; growing demand for sustainable agriculture practices; innovations in drug delivery systems; and technological advancements in the production of chitosan are the major trends impacting the chitosan market growth

Nov 16th, 2022

Chitogen Inc. and trA Chitosan, jointly announced the signing of a Letter of Intent to supply tru Chitosan for the market expansion

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

of Chitogen's patented and proprietary SoftSeal interventional hemostat product line.

Sep 1st, 2022

Researchers at the University of Maryland's Center for Materials Innovation developed an innovative approach to controlling methane emissions by utilising chitosan, a chemical derivative of chitin, which is biodegradable.

Sep 12th, 2023

At EUCHIS 2023, Heppe Medical Chitosan GmbH announced the launch of their first-ever chitosan standards, marking a significant development in the field of molecular weight analysis.

Jan 8th, 2024

The development of the biodegradable chitosan sponge, crafted from chitosan, by researchers at the University of Porto and the Federal University of Sao Paulo represents a significant innovation in the treatment of candidiasis.

Expansion in the food and beverage sector

Chitosan is gaining traction in the food and beverage sector as a food preservative, additive, and packaging material, driven by its antimicrobial properties.

Growing demand for sustainable agriculture practices globally

The use of chitosan as a biopesticide and plant growth enhancer in agriculture is on the rise, reflecting the trend towards sustainable and eco-friendly farming practices.

Increased innovations and developments in drug delivery systems

Ongoing research and development efforts are leading to the exploration of new ways to utilise chitosan in drug delivery, particularly in targeted and controlled-release formulations.

Technological advancements in the production of chitosan

Innovations in the extraction and processing of chitosan are improving its quality, consistency, and functionality, expanding its applicability across different end-use sectors.

One of the key trends in the chitosan market is the product's role in the food and beverage sector. Chitosan exhibits strong antimicrobial properties against a wide range of pathogens, including bacteria, fungi, and viruses and its use as a natural preservative extends the shelf life of food products by inhibiting microbial growth, reducing spoilage, and maintaining quality without the need for synthetic preservatives. Chitosan can also be used to form edible films and coatings for food products. These films serve as a barrier to oxygen, moisture, and microbial contaminants, further extending the shelf life of fresh produce, meats, and seafood.

At EUCHIS 2023, Heppe Medical Chitosan GmbH announced the launch of their first-ever chitosan standards through which it aims to enhance the precision of molecular weight analysis, thereby promoting better research, development, and application of chitosan across various end-use sectors, including biomedicine, pharmaceuticals, and environmental engineering. The

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

introduction of these chitosan standards represents a breakthrough for researchers and product developers, offering a consistent and accurate means to measure molecular weight, which is essential for ensuring the quality and performance of chitosan-based products.

Market Segmentation

"Chitosan Market Report and Forecast 2025-2034" offers a detailed analysis of the market based on the following segments:

Market Breakup by Application

- Water Treatment
- Pharmaceutical and Biomedical
- Cosmetics
- Food and Beverages
- Others

Market Breakup by Region

- North America
- Europe
- Asia Pacific
- Latin America
- Middle East and Africa

The pharmaceutical and biomedical sectors maintain their dominance in the chitosan market due to the product's high biocompatibility

The pharmaceutical and biomedical sectors occupy a significant chitosan market share as chitosan is highly biocompatible and biodegradable, making it suitable for various medical and pharmaceutical applications. It also breaks down into harmless products, which minimises the risk of adverse reactions in the body. Chitosan is an excellent vehicle for drug delivery as its ability to protect drugs from degradation, enhance absorption, and control the release of drugs makes it highly valuable in formulating tablets, capsules, and other drug delivery systems.

Chitosan promotes wound healing and is used in bandages and wound dressings as its antimicrobial properties prevent infection, while its biocompatibility promotes tissue regeneration without causing excessive inflammation or foreign body reactions.

The chitosan market demand is also driven by the cosmetic sector as the unique properties of chitosan align well with the needs and trends in cosmetic formulations. Consumers are increasingly seeking natural, eco-friendly products and chitosan, being a natural polymer derived from chitin, meets this demand. Its biodegradability is an added advantage, aligning with the trend towards sustainability in the cosmetics sector. Chitosan also has excellent moisture retention capabilities, making it a popular ingredient in skin moisturisers, lotions, and anti-ageing products as it helps keep the skin hydrated and can improve skin texture and appearance.

Competitive Landscape

The market players are increasing their research and development efforts, exploring potential application of chitosan to gain a competitive edge in the market

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

G.T.C. Bio Corporation

Is a renowned chitosan manufacturer located in Shandong Province, China. The company excels in the biotechnology field, combining manufacturing and trade.

Panvo Organics Pvt. Ltd.

Is recognised as a WHO-GMP-certified manufacturer excelling in the production of active pharmaceutical ingredients, novel formulations, and sustainable agriculture inputs.

AgraTech International, Inc.,

Is recognised as a biotech enterprise that specialises in the production of chitosan, a speciality chemical sourced from crustacean waste.

Golden-Shell Pharmaceutical Co., Ltd.,

Founded in 1994 and originally known as Golden-Shell Biochemical, is now recognised as the largest manufacturer of chitin and its derivatives in China.

Innovations in the extraction and processing of chitosan are significantly enhancing its quality, functionality, and applicability across industries, positively influencing the chitosan market. The market players are focusing on these innovations to meet the rising demand for chitosan and to capitalise on its versatile properties. Innovative extraction techniques are now being developed to minimise the use of harmful chemicals and reduce environmental impact. These methods aim to improve the purity and yield of chitosan while preserving its functional properties.

As per the chitosan market analysis, the demand for chitosan in North America is significant and is expected to continue to grow in the coming years. North America, particularly the United States, has a highly advanced healthcare and pharmaceutical sector and the demand for chitosan in drug delivery systems, wound healing products, and tissue engineering is substantial due to its biocompatibility and biodegradability. With growing environmental concerns and stricter regulations on water quality, there is an increased demand for effective and eco-friendly water treatment solutions. Chitosan is used in water treatment facilities for its ability to bind with contaminants and heavy metals, promoting their removal.

The chitosan market in the Asia Pacific region is also robust and has been witnessing continued expansion, driven by regional dynamics, economic growth, and product's diverse industrial applications. The Asia Pacific is a major producer of seafood, and consequently, it has an abundant supply of chitin, the raw material for chitosan that is primarily derived from the shells of crustaceans like shrimp and crabs. This abundant supply facilitates the production of chitosan and supports a robust market.

Countries like Japan, China, and India are rapidly growing in the pharmaceutical and biomedical sectors and chitosan's biocompatibility and biodegradability make it highly valuable for drug delivery systems, wound dressings, and tissue engineering, driving its demand in these applications.

Table of Contents:

1 Executive Summary

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 1.1 Market Size 2024-2025
- 1.2 Market Growth 2025(F)-2034(F)
- 1.3 Key Demand Drivers
- 1.4 Key Players and Competitive Structure
- 1.5 Industry Best Practices
- 1.6 Recent Trends and Developments
- 1.7 Industry Outlook
- 2 Market Overview and Stakeholder Insights
 - 2.1 Market Trends
 - 2.2 Key Verticals
 - 2.3 Key Regions
 - 2.4 Supplier Power
 - 2.5 Buyer Power
 - 2.6 Key Market Opportunities and Risks
 - 2.7 Key Initiatives by Stakeholders
- 3 Economic Summary
 - 3.1 GDP Outlook
 - 3.2 GDP Per Capita Growth
 - 3.3 Inflation Trends
 - 3.4 Democracy Index
 - 3.5 Gross Public Debt Ratios
 - 3.6 Balance of Payment (BoP) Position
 - 3.7 Population Outlook
 - 3.8 Urbanisation Trends
- 4 Country Risk Profiles
 - 4.1 Country Risk
 - 4.2 Business Climate
- 5 Global Chitosan Market Analysis
 - 5.1 Key Industry Highlights
 - 5.2 Global Chitosan Historical Market (2018-2024)
 - 5.3 Global Chitosan Market Forecast (2025-2034)
 - 5.4 Global Chitosan Market by Application
 - 5.4.1 Water Treatment
 - 5.4.1.1 Historical Trend (2018-2024)
 - 5.4.1.2 Forecast Trend (2025-2034)
 - 5.4.2 Pharmaceutical and Biomedical
 - 5.4.2.1 Historical Trend (2018-2024)
 - 5.4.2.2 Forecast Trend (2025-2034)
 - 5.4.3 Cosmetics
 - 5.4.3.1 Historical Trend (2018-2024)
 - 5.4.3.2 Forecast Trend (2025-2034)
 - 5.4.4 Food and Beverages
 - 5.4.4.1 Historical Trend (2018-2024)
 - 5.4.4.2 Forecast Trend (2025-2034)
 - 5.4.5 Others
 - 5.5 Global Chitosan Market by Region
 - 5.5.1 North America

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 5.5.1.1 Historical Trend (2018-2024)
- 5.5.1.2 Forecast Trend (2025-2034)
- 5.5.2 Europe
 - 5.5.2.1 Historical Trend (2018-2024)
 - 5.5.2.2 Forecast Trend (2025-2034)
- 5.5.3 Asia Pacific
 - 5.5.3.1 Historical Trend (2018-2024)
 - 5.5.3.2 Forecast Trend (2025-2034)
- 5.5.4 Latin America
 - 5.5.4.1 Historical Trend (2018-2024)
 - 5.5.4.2 Forecast Trend (2025-2034)
- 5.5.5 Middle East and Africa
 - 5.5.5.1 Historical Trend (2018-2024)
 - 5.5.5.2 Forecast Trend (2025-2034)
- 6 North America Chitosan Market Analysis
 - 6.1 United States of America
 - 6.1.1 Historical Trend (2018-2024)
 - 6.1.2 Forecast Trend (2025-2034)
 - 6.2 Canada
 - 6.2.1 Historical Trend (2018-2024)
 - 6.2.2 Forecast Trend (2025-2034)
- 7 Europe Chitosan Market Analysis
 - 7.1 United Kingdom
 - 7.1.1 Historical Trend (2018-2024)
 - 7.1.2 Forecast Trend (2025-2034)
 - 7.2 Germany
 - 7.2.1 Historical Trend (2018-2024)
 - 7.2.2 Forecast Trend (2025-2034)
 - 7.3 France
 - 7.3.1 Historical Trend (2018-2024)
 - 7.3.2 Forecast Trend (2025-2034)
 - 7.4 Italy
 - 7.4.1 Historical Trend (2018-2024)
 - 7.4.2 Forecast Trend (2025-2034)
 - 7.5 Others
- 8 Asia Pacific Chitosan Market Analysis
 - 8.1 China
 - 8.1.1 Historical Trend (2018-2024)
 - 8.1.2 Forecast Trend (2025-2034)
 - 8.2 Japan
 - 8.2.1 Historical Trend (2018-2024)
 - 8.2.2 Forecast Trend (2025-2034)
 - 8.3 India
 - 8.3.1 Historical Trend (2018-2024)
 - 8.3.2 Forecast Trend (2025-2034)
 - 8.4 ASEAN
 - 8.4.1 Historical Trend (2018-2024)

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 8.4.2 Forecast Trend (2025-2034)
- 8.5 Australia
 - 8.5.1 Historical Trend (2018-2024)
 - 8.5.2 Forecast Trend (2025-2034)
- 8.6 Others
- 9 Latin America Chitosan Market Analysis
 - 9.1 Brazil
 - 9.1.1 Historical Trend (2018-2024)
 - 9.1.2 Forecast Trend (2025-2034)
 - 9.2 Argentina
 - 9.2.1 Historical Trend (2018-2024)
 - 9.2.2 Forecast Trend (2025-2034)
 - 9.3 Mexico
 - 9.3.1 Historical Trend (2018-2024)
 - 9.3.2 Forecast Trend (2025-2034)
 - 9.4 Others
- 10 Middle East and Africa Chitosan Market Analysis
 - 10.1 Saudi Arabia
 - 10.1.1 Historical Trend (2018-2024)
 - 10.1.2 Forecast Trend (2025-2034)
 - 10.2 United Arab Emirates
 - 10.2.1 Historical Trend (2018-2024)
 - 10.2.2 Forecast Trend (2025-2034)
 - 10.3 Nigeria
 - 10.3.1 Historical Trend (2018-2024)
 - 10.3.2 Forecast Trend (2025-2034)
 - 10.4 South Africa
 - 10.4.1 Historical Trend (2018-2024)
 - 10.4.2 Forecast Trend (2025-2034)
 - 10.5 Others
- 11 Market Dynamics
 - 11.1 SWOT Analysis
 - 11.1.1 Strengths
 - 11.1.2 Weaknesses
 - 11.1.3 Opportunities
 - 11.1.4 Threats
 - 11.2 Porter's Five Forces Analysis
 - 11.2.1 Supplier's Power
 - 11.2.2 Buyer's Power
 - 11.2.3 Threat of New Entrants
 - 11.2.4 Degree of Rivalry
 - 11.2.5 Threat of Substitutes
 - 11.3 Key Indicators for Demand
 - 11.4 Key Indicators for Price
- 12 Price Analysis
 - 12.1 North America Historical Price Trends (2018-2024) and Forecast (2025-2034)
 - 12.2 Europe Historical Price Trends (2018-2024) and Forecast (2025-2034)

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 12.3 Asia Pacific Historical Price Trends (2018-2024) and Forecast (2025-2034)
- 12.4 Latin America Historical Price Trends (2018-2024) and Forecast (2025-2034)
- 12.5 Middle East and Africa Historical Price Trends (2018-2024) and Forecast (2025-2034)
- 13 Procurement Insights
 - 13.1 Contract Terms
 - 13.2 Cost Structure
 - 13.2.1 Raw Material
 - 13.2.2 Utility
 - 13.2.3 Labour Cost
 - 13.2.4 Fixed Cost
 - 13.3 Pricing Model
 - 13.4 Vendor Selection Criteria
 - 13.5 Supplier and Buyer Power at Regional Level
 - 13.5.1 Demand
 - 13.5.2 Supply
 - 13.5.3 Raw Material/Feedstock Availability
 - 13.5.4 Supplier Power
 - 13.5.5 Buyer Power
 - 13.6 Procurement Strategy: Best Practices
- 14 Competitive Landscape
 - 14.1 Supplier Selection
 - 14.2 Key Global Players
 - 14.3 Key Regional Players
 - 14.4 Key Player Strategies
 - 14.5 Company Profiles
 - 14.5.1 G.T.C. Bio Corporation
 - 14.5.1.1 Company Overview
 - 14.5.1.2 Product Portfolio
 - 14.5.1.3 Demographic Reach and Achievements
 - 14.5.1.4 Certifications
 - 14.5.2 Panvo Organics Pvt. Ltd.
 - 14.5.2.1 Company Overview
 - 14.5.2.2 Product Portfolio
 - 14.5.2.3 Demographic Reach and Achievements
 - 14.5.2.4 Certifications
 - 14.5.3 AgraTech International, Inc.
 - 14.5.3.1 Company Overview
 - 14.5.3.2 Product Portfolio
 - 14.5.3.3 Demographic Reach and Achievements
 - 14.5.3.4 Certifications
 - 14.5.4 Golden-shell Pharmaceutical Co., Ltd.
 - 14.5.4.1 Company Overview
 - 14.5.4.2 Product Portfolio
 - 14.5.4.3 Demographic Reach and Achievements
 - 14.5.4.4 Certifications
 - 14.5.5 Heppe Medical Chitosan GmbH
 - 14.5.5.1 Company Overview

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

14.5.5.2 Product Portfolio

14.5.5.3 Demographic Reach and Achievements

14.5.5.4 Certifications

14.5.6 Others

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Chitosan Market Report and Forecast 2025-2034

Market Report | 2025-08-13 | 176 pages | EMR Inc.

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$3599.00
	Five User License	\$4249.00
	Corporate License	\$5099.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>
		Date	<input type="text" value="2026-02-22"/>
		Signature	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com