

Cell Viability Assays Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The cell viability assays market is expected to register a CAGR of 7.7% during the forecast period, 2022-2027.

The COVID-19 pandemic has significantly impacted the growth of the cell viability assay market, as most companies have been focusing on developing cell-based therapies for COVID-19 treatment. For instance, in April 2020, Calidi Biotherapeutics Inc. revealed that the Investigational New Drug (IND) application submitted by its partner, Personalized Stem Cells Inc. (PSC), received the Food and Drug Administration's approval for the treatment of COVID-19 and pneumonia patients using stem cell therapy. As cell viability assays are essentially used for screening the response of the cells against a drug or a chemical agent, therefore, with the increased use of cell-based therapies, the cell viability assay market is expected to see a surge during the forecast year.

Additionally, according to the study published in Stem Cell Research & Therapy volume on 'When stem cells meet COVID-19: recent advances, challenges and future perspectives' published in January 2022, stem cell therapy and stem cell-derived organoid models have got much attention as a new treatment and research method for COVID-19, and stem cells play a role in the battle against COVID-19. With the increase in the need for stem cell therapies, there will be an increase in the need for cell viability assays; hence, the market is expected to grow. Moreover, the growing research and development will open up further opportunities for the market players to launch new products, which is expected to drive market growth during the forecast period.

According to the World Health Organization (WHO), chronic illnesses will account for nearly three-quarters of all fatalities globally by 2020, with ischemic heart disease accounting for 71% of fatalities and diabetes accounting for 70%. Furthermore, as per the Globocan Database, the number of new cases was estimated to increase from 19.3 million to 30.2 million between 2020 and 2040.

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Moreover, chronic diseases and conditions are on the rise worldwide. As per the International Diabetes Federation Diabetes Atlas, in 2021, nearly 573 million adults globally were living with diabetes worldwide, and the number is expected to reach 643 million by 2030 and 783 million by 2045. As chronic disorders are on the rise, there is a huge demand concerning assays which are helping in the faster treatment and timely detection of the patients' condition.

In emerging markets, cancer and heart diseases are becoming the main causes of death due to urbanization, sedentary lifestyles, changing diets, rising obesity levels, and widespread availability of tobacco products. In April 2020, Biotek introduced a new cell count and viability starter kit, which can automatically do the process of cell counting and viability measurements in a mammalian cell suspension. Thus, with the growing burden of chronic diseases and the launch of new products, the market is expected to see a surge in the years to come.

However, the lack of professionals and technical experts to run these instruments will challenge the growth of the cell viability assays market in the forecast period mentioned above. Also, the high cost of instruments will obstruct the market growth rate.

Cell Viability Assays Market Trends

Stem Cell Research Segment is Estimated to Register the Fastest Growth Over the Forecast Period

The stem cell research segment is estimated to register the fastest growth, owing to the rising R&D activities and funding from various organizations. For instance, in June 2021, The Morrison Government is investing USD 180 million in ground-breaking medical research projects around Australia to improve the lives of Australians. Funded through the Government's USD 20 billion Medical Research Future Fund, 106 medical research projects will receive funding to improve health outcomes, including for Australians with cancer, dementia, brain injuries, heart problems, neurofibromatosis, and many others.

Technological advancements will play a significant role in the future, with multiple experiments in pluripotent stem cells being the center for exciting growth. For instance, in April 2022, Researchers at Osaka University developed a biomaterial using stem cells to reverse intervertebral disk (IVD) degeneration, which is associated with back pain and certain spinal issues. The stem cells were induced into chondrocytes -- cells producing collagen that supports cartilage tissue. Implanting this biomaterial into a rat model of IVD degeneration brought the spinal mechanical properties back to control levels, and this type of innovation is likely to fuel market growth in future years.

Companies are raising funds to develop stem cell-based therapies to tackle many diseases. For instance, in January 2022, Cellino Biotech, a cell therapy manufacturing company, raised USD 80 million Series A financing round. Cellino plans to expand access to stem cell-based therapies with the intention of building the first autonomous human cell foundry in 2025. As the applications of stem cell technologies in the treatment of diseases have ultimately increased, the overall adoption rate of cell viability assays across the world.

Thus, considering all the aforementioned factors, the market is expected to witness high growth over the forecast period.

North America is Expected to Hold a Significant Share in the Market and Expected to do Same in the Forecast Period

North America holds a major share of the cell viability assays market and is expected to witness a similar trend over the forecast period without significant fluctuations. The region is dominating the market, due to various factors, like the increasing incidences of chronic diseases, rise in cancer cases, rise in investment initiatives by governments, and high-quality infrastructure for clinical and laboratory research.

The United States is expected to increase its market share in the future, owing to the increased adoption of cancer therapy and

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the growing burden of cancers in the United States. According to the Globocan 2020 report, an estimated 2,281,658 new cancer cases were diagnosed in the United States in 2020, with nearly 612,390 deaths. In 2020, The most common cancers were breast (253,465), lung (227,875), prostate (209,512), and colon (101,809) in United States.

For instance, the National Cancer Institute (NCI) stated that the national expenditure on cancer care was expected to reach USD 156 billion by 2020. This factor is expected to boost the market's future growth. In December 2019, the researchers at the National Eye Institute (NEI) launched a clinical trial to test the safety of a novel patient-specific stem cell-based therapy to treat geographic atrophy, the advanced dry form of age-related macular degeneration (AMD), a leading cause of vision loss among people aged 65 years and above. Moreover, in March 2022, Promega Corporation and FUJIFILM Cellular Dynamics, Inc. announced a strategic collaboration to advance novel assay development for drug discovery. Under a multi-year licensing agreement, FUJIFILM Cellular Dynamics will offer a wide range of custom differentiated iPSCs integrated with Promega biosensor and intracellular bioluminescent reporter capabilities for researchers and scientists to use as part of novel assay development in the drug discovery process.

Furthermore, in the United States, there is a rise in the funding for cell-based research, which is expected to propel the overall growth of the cell viability assay market over the forecast period.

Cell Viability Assays Market Competitor Analysis

The cell viability assays market is fragmented and competitive owing to the presence of various small and large market players. Some of the market players are Abcam PLC, Becton Dickinson & Company, Bio-Rad Laboratories, Biotek Instruments, Creative Bioarray, GE Healthcare, Merck KGaA, Perkin Elmer, Promega Corporation, and Thermo Fischer Scientific Inc.

Additional Benefits:

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

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