

Pesticide Detection Market to Reach USD 2.43 Billion by 2035 Amid Rising Food Safety Concern & Technological Advancement

Advances in detection technologies and rising awareness about pesticide residues are driving significant growth in the pesticide detection industry worldwide.

NEWARK, DE, UNITED STATES, June 4, 2025 /EINPresswire.com/ -- The global [pesticide detection market](#) is set for consistent growth, with its valuation projected to increase from around USD 1.50 billion in 2025 to nearly USD 2.43 billion by 2035. This represents a compound annual growth rate (CAGR) of 4.9% during the forecast period. The surge in demand is driven by

intensifying efforts from governments and private sectors to safeguard public health through stringent food safety protocols and advanced analytical technologies.



As public awareness of pesticide-related health risks grows, so does the demand for

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Advanced pesticide detection technologies are revolutionizing food safety, ensuring cleaner crops and healthier lives worldwide—driving innovation and trust in the global agri-food market.”

Nandini Roy Chaudhari

comprehensive testing solutions across food production and distribution channels. Regulatory agencies are tightening safety standards, while food manufacturers are increasingly investing in accurate, rapid, and cost-effective pesticide detection systems to comply with evolving regulations. The integration of technologies such as high-performance liquid chromatography (HPLC), gas chromatography-mass spectrometry (GC-MS), and biosensors is driving transformative changes in detection efficiency and reliability, further propelling the market's expansion.

Advanced Technologies and Rising Food Safety Concerns Drive Market Expansion

The global pesticide detection market is witnessing robust growth, driven by increasing consumer awareness about pesticide contamination, stringent government regulations on pesticide residue levels, and technological advancements in food safety compliance technologies. Forecasts indicate the market will expand substantially between 2025 and 2035, as demand for advanced pesticide residue detection technologies continues to rise worldwide.

Increasing Demand for Pesticide Detection in Agriculture and Food Industry

With rising concerns over food contamination monitoring, stakeholders across the agricultural and food sectors are prioritizing pesticide residue analysis to ensure consumer safety. The growth in organic farming and stringent testing standards in food safety labs are fueling the demand for reliable pesticide detection instruments. Pesticide detection equipment for fruits and vegetables, as well as water and soil pesticide detection systems, have become essential tools for maintaining quality assurance in agro-food industries globally.

Rising Consumer Awareness and Environmental Impact

Growing consumer awareness about pesticide contamination is a major factor influencing market dynamics. As consumers demand higher quality and safer food products, manufacturers are adopting enhanced food safety compliance technologies to monitor and minimize pesticide residues. This shift is especially pronounced in markets focused on organic farming and sustainable agriculture, where pesticide detection plays a key role.

Environmental toxin screening, particularly in water and soil, has also gained importance due to concerns about pesticide runoff and its effects on ecosystems. Consequently, the pesticide detection market is witnessing increased investment in water and soil pesticide detection systems that provide comprehensive monitoring solutions.

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Country-Wise Analysis

United States (CAGR: 4.0%)

The U.S. market is driven by robust regulatory frameworks, significant R&D investments, and strong demand from the agricultural and processed food sectors. The FDA's ongoing updates to Maximum Residue Limits (MRLs) are pushing food companies to adopt more sensitive detection methods.

Germany (CAGR: 3.2%)

Germany's well-established food safety infrastructure and focus on sustainable agriculture are contributing to stable market growth. The market is further supported by strong EU regulations and consumer preference for organic food products.

India (CAGR: 6.3%)

India is the fastest-growing country in the pesticide detection market. Rapid urbanization, increasing health awareness, and government initiatives like the National Food Security Mission (NFSM) are major growth enablers. Domestic testing labs and food exporters are also stepping up their adoption of advanced detection technologies.

Leading Manufacturers

- Renka Bio
- Sciex
- Merk
- Agilent Technologies
- PerkinElmer Inc.
- Shimadzu Corporation
- Waters Corporation
- Thermo Fisher Scientific
- SpensaKarlabs
- ALS Limited
- AsureQuality Ltd.
- SCS Global Services
- Microbac Laboratories Inc.
- Symbio Laboratories
- Eurofins Scientific
- Intertek Group plc
- SGS SA
- Fera Science Limited

Explore Agricultural Enhancement Products Industry Analysis:

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Key Segments

By Method:

As per Method, the industry has been categorized into Multi-residue Types (MRMs), Selective or Single Residue (SRMs), Detect Multiple Pesticide Residues

By Distribution Channel:

As per Distribution Channel the industry has been categorized into Traditional Technologies,

Rapid Detection Technologies, Gas Chromatography (GC), Liquid Chromatography (LC), High-Performance Liquid Chromatography (HPLC), Mass Spectrometer (MS), Thin Layer Chromatography (TLC), High-Performance Thin Layer Chromatography (HPTLC), Electro Analytical Technique, Electrochemical Sensors Chemicals & Biosensors, Spectroscopic Techniques, Flow Injection Analysis, Spectrophotometry, Capillary Electrophoresis, Bioassay for Pesticide Detection, ELISA Enzyme linked Immune Absorbent Assay

By Region:

The market spans North America, Latin America, Western Europe, Eastern Europe, South Asia & Pacific, East Asia, Central Asia, Balkan and Baltic Countries, Russia and Belarus, and The Middle East & Africa.

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