

Sample Preparation - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Sample Preparation Market size is estimated at USD 9.07 billion in 2024, and is expected to reach USD 11.22 billion by 2029, growing at a CAGR of 4.35% during the forecast period (2024-2029).

The COVID-19 pandemic significantly impacted the market studied. Due to the surge in infected patients, the demand for several sample preparation products increased globally. Most diagnostic tests relied on real-time polymerase chain reaction (RT-PCR) to amplify SARS-CoV-2 viral RNA from patient swabs. This created demand for various products for sample preparation. The ACS article published in February 2022 stated that the study's researchers used DirectDetect SARS-CoV-2 Direct Real-time RT-PCR sample preparation workflow from PerkinElmer for the detection of COVID-19 that successfully detected SARS-CoV-2 using minutes-long or hours-long sample preparation techniques or further implemented for decentralized diagnostic efforts. Such research related to sample preparation for the detection of COVID-19 impacted the market studied. Therefore, the pandemic significantly affected the market. However, sample preparation had a significant demand even during the post-pandemic period due to the emergence of mutant strains of COVID-19 and extensive research on advanced vaccines and diagnostics, thereby contributing to the market's growth.

Factors such as rapid advancements in sample collection and preparation and increased research and development spending on life sciences are expected to fuel the market's growth. For instance, according to the French Healthcare innovation 2030 report published in June 2021, France has 3,100 health tech businesses, employing 455,000 people, including 750 biotech companies. This is expected to lead to increased adoption of life science products in the research and development of novel therapies. In turn, it is expected to create opportunities for sample preparations needed for research laboratories for drug development. Furthermore, according to the above source, France intends to spend USD 1.8 billion in investment in addition to the funds already allocated to biomedical research. Thus, adopting life science sample preparations in biomedical research will further fuel

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the market's growth.

Moreover, the increasing number of clinical trials coupled with high investments in research and development (R&D) and product launches related to sample preparation are expected to flourish the market's growth over the forecast period. For instance, in March 2022, Beckman Coulter Life Sciences launched the CellMek Sample Preparation System (SPS), a fully automated SPS for clinical flow cytometry that offers on-demand processing for many sample types to help laboratories to expand their capabilities.

Therefore, owing to the abovementioned factors, the market studied is expected to witness growth over the forecast period. However, the high cost of installation of the systems is expected to hinder the market's growth over the forecast period.

Sample Preparation Market Trends

Pharmaceutical Segment is Expected to Hold a Significant Share in the Market over the Forecast Period

The pharmaceutical segment is expected to hold a major market share over the forecast period owing to the extensive use of sample preparation in product development and manufacturing. Pharmaceutical products and biological materials are very complex. Although pharmaceutical analyses have been carried out using various highly efficient analytical instruments, a sample preparation procedure is usually necessary to extract and isolate the analytes of interest from these complex matrixes because most analytical tools cannot handle the matrix directly. The development of sample preparation plays a vital role in pharmaceutical analysis. Its final aim should be to isolate and purify the analyte from those matrixes, thereby contributing to the growth of the studied segment.

As crucial as sample preparation is for pharmaceutical research, its demand is expected to increase with increased pharmaceutical spending. The data updated by Organisation for Economic Co-operation and Development (OECD) in August 2022 stated that South Korea spent USD 728 per capita, followed by Italy's USD 708 per capita in 2021. This spending on pharmaceuticals in the countries increased from 2020. Thus, the rise in spending indicates the focus of this company on research and development. This ultimately creates demand for sample preparation products used in pharmaceutical development, thereby driving the segment's growth.

Furthermore, per the Journal of Pharmaceutical analysis article published in March 2022, sample preparation is regarded as the bottleneck phase in bioanalysis due to the complexity and individual problems presented by each biological matrix. And the researchers of the study used solid phase extraction (SPE), liquid-liquid extraction (LLE), head space-single drop microextraction (HS-SPME), and single drop microextraction (SDME) sample preparation techniques, among others. Adopting sample preparation techniques in the research and development of pharmaceuticals is expected to boost the market's growth.

Hence, owing to the abovementioned factors, the pharmaceutical segment is expected to attain good growth over the forecast period.

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

North America will dominate the sample preparation market throughout the forecast period. Factors such as increasing research and development (R&D), product launches, and the concentration of market players in the region are predicted to drive the market's growth.

The United States is expected to be the largest market in this region, among other countries. In the United States, the pharmaceutical industry is most research-intensive. The industry is deeply invested in applying innovative solutions to enhance pipeline development to support improvements in patient care. According to the NCBI article published in March 2022, the United

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States accounts for about 45% of the world's pharmaceutical market and 22% of its manufacturing. Additionally, as per the source mentioned above, the United States pharmaceutical production and sales will continue to grow in the current year. Hence, the high investment in R&D in the pharmaceutical sector in the United States is anticipated to drive demand for sample preparation products and applications. Thereby forcing the market's growth.

Furthermore, the well-established healthcare infrastructure-focused market players in research and development (R&D) for life sciences and pharmaceuticals and recent product launches in the United States are primary growth factors for the market. For instance, in June 2022, Thermo Fisher Scientific showcased the AccelerOme Automated Sample Preparation Platform during the 70th American Society for Mass Spectrometry (ASMS) Conference on Mass Spectrometry and Allied Topics, held during June 5-9, 2022.

In addition, in July 2022, PerkinElmer Inc., a global leader committed to innovating for a healthier world, launched the research use only (RUO) BioQule NGS System, an automated benchtop solution for next-generation sequencing (NGS) library preparation of up to eight samples. The BioQule NGS System allows researchers to create qualitative NGS libraries that produce dependable, repeatable results in various applications requiring genomic analysis by combining automated thermocycling, integrated quality control through optical quantification, and durable liquid handling technology into a single device. Thus, such developments are expected to drive the market's growth in the country, driving the overall market growth in the region.

Therefore, owing to the abovementioned factors, the market studied is predicted to witness growth in North America over the forecast period.

Sample Preparation Industry Overview

The sample preparation market is moderately competitive due to the presence of several market players. The rising number of market players is intensifying the competition. Players such as Agilent Technologies, Bio-Rad Laboratories, Danaher Corporation, Merck Millipore, and Illumina, among others, are disrupting the market by launching several new products.

Additional Benefits:

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

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