

Food Safety Technology Market Forecasts to 2032 – Global Analysis By Testing Type (Microbiological Testing, Chemical Testing, Nutritional Testing, Allergen Testing and GMO Testing), Food Type, Technology, End User and By Geography

<https://marketpublishers.com/r/FFB7C714380DEN.html>

Date: December 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: FFB7C714380DEN

Abstracts

According to Statistics MRC, the Global Food Safety Technology Market is accounted for \$26.27 billion in 2025 and is expected to reach \$44.44 billion by 2032 growing at a CAGR of 7.8% during the forecast period. Food Safety Technology refers to modern solutions and systems aimed at maintaining the safety, hygiene, and quality of food products across the entire supply chain. It includes innovations such as smart sensors, blockchain-based traceability, automated monitoring tools, and rapid pathogen detection techniques. Adopting these technologies helps food producers and distributors prevent contamination, minimize spoilage, and adhere to strict regulatory requirements. Digital platforms facilitate real-time food quality tracking, increasing transparency for end consumers. Additionally, AI and predictive analytics allow proactive identification of risks, enabling businesses to address potential threats before they reach consumers, ensuring public health protection and fostering global consumer confidence.

According to the World Health Organization (WHO), unsafe food causes illness in 600 million people annually, leading to 420,000 deaths and a loss of 33 million healthy life years (DALYs). Children under 5 are especially vulnerable, with 125,000 deaths each year from foodborne diseases.

Market Dynamics:

Driver:

Rising foodborne illnesses

The global rise in foodborne diseases is a key factor propelling the Food Safety Technology market. Pathogen contamination, including bacteria and viruses, creates serious health challenges, encouraging regulators and food producers to adopt stricter safety protocols. Growing consumer awareness of food quality and hygiene is driving demand for transparency across supply chains. This scenario has led to wider implementation of innovative solutions like smart sensors, automated monitoring, and rapid microbial detection. By identifying hazards early and minimizing outbreaks, Food Safety Technology ensures public safety, decreases losses from product recalls, and enhances consumer confidence, reinforcing the reliability of food brands on a global scale.

Restraint:

High implementation costs

The steep costs associated with implementing Food Safety Technology significantly restrain market expansion. Cutting-edge solutions like IoT sensors, automated monitoring systems, blockchain traceability, and rapid pathogen detection require considerable upfront investment. Small and mid-sized businesses often find it challenging to fund these technologies, restricting their adoption. Moreover, expenses for training staff to efficiently operate and manage these systems add to the financial load. Regular maintenance, software updates, and integration with existing processes further increase overall costs. Consequently, high capital requirements continue to be a major obstacle, particularly for smaller food industry participants, limiting the broader implementation of advanced food safety solutions across the sector.

Opportunity:

Adoption of IoT and smart sensors

The growing implementation of smart sensors and IoT technology offers promising prospects for the Food Safety Technology market. These innovations facilitate continuous monitoring of crucial factors like temperature, humidity, and storage conditions across the supply chain, maintaining food quality and safety. Automated alerts and data analytics help businesses identify issues, prevent contamination, and minimize spoilage effectively. Cloud integration enables efficient tracking, reporting, and decision-making, boosting operational productivity. As more manufacturers and

distributors adopt connected devices, the market demand for IoT-driven food safety solutions is projected to rise. This trend represents a substantial opportunity for technological advancement and market growth in the food safety sector.

Threat:

Supply chain disruptions

Interruptions in food supply chains represent a major threat to the Food Safety Technology market. Natural disasters, pandemics, geopolitical tensions, and logistical issues can disrupt food production, storage, and distribution processes. Such disturbances may compromise monitoring efforts, increase contamination risks, and delay the execution of safety measures. Businesses depending on real-time tracking and automated quality control technologies may experience reduced efficiency and effectiveness during these events. With global supply chains becoming increasingly interconnected, the consequences of disruptions are amplified. Ensuring resilient systems is essential, as vulnerabilities in supply chain operations remain a significant threat to the adoption and successful implementation of advanced Food Safety Technology solutions worldwide.

Covid-19 Impact:

The COVID-19 outbreak had a profound impact on the Food Safety Technology market, highlighting the importance of stricter hygiene practices, monitoring, and supply chain transparency. Disruptions due to lockdowns and heightened consumer concern over food safety accelerated the deployment of advanced technologies, including IoT-enabled sensors, automated monitoring tools, and blockchain-based traceability systems. Food producers and distributors focused on implementing rigorous safety protocols to maintain product quality, prevent contamination, and meet regulatory requirements. The crisis underscored the value of remote monitoring and real-time data analysis, prompting increased investment in innovative solutions. Consequently, the pandemic served as a key driver, accelerating the adoption and growth of food safety technologies worldwide.

The microbiological testing segment is expected to be the largest during the forecast period

The microbiological testing segment is expected to account for the largest market share during the forecast period because of its essential function in identifying and preventing

contamination by bacteria, viruses, and other harmful microorganisms. Food producers and distributors depend on microbiological assessments to guarantee product safety and quality before products reach the market. Rising cases of food borne illnesses have increased the demand for reliable testing, positioning microbiological analysis as a central element for regulatory adherence and consumer safety. The introduction of rapid detection tools and automated microbial screening technologies has boosted its implementation. The leading role of microbiological testing highlights the food industry's focus on protecting public health and ensuring consumer confidence in the safety of food products.

The fruits & vegetables segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the fruits & vegetables segment is predicted to witness the highest growth rate due to the increasing consumer preference for fresh, safe, and high-quality produce. Being highly perishable, fruits and vegetables are prone to microbial contamination, chemical residues, and spoilage, which drive the need for rigorous monitoring and testing. Regulatory frameworks and traceability mandates further encourage the implementation of advanced solutions such as rapid pathogen detection, IoT-enabled sensors, and blockchain tracking. Enhanced consumer awareness about pesticides, allergens, and nutritional standards also promotes investment in food safety technologies, positioning the Fruits & Vegetables segment as the fastest-growing area in the global food safety technology landscape.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, attributed to strict regulatory frameworks, mature food processing sectors, and heightened consumer focus on hygiene and product quality. The region's commitment to minimizing foodborne illnesses and maintaining compliance with food safety standards accelerates the use of advanced solutions, including microbiological and chemical testing, IoT monitoring, and blockchain traceability. Well-developed infrastructure, extensive automation adoption, and substantial R&D investments reinforce market leadership. Furthermore, growing consumer demand for safe, high-quality, and processed foods drives manufacturers to implement cutting-edge technologies, securing North America's position as the foremost region in the global Food Safety Technology market and supporting sustained adoption of innovative safety solutions.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by rapid urbanization, higher disposable incomes, and heightened consumer awareness regarding food safety. The expansion of food processing, retail, and distribution sectors, along with stricter government regulations, is promoting the adoption of technologies such as IoT-enabled monitoring, blockchain for traceability, and rapid pathogen detection. Concerns over contamination, foodborne diseases, and nutritional quality further drive the deployment of advanced solutions. With emerging markets like China and India offering vast opportunities, Asia-Pacific is set to be the fastest-growing region in the global Food Safety Technology market, attracting significant investment and innovation.

Key players in the market

Some of the key players in Food Safety Technology Market include Eurofins Scientific, SGS SA, Bureau Veritas, Intertek Group PLC, Thermo Fisher Scientific Inc., Merieux Nutrisciences, ALS Global, NSF International, UL LLC, Neogen Corporation, Agilent Technologies, FoodChain ID, Bio-Rad Laboratories, AsureQuality Limited and PerkinElmer Inc.

Key Developments:

In October 2025, Thermo Fisher Scientific Inc. announced a definitive agreement to acquire Clario Holdings, Inc. from a shareholder group led by Astorg and Nordic Capital, Novo Holding and Cinven, for \$8.875 billion in cash at close plus potential additional earnout and other payments in the future, largely dependent on performance.

In June 2025, Saudi Ground Services Company (SGS) has signed a five-year strategic agreement in Riyadh with daa International, operator of the Red Sea International Airport, to provide ground handling services for all airlines at Red Sea International Airport, adhering to the highest operational standards and environmental sustainability practices.

In September 2024, Eurofins Scientific recently acquired Infinity Laboratories, Inc. Infinity operates eight state-of-the-art laboratories across the United States and employs approximately 100 staff. The company offers microbiology, chemistry, sterilisation, and package testing to pharmaceutical, biotechnology, and medical device clients. Infinity's competencies and geographic coverage complement and enhance Eurofins' portfolio in

BioPharma Product Testing and Medical Device Testing services.

Testing Types Covered:

Microbiological Testing

Chemical Testing

Nutritional Testing

Allergen Testing

GMO Testing

Food Types Covered:

Meat, Poultry, Seafood

Dairy Products

Processed Foods

Fruits & Vegetables

Cereals & Grains

Technologies Covered:

Traditional Methods

Rapid Methods

Emerging Technologies

End Users Covered:

Food Manufacturers

Food Safety Organizations

Quality Control Laboratories

Industry Testing Facilities

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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