Analytical Instrumentation Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The analytical instrumentation market (hereafter referred to as the market studied) was valued at USD 43.2 billion in the current year. It is projected to be worth USD 66.27 billion by the next five years, registering a CAGR of 7.5% during the forecast period. The increasing concern for product quality, increasing investments in R&D, and stringent government regulations are the major factors driving the analytical instrumentation market growth. Increasing customer awareness, especially in emerging regions, and the need for analytical instruments across multiple sectors are expected to expand the market growth. Stringent regulations on drug safety, increasing focus on the quality of food products, expansion of crude and shale gas production, and technological advancements in mass spectrometers would aid the market growth.

Key Highlights
The biopharmaceutical industry also plays a significant role in developing the studied market. With a rising emphasis on pharmaceutical quality production, the bioprocessing sector is also emerging as a substantial investor in the market studied.
In January 2022, Fujifilm announced the addition of an additional 89,000 sq. ft of laboratory space at its North Carolina facility, which will feature analytical instrumentation, high throughput bioprocessing equipment, and automation technologies to support the process characterization program. This expansion will also allow Fujifilm Diosynth Biotechnologies to help its partners further in guiding clinical process development that can create more robust commercial processes.
Automation across the end-user industries fueled the development in the market studied. Companies developing batteries for electric vehicles, mobile phones, energy systems, and other systems rely on analytical instruments to enhance storage potential and output, creating a more efficient, cleaner, and safer energy source. Companies use electron microscopy technologies to understand structures that level down at the atomic scale and spectroscopy tools to discover critical changes in materials that cause defects and inefficiency.
Elemental analysis spectrometers are finding applications in environmental, petrochemical, food safety, metallurgical,

geochemical, and clinical/toxicology research. These products are widely used in markets such as China, India, and Latin America, to support compliance with increasingly stringent international environmental and consumer safety regulations. Agilent Technologies Inc., Thermo Fisher Scientific, and Shimadzu Corporation, among others, are some significant vendors in the market studied, which are also increasingly investing in the market development and expansion of market scope.
However, the high cost of analytical instruments restrains the growth of the studied market. Along with the cost of instruments, various other costs, such as staffing, maintenance, and laboratory expenses, are also restraining the market's growth. Moreover, the advancement in features and functionalities, technological advances, and innovative systems are adding to the cost of analytical instruments. For instance, high-performance liquid chromatography (HPLC) ranges from USD 12,000 to USD 50,000. The 90-L column and packing station costs about USD 200,000.
The COVID-19 outbreak resulted in significant demand in the market studied. The need for accelerated research significantly increased during the COVID-19 epidemic, and the public expects unprecedented progress from the scientific community.

Analytical Instrumentation Market Trends

Life Sciences Segment Expected to Hold Significant Market Share

Life sciences account for the largest analytical instrument industry share, representing a quarter of the entire industry. Life sciences comprise more than 13 individual technology segments, encompassing various applications using analytical tools such as spectrometry, atomic spectroscopy, and molecular spectroscopy, among others. It provides significant opportunities for the growth of both general instrument applications and niche research systems.
Demand for Next Generation Sequencing (NGS) continues to flourish, impacting the sequencing segment and driving strong demand in the nucleic acid sample preparation segment. This growth was evident in the public and private sectors, as genomics technology went beyond basic research to reach the biomedical domain.
Such tremendous growth is expected to create a significant demand for analytical instrumentation solutions, as it helps pharmaceutical companies comply with stringent regulations on drug safety.
The market is witnessing several strategic developments, such as new product developments, mergers, and collaboration, that suggest an increase in the adoption of the analytical tool in the segment.
Drug discovery and clinical research require various complex diagnostic instruments, analytical instruments, advanced medical devices, testing equipment, and many other specialized products. The COVID-19 pandemic resulted in significant demand in the market due to the growing need for accelerated research and public expectations of unprecedented progress from the scientific community.
Hence, the demand for analytical instrumentation in the life sciences industry is expected to grow with increasing clinical research and drug discovery activities.

Asia-Pacific Region Expected to Witness High Market Growth

The demand for analytical instrumentation is growing significantly in the Asia-Pacific region. Specifically, the area utilized these products to address climate change, an aging population, food production, and newer energy sources. Analytical instrumentation vendors have also responded to the market demand via distribution by local companies and direct sales. Also, due to the trade tensions between the US and China, multiple companies have shifted some of their production and supply chains to countries outside China to circumvent disruption in business operations.
One sector that received significant growth for analytical instruments from the Chinese government is life sciences. Within the 13th Five-Year Plan period, the life sciences industry in China registered medium-to-high-speed growth. China's government

announced that it would further include a commitment to invest around USD 9 billion over the next 20 years in the precision medicine industry in its next five-year plan. Moreover, there is no specific antiviral treatment that is proven to be effective for COVID-19. Combinations of antivirals, different drugs, and traditional Chinese medicine are used in China. However, current treatment options are mainly based on previous experience showing clinical benefits in treating influenza and other viral infections.
The region is home to several highly diverse countries ranging from advanced technological hubs to emerging economies. Countries like Singapore, South Korea, Taiwan, and Australia are already significant players on the world stage in industries like pharmaceuticals, biotechnology, semiconductors, and mining. The growth lifted in these countries due to substantial foreign investment and an ideal location to integrate into global supply chains. Many expect countries in the region to be competitive with China, Japan, and other international players shortly.
Countries such as India have also been among the emerging markets in the analytical instrumentation industry owing to higher investment in testing and R&D activities. The growing awareness among the country's expanding end-user industries is also driving investment in the market studied. Therefore, the country's analytical instruments market witnessed exponential growth since the turn of the century. However, in the past 2-3 years, the pace of change slowed down to high single digits, and ever-thinning margins impacted the industry. Procurement pressures from government organizations and the private sector are taking a toll on the companies' bottom lines, though top lines are still growing.
According to the Indian Analytical Instrument Association (IAIA), the country presently accounts for about 2-3% of the global analytical instrumentation market. However, India is at a very micro-scale in manufacturing, especially for high-end equipment, like liquid chromatography and mass spectrometry.
Expressing concern over the declining margins and slow growth rate due to the lack of government support for the country's analytical instrument industry, IAIA suggested immediate intervention of the government organizations to support the much-needed boost to the analytical instrument manufacturing sector in the country.

Analytical Instrumentation Market Competitor Analysis

The analytical instruments market is fragmented and is home to numerous primary and smaller vendors depending on the location. The major vendors in the market garner more in-depth product portfolios, catering to different customer requirements, whereas smaller vendors operate in niche segments, providing customizations and customer-specific orders. Key players include Agilent Technologies Inc., Malvern Panalytical Ltd (Spectris Company), PerkinElmer Inc., Thermo Fisher Scientific, and Shimadzu Corporation.

February 2022 - Sartorius AG announced the acquisition of Novasep□s chromatography division. The portfolio acquired encompasses chromatography systems suited for smaller biomolecules, such as oligonucleotides, peptides, and insulin, and innovative systems for continuous biologics manufacturing.
January 2022 - Bruker Corporation announced the acquisition of Prolab Instruments GmbH, a Swiss technology company specializing in low-flow, high-precision liquid chromatography technology and systems.

Additional Benefits:

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

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