

## **Circular Dichroism Spectrometers Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

Market Report | 2023-01-23 | 114 pages | Mordor Intelligence

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### **Report description:**

The circular dichroism spectrometers market is expected to register a CAGR of 6.2% over the forecast period.

The COVID-19 pandemic is expected to have a significant impact on the market as initially due to the lockdown restrictions imposed by the countries to control the spread of the virus, the research and development activities were impacted but after that with the growing severity of the pandemic, very intensive research and development activities were started to find a cure for SARS-CoV-2 virus infection in which circular dichroism spectrometers were also used. For instance, according to the research study published in August 2020, titled "Computed Optical Spectra of SARS-Cov-2 Proteins", three types of optical spectra of SARS-CoV-2 proteins were analyzed: far-ultraviolet (UV) electronic circular dichroism (CD), near-UV CD and infrared (IR) spectra in the amid region and it was observed that the aromatic residue local conformational changes are detectable in the near-UV CD spectrum. According to the study results, it may detect slightly varied tertiary structure characteristics in various protein models; while in the absence of other experimental or computational data, near-UV CD spectra are challenging to interpret. However, calculated spectra might match the protein's true conformational distribution in solution when paired with a collection of molecular dynamics snapshots. Therefore, the outbreak of the pandemic increased the research activities which in turn propelled the demand for circular dichroism spectrometers. Thus, the market witnessed considerable growth during the pandemic.

The increasing popularity of biologics and increasing investments by private and public sectors are the major factors propelling the market growth. The circular dichroism spectrometers are used in the study of molecular structure and chiral activities of biomolecules, their use is expected to increase with the growing popularity and usage of biopharmaceuticals or biologics (for example, vaccines, gene and cellular therapies, fusion proteins, insulin, interferon, and monoclonal antibody (mAb) among others) that are used in the treatment of various chronic and rare diseases. For instance, according to the April 2022 report of the American Cancer Society, biologics are used in the treatment of cancer in many ways and are being used widely for the

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treatment. Furthermore, in June 2022, Amgen Inc. received approval for RIABNI (rituximab-arrx), a biosimilar to Rituxan, from the United States Food and Drug Administration for adults with moderate to severely active rheumatoid arthritis (RA) who have had an inadequate response to one or more tumor necrosis factor (TNF) antagonist therapies in combination with methotrexate. Hence, the growing usage of biologics drugs and their potential in treating various diseases is expected to increase intensive research and development activities, where circular dichroism spectrometers may be in the analysis of biomolecules and thus, the demand for circular dichroism spectrometers is expected to increase over the forecast period that is expected to boost growth in the studied market.

Moreover, the growing research and development activities along with new investments in the area by the government as well as private entities are expected to fuel growth in the circular dichroism spectrometers market over the forecast period. For instance, in August 2022, Innovent Biologics of China and Paris-based Sanofi would invest USD 2.42 billion in the biopharma group to jointly develop two cancer drugs in China. As per the Innovent Biologics, SAR408701, or tusamitamab ravtansine, would be used to treat lung, gastric and other cancers, while SAR444245, or non-alpha IL-2, was under phase-II studies for skin cancer, head, and neck tumors, among others. In addition to this, the other business expansion initiative by the companies in the biologics area such as expansion, mergers, acquisitions, and collaborations are further expected to fuel growth in the bioprocess containers market over the forecast period. For instance, in June 2022, the Rare Disease division of AstraZeneca, Alexion, will spend about EUR 65 million to expand its manufacturing capabilities in Ireland, and over the next 18 months, the investment will be used by the company to build up its biologics manufacturing capacity and increase research and development initiatives in the country. Therefore, due to the above-mentioned factors, the demand for circular dichroism spectrometers is expected to increase, thereby considerable market growth is anticipated over the forecast period.

However, the lack of skilled professionals is expected to restrain the growth of the circular dichroism spectrometers market over the forecast period.

#### Circular Dichroism Spectrometers Market Trends

##### Pharmaceutical Industry is Expected to Witness Growth Over the Forecast Period

The pharmaceutical industry is one of the largest end-users of various analytical instruments as they are intensively involved in the research and development activities of biologics and other drug molecules hence, the use of circular dichroism spectrometers is expected to increase among the pharmaceutical companies and the market is expected to grow. For instance, according to the November 2021 report of the Office for National Statistics (ONS) of the United Kingdom, the amount spent on research and development annually in the pharmaceutical industry in the United Kingdom has increased 6% to an all-time high of GBP 5.02 billion (about USD 6.76 billion), which is about 18.6 of the total research and development spending of the United Kingdom.

Moreover, the growing investment in drug research and development activities by the key market players in the area is further expected to increase the demand for circular dichroism spectrometers which is expected to boost the segment's growth. For instance, in May 2022, Pfizer Inc. launched global drug research and development center at the Indian Institute of Technology (IIT) - Madras Research Park in Chennai, India with an investment of about USD 20.0 million. Therefore, due to the aforementioned factors, the pharmaceutical industry is expected to hold a significant share in the studied market over the forecast period.

Therefore, owing to the above mentioned factors considerable segment growth is anticipated over the forecast period.

##### North America is Expected to Dominate the Circular Dichroism Spectrometers Market Over the Forecast Period

North America is expected to dominate the overall circular dichroism spectrometers market, over the forecast period. The growth is due to factors due to the rising popularity of biologics drugs in the region and high research and development expenditure. For

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instance, in May 2022, Abevmy, which is jointly developed by Biocon Biologics and Viatrix was approved by Health Canada across four oncology indications. Abevmy is a recombinant humanized monoclonal antibody that selectively binds to human vascular endothelial growth factor (VEGF) and neutralizes its biological activity. Similarly, in March 2021, the Government of Canada provided funding of USD 415 million to Sanofi Pasteur Limited (Sanofi) in building an end-to-end influenza vaccine manufacturing facility in Toronto, and apart from this, Sanofi will invest about USD 455 million for different activities in the facility.

Key product launches, high concentration of market players or manufacturer's presence, and acquisition & partnerships among major players, and increasing research and development investments in the United States are some of the factors driving the growth of the circular dichroism spectrometers market in the country. For instance, the research and development expenditure of Pfizer increased from USD 9.4 billion to USD 13.8 billion in 2021 and as Pfizer is involved in the research and development of various biologics, the demand for circular dichroism spectrometers is expected to increase in the United States.

Therefore, due to the above-mentioned factors, the North American region is expected to hold a significant market share in the circular dichroism spectrometers market over the forecast period.

### Circular Dichroism Spectrometers Market Competitor Analysis

The circular dichroism spectrometers market is consolidated and consists of a few major players. The competitive landscape includes an analysis of a few international as well as local companies which hold the market shares and are well known including Jasco, Applied Photophysics Ltd., On-Line Instrument Systems, Inc. (Olis), Bruker, and Bio-Logic Science Instrument, Inc. among others.

Additional Benefits:

- <ul> <li> The market estimate (ME) sheet in Excel format </li>
- <li> 3 months of analyst support </li> </ul>

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