

Global Food Safety Testing Market to Surge with AI, Biosensors & Rising Demand Amid Foodborne Illness Concerns

Rising contamination risks, stringent regulations, and advanced pathogen detection technologies drive the food safety testing market globally.

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EINPresswire.com/ -- The global [food safety testing market](#) is expanding rapidly, driven by the mounting need for quality assurance across the food industry, and a growing focus on consumer health protection. Demand is surging due to a rise in foodborne illnesses, stricter regulatory

frameworks, and increased complexity in food supply chains. According to DataM Intelligence, the food safety testing market is segmented by testing type, technology, application, and region, with the market projected to maintain robust growth at a CAGR of 8.23% through 2031. Key factors fueling this trajectory include heightened scrutiny over packaged and processed foods, as well as the escalating incidence of contamination in meat and dairy products.

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Food safety testing is becoming indispensable worldwide. With AI-driven detection, rapid diagnostics & global regulatory push, the market ensures consumer health while mitigating contamination risks.”

DataM Intelligence



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Microbiological testing remains the leading segment due to its effectiveness in detecting pathogens such as Salmonella, E. coli, and Listeria, which are major contributors to foodborne disease outbreaks. North America retains its dominant position in market share,

attributable to a mature food and beverage industry, advanced infrastructure, and comprehensive regulatory enforcement. This regional advantage is strengthened by the widespread adoption of precautionary testing, particularly in the meat, poultry, and dairy sectors.

Key Highlights from the Report

- The global food safety testing market is forecasted to grow at a CAGR of 8.23% from 2024 to 2031.
- Microbiological testing is the largest and fastest-growing segment within food safety testing.
- North America is the market leader, driven by advanced food safety regulations and a robust processed food industry.
- Rising incidence of foodborne illness, heightened by pesticide and chemical contamination, propels market demand.
- Leading players in the market are implementing strategies such as acquisitions, collaborations, and product innovation.
- COVID-19 has accelerated demand for food safety testing solutions, especially in supply chains affected by disruptions.

Market Segmentation

By Testing Type

The market is categorized into allergen testing, chemical & nutritional testing, GMO testing, microbiological testing, and residues & contamination testing. Microbiological testing leads the market, focusing on detecting pathogenic organisms, indicator microbes, and beneficial bacteria like Bifidobacteria and Lactobacillus.

By Technology

Key technologies include PCR, immunoassays, chromatography, and advanced biosensor platforms, offering precision, speed, and efficiency in food testing.

By Application

Applications span meat, poultry, seafood, dairy, processed foods, beverages, cereals, and grains, allowing food safety protocols to be tailored to specific product types.

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Regional Insights

North America contributes the largest share to the global food safety testing market, a reflection of its robust regulatory landscape, technological leadership, and the criticality of food safety for its sizable food and beverage sector. The region is routinely at the forefront of implementing

advanced safety measures and swift adoption of innovative testing solutions, thus driving market expansion.

Asia Pacific, meanwhile, is set for the fastest growth in the forecast period. This dynamic is fueled by urbanization, the rise of processed food consumption, and increasing consumer awareness of food safety. Stringent regulatory updates and investments in safety infrastructure are further spurring market growth across major economies in this region. Europe and South America also demonstrate strong progress, underpinned by evolving consumer expectations and regulatory harmonization across the food supply chain.

Market Dynamics

Market Drivers

Accelerated incidences of foodborne illnesses, often linked to pathogen contamination or chemical residues from excessive pesticide use, remain a primary driver for food safety testing. As food production and processing become more globalized and supply chains lengthen, opportunities for contamination and cross-border outbreaks rise, prompting stricter compliance and proactive risk management. Growing disposable income and urbanization further bolster demand as consumers prioritize safety and quality in their dietary choices. Meanwhile, the continual rollout of new, faster, and more reliable testing methodologies is facilitating faster turnaround and broader adoption in industry.

Market Restraints

Despite its rapid growth, the market faces challenges, notably in developing countries where limited research infrastructure and low awareness among smaller food manufacturers hamper widespread adoption. The high cost and technical expertise required for advanced testing technologies may be prohibitive for some regions and small businesses. Furthermore, inconsistencies in global food safety standards can impede international trade and uniform implementation of testing protocols.

Market Opportunities

Emerging market opportunities are evident in the development of novel, cost-effective, and rapid detection technologies such as portable biosensors and digital data management for on-site and in-process food safety testing. Increasing investments in R&D, rising collaborations between public and private sectors, and the trend toward smarter, automated quality control systems open new avenues for market expansion. The focus on sustainability and the push for transparent, traceable food production also create prospective growth trajectories for service providers and technology innovators across the food safety spectrum.

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Reasons to Buy the Report

- In-depth analysis backed by DataM Intelligence's industry research and market data.
- Insights into key growth drivers, opportunities, and trends shaping the global food safety testing landscape.
- Detailed segmentation by testing type, technology, application, and regional analysis.
- Coverage of competitive intelligence, recent developments, and company strategies in the sector.
- Option for customized market insights and focus reports tailored to specific business requirements.

Frequently Asked Questions (FAQs)

- How big is the global food safety testing market?
- What are the primary testing types used in food safety testing?
- Who are the key players in the food safety testing market?
- Which region dominates the food safety testing industry?
- What is the projected CAGR for food safety testing from 2024-2031?

Company Insights

- SGS SA
- Eurofins Scientific
- Intertek Group plc
- Bureau Veritas
- ALS Limited
- TÜV SÜD
- Symbio Laboratories
- QIMA
- Pacific Lab
- Mérieux Nutrisciences

Recent Developments:

- In September 2025, Thermo Fisher Scientific launched AI-powered rapid pathogen detection kits for food safety laboratories. The platform detects E. coli, Salmonella, and Listeria with high accuracy. Early adoption shows faster testing, improved compliance, and reduced outbreak risks.
- In August 2025, SGS North America expanded its food testing services with high-throughput molecular diagnostic tools. The platform supports allergen detection and GMO analysis. Initial deployments demonstrate faster turnaround and enhanced quality assurance for manufacturers.

Conclusion

The food safety testing market continues to evolve as a critical pillar supporting global food security and public health. Factors such as the increasing burden of foodborne illnesses, stringent government regulations, advancements in testing technology, and rising consumer awareness fuel the need for robust food safety solutions. Global industry players are investing in innovation and collaboration to meet the demands of this dynamic market. As food chains become increasingly complex and international, ensuring food safety is both a regulatory requirement and a strategic priority for manufacturers, processors, and retailers worldwide.

Sai Kiran

DataM Intelligence 4market Research LLP

877-441-4866

sai.k@datamintelligence.com

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