

India Chromatography Instruments Market By Type (Liquid Chromatography Systems, Gas Chromatography Systems, Supercritical Fluid Chromatography Systems, Thin-Layer Chromatography Systems), By Consumable & Accessory (Columns, Column Accessories and Consumables, Autosamplers, Autosampler Accessories and Consumables, Flow Management Accessories and Consumables, Other), By End Use Industry (Life Science Industry, Academic & Research Institutes, Oil & Gas Industry, Environmental Agencies, Food & Beverage Industry, Others), By Region, Competition, Forecast & Opportunities, 2020-2030F

<https://marketpublishers.com/r/I85AFC5CBC0AEN.html>

Date: February 2025

Pages: 85

Price: US\$ 3,500.00 (Single User License)

ID: I85AFC5CBC0AEN

Abstracts

India Chromatography Instruments Market was valued at USD 271.09 Million in 2024 and is expected to reach USD 418.63 Million by 2030 with a CAGR of 7.47% during the forecast period. The chromatography instruments market in India is experiencing significant growth, driven by the expanding pharmaceutical and biotechnology sectors, rising food safety concerns, and advancements in research and development. The increasing demand for quality control and regulatory compliance in pharmaceuticals, along with stringent environmental regulations and growing applications in food and beverage testing, are fueling the adoption of chromatography systems. Liquid

chromatography systems, in particular, are emerging as the fastest-growing segment due to their versatility in analyzing complex compounds, especially in the development of biologics and biosimilars.

Western India dominates the market, benefiting from its strong pharmaceutical, chemical, and food processing industries, along with the presence of advanced research institutions and export-driven industries. However, challenges such as the high cost of chromatography instruments and the need for skilled professionals to operate and maintain these sophisticated systems may hinder market growth. Despite these hurdles, increasing investments in technology and infrastructure, along with government initiatives to promote research and innovation, are expected to sustain the market's positive trajectory.

Key Market Drivers

Growing Pharmaceutical and Biotechnology Industry

The growing pharmaceutical and biotechnology industries in India are pivotal drivers for the chromatography instruments market. In the fiscal year 2023-24, India's pharmaceutical market was valued at USD 50 billion, with domestic consumption accounting for USD 23.5 billion and exports at USD 26.5 billion. These sectors increasingly rely on advanced analytical tools for quality assurance, research, and regulatory compliance.

India is a global leader in the production of generic medicines, supplying approximately 40% of the generic drugs consumed in the U.S. and 25% of all medicines in the U.K. This dominance necessitates stringent quality control, where chromatography systems play an indispensable role in ensuring the purity, efficacy, and compliance of pharmaceutical products. Furthermore, India produces nearly 60% of the world's vaccines, and the complexities of vaccine development—particularly in protein purification and stability testing—drive the demand for sophisticated chromatography technologies.

The biotechnology sector is equally influential, with a strong focus on biopharmaceuticals, including monoclonal antibodies, insulin analogs, and recombinant proteins. Companies like Biocon and Serum Institute of India heavily invest in chromatography systems to meet the precise requirements of biologics manufacturing, such as the separation and purification of complex biomolecules. Additionally, advancements in biosimilars production, a growing segment globally and domestically,

require highly reliable analytical tools to meet regulatory standards and compete in international markets.

India's commitment to self-reliance in pharmaceutical manufacturing, particularly in Active Pharmaceutical Ingredients (APIs), further boosts the adoption of chromatography systems. New API production facilities and expansions in existing plants demand these systems for efficient analysis and quality assurance, reducing dependency on imports.

Key Market Challenges

Lack of Skilled Personnel

A significant challenge facing the chromatography instruments market in India is the lack of skilled personnel proficient in the operation and maintenance of advanced analytical systems. Chromatography, a complex and precision-driven technique, requires operators to have specialized knowledge of both the instruments and the underlying scientific principles, such as chemical separation and analysis. The shortage of trained professionals with expertise in chromatography means that many laboratories, especially in smaller towns and rural areas, struggle to use the equipment effectively. This skill gap also extends to interpreting complex data accurately, which is crucial in ensuring that results meet the stringent regulatory standards set by bodies such as the Food Safety and Standards Authority of India (FSSAI) or the Central Drugs Standard Control Organization (CDSCO).

This challenge is compounded by the fast pace of technological advancements in the chromatography field. Newer, more sophisticated systems require continuous training and education to stay up-to-date with evolving methodologies and instrument functionalities. However, the supply of qualified professionals remains limited, particularly in non-metropolitan regions where educational infrastructure and access to training programs are less developed. As a result, many organizations face difficulty in maximizing the potential of their chromatography systems, leading to inefficiencies and, in some cases, underutilization of expensive, high-end equipment. Moreover, this skill shortage affects the ability to conduct high-precision analyses for critical applications such as pharmaceutical product quality assurance, food safety testing, and biotechnological research, which could ultimately impact public health and safety.

Key Market Trends

Government Support and Initiatives

Government Support and Initiatives play a pivotal role in addressing the challenge of the lack of skilled personnel in India's chromatography instruments market. The Indian government has increasingly recognized the importance of advanced analytical techniques, including chromatography, in driving sectors such as pharmaceuticals, food safety, and biotechnology. In response to the demand for skilled professionals, the government has introduced various programs and initiatives aimed at enhancing technical education and providing support to laboratories and research institutions.

One of the key initiatives is the Skill India Mission, launched to promote skill development and equip the workforce with relevant technical expertise. Under this mission, the government has been focusing on improving education and training in various sectors, including life sciences and analytical chemistry. Numerous skill development programs have been introduced in collaboration with industry stakeholders to bridge the gap between academia and industry requirements, specifically targeting the training of professionals who can handle sophisticated laboratory instruments like chromatography systems.

Additionally, the Atal Innovation Mission (AIM), launched by the government, encourages innovation and entrepreneurship, fostering skill-building in the fields of science and technology. This initiative supports academic institutions, startups, and research organizations in providing hands-on training, exposure to cutting-edge technologies, and access to industry experts. As a result, this ecosystem helps create a talent pool capable of working with advanced analytical instruments and meeting industry demands for skilled personnel.

Furthermore, the Department of Biotechnology (DBT) and the Council of Scientific and Industrial Research (CSIR) offer research and development grants to institutions that focus on training personnel in laboratory techniques and equipment handling. These organizations also provide funding for upgrading research infrastructure, ensuring that personnel have access to modern chromatography systems and are trained on the latest technologies.

The Food Safety and Standards Authority of India (FSSAI) has also contributed to the training and capacity-building efforts. Through collaborations with state food safety departments and laboratories, FSSAI conducts training programs aimed at improving the quality of food safety testing, which includes the use of chromatography instruments for contaminant analysis.

Together, these government-supported programs and initiatives are beginning to address the critical skills gap by developing a workforce that is well-versed in the latest analytical technologies, thereby enhancing the effective use of chromatography systems across industries. While progress is still underway, these steps signal a shift toward building a more robust ecosystem of skilled professionals capable of driving innovation, ensuring quality, and meeting global standards in sectors that rely on chromatography.

Key Market Players

Agilent Technologies, Inc

Waters India Pvt Ltd

Thermo Fisher Scientific

PerkinElmer (India) Private Ltd

Merck KGaA

Phenomenex India Pvt Ltd.

Bio-Rad laboratories India Pvt.Ltd

Hitachi India Pvt. Ltd.

Scion Instruments

Report Scope

In this report, the India Chromatography Instruments Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

India Chromatography Instruments Market, By Type:

Liquid Chromatography Systems

Gas Chromatography Systems

Supercritical Fluid Chromatography Systems

Thin-Layer Chromatography Systems

India Chromatography Instruments Market, By Consumable & Accessory:

Columns

Column Accessories and Consumables

Autosamplers

Autosampler Accessories and Consumables

Flow Management Accessories and Consumables

Other

India Chromatography Instruments Market, By End Use Industry:

Life Science Industry

Academic & Research Institutes

Oil & Gas Industry

Environmental Agencies

Food & Beverage Industry

Others

India Chromatography Instruments Market, By Region:

East India

West India

North India

South India

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the India Chromatography Instruments Market.

Available Customizations:

India Chromatography Instruments Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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