

Global Chromatography Instrumentation - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Global Chromatography Instrumentation Market size is estimated at USD 9.63 billion in 2024, and is expected to reach USD 12.42 billion by 2029, growing at a CAGR of 5.23% during the forecast period (2024-2029).

The COVID-19 pandemic is likely to have a slightly positive effect on the market. The COVID-19 pandemic is expected to have a positive effect on this segment. Since the pharmaceutical and bioindustry sectors have received a huge amount of attention recently, this is expected to positively aid in developing the gas chromatography market. In July 2020, an article was released in the 'Chromatography Today' magazine, which stated that the United States Air Force and researchers from the University of Michigan had collaborated to make modifications to an existing gas analysis system so that it could work like a breathalyzer that can analyze the breath and detect the chemical signature of acute respiratory distress syndrome (ARDS) in its very early stages, which is a precursor to most COVID-19 infections. Developments such as these are expected to positively aid the market growth.

Chromatography is used for quality control in the food industry by separating and analyzing additives, vitamins, preservatives, proteins, and amino acids. These factors have been the primary drivers of the growth of this market. Technological advancements in developing more accurate and efficient systems have also helped the market growth.

Moreover, according to the Centers for Disease Control updates from September 2022, in the United States, over 100 million adults suffer from diabetes or prediabetes, and this number has doubled over the last five years. Additionally, according to the Centre for Disease Control and Prevention (CDC) updates from July 2021, illnesses from mosquito, tick, and flea bites have tripled, and nine new vector-borne diseases were discovered. Thus, the increase in various illnesses and chronic diseases is expected to enhance the demand for downstream processing as chromatography columns are used to purify the product in downstream processing for drug development. Thereby, the market is expected to upsurge during the forecasted year.

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In June 2020, Waters Corporation launched its new high-performance liquid chromatography (HPLC) - Waters Arc HPLC System. The company declared that the new liquid chromatography system could be used for routine testing in various end-use areas, such as the food & beverage industry, pharmaceuticals industry, and the academic and materials markets.

However, the high cost of HPLC instruments and the lack of skilled personnel for equipment handling are expected to hinder the market growth during the forecast period.

Chromatography Instrumentations Market Trends

Liquid Chromatography Systems are Expected to Dominate the Chromatography Instrumentation Market

Liquid chromatography (LC) is a separation technique in which the mobile phase is a liquid, where sample ions or molecules are dissolved. Conventional LC is commonly used in preparative scale work to purify and isolate some components of a mixture. Nowadays, liquid chromatography generally utilizes very small packing particles and relatively high pressure for analytical separations of solutions, detection & quantification, referred to as high-performance liquid chromatography (HPLC).

Companies in the market are focusing on launching advanced liquid chromatography systems and components. For instance, in November 2020, PerkinElmer Inc. launched a new HPLC, UHPLC, and next-generation software solution (LC 300TM platform and SimplicityChromTM software). Similarly, in March 2020, Scion Instruments launched new LC6000 series HPLC to their range of chromatography products.

The diverse qualitative and quantitative applications of LC along with mass spectroscopy in the pharmaceutical industry are reported in four key fields, which are synthetic organic chemistry, combinatorial library parallel synthesis, bioanalysis in support of ADME (absorption, distribution, metabolism, and excretion), proteomics, and also pharmaceutical research.

Additionally, in February 2021, Thermo Fisher Scientific launched its Vanquish Online 2D-Liquid Chromatography (LC) system, which offers versatility for multidimensional liquid chromatography. Moreover, in July 2022, Shimadzu launched its i-Series Plus integrated HPLC system that covers conventional to ultra-fast LC analysis. The launch coincides with the company's 50th anniversary of its presence in Europe.

As a result of the aforementioned main advantages, the short analysis time needed, and reliable results, liquid chromatography is extensively used for quality control purposes in the pharmaceutical and biotechnology industries. This will boost the growth of the segment in the coming years.

North America is Expected to Dominate the Market Over the Forecast Period

North America accounts for the largest share of the chromatography instrumentation market due to growing government investments and funding for research. Additionally, the presence of major key participants in this region is expected to drive market growth. The countries also have developed well-structured health care systems. These systems also encourage research and development. These policies encourage global players to enter the United States and Canada. Due to their developed healthcare systems, these economies spend a high percentage of their gross domestic product on research and development. As a result, these countries enjoy the presence of many global market players and research laboratories, primarily using chromatography instrumentation. As demand is met by the presence of global players in the region, the market is further expected to increase.

In February 2022, The Federal Trade Commission approved Sartorius Stedim Biotech S.A.'s petition for prior approval of its

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acquisition of the Chromatography Equipment Business of Novasep Process SAS. Moreover, in May 2022, Agilent Technologies signed a collaboration agreement with APC Ltd., in which the companies committed to combining their technologies to provide unique workflows to customers that support automated process analysis via liquid chromatography (LC). Such acquisitions are expected to boost the growth of the market in the region.

Moreover, per the American Cancer Society statistic updated in January 2022, cancer continues to be the second most common cause of death in the United States, after heart disease. A total of 1.9 million new cancer cases and 609,360 deaths from cancer are expected to occur in the United States in 2022. The number is estimated to increase in the coming years due to the changing lifestyle of the people found in the region. Therefore, with the increasing prevalence of cancer, chromatography instrumentation is adopted to develop a vaccine for cancer; hence, the market is expected to grow in the region.

Therefore, owing to the above factors, the growth of the chromatography instrumentation market in North America is expected to drive over the forecast period.

Chromatography Instrumentations Industry Overview

The market for chromatography instrumentation is moderately competitive, and key players are manufacturing a majority of chromatography instrumentation products. Market leaders with more funds for research and a better distribution system have established their position in the market. Moreover, Asia-Pacific is witnessing an emergence of some small players due to the rise of awareness. This has also helped the market grow. Some of the major players are Agilent Technologies, Thermo Fisher Scientific, Merck KGaA, and Sartorius.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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