

Next Generation Sequencers Market is estimated to reach US\$45.460 billion by 2028 at a CAGR of 8.48%

The next-generation sequencers market is anticipated to grow at a CAGR of 8.48% from US\$25.720 billion in 2021 to US\$45.460 billion by 2028.



NOIDA, UTTAR PARDESH, INDIA, December 7, 2023 /EINPresswire.com/ -- According to a new study published by Knowledge Sourcing Intelligence, the [next-generation sequencers market](#) is projected to grow at a CAGR of 8.48% between 2021 and 2028 to reach US\$45.460 billion by 2028.

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The major factors primarily linked to the market's expansion are increased usage in diagnosis, including DNA pre-sequencing, increased usage by synthesis technology systems, increase in demand for target re-sequencing, and increased healthcare spending.

The next-generation sequencing market is experiencing significant growth as advanced sequencing technologies continue to revolutionize [genomic](#) research and diagnostics. These sequencers, characterized by high throughput and efficiency, play a pivotal role in decoding

DNA and RNA sequences with unprecedented speed and accuracy. Key players in the market are continually innovating to enhance sequencing capabilities, leading to broader applications in areas such as personalized medicine, oncology, and agricultural genomics. The expanding adoption of next-generation sequencers reflects a dynamic landscape where advancements in genomic analysis are driving breakthroughs in various scientific disciplines.

The increased utilization of Next-Generation Sequencing (NGS) technology in clinical diagnostics, driven by its advantages in speed, cost-effectiveness, and accuracy, is anticipated to propel market growth. An article by PubMed Central claimed that advancements in Next-Generation Sequencing (NGS) coupled with bioinformatics analysis are increasingly employed for the cost-effective examination of multiple genes. This approach has found application in the analysis of

clinical cancer samples, providing a basis for NGS-based molecular diagnosis.

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Based on technology, the market can be segmented into sequencing by synthesis, ion semiconductor sequencing, single-molecule real-time sequencing, nanopore sequencing, and others. Ion semiconductor sequencing is expected to experience rapid expansion over the forecasted period. The sophistication and affordability of ion semiconductor sequencing equipment, in contrast to other DNA sequencing methods, contribute to the growth of the sector. Illumina's Next-Generation Sequencing technology, known as sequencing by synthesis, is a globally utilized example. Illumina sequencing equipment facilitates massively parallel sequencing through a distinctive method that identifies individual bases as they are incorporated into evolving DNA strands.

Based on application, the market can also be segmented into diagnostics, drug discovery, [biomarker](#) discovery, agriculture and animal research, and others. In the realm of pharmacogenomics, NGS is extensively employed to accelerate the drug discovery process. As an illustration, in September 2022, Predicine, Inc. announced that the U.S. FDA had awarded breakthrough device designation to the Predicine CARE™ cfDNA Assay. This Next-Generation Sequencing assay is designed for tumor mutation profiling in cell-free DNA (cfDNA) extracted from liquid biopsy samples obtained from individuals with cancer.

Based on end users, the market can be differentiated into hospitals and clinics, pharmaceutical and biotechnology companies, academics and research institutes, and others.

Based on geography, North America is expected to maintain dominance in the next-generation sequencer market for an extended period. The increasing adoption of next-generation sequencing (NGS) technology in routine clinical diagnostic tests contributes to this trend. Factors such as the growing incidence of infectious and chronic diseases, increased spending on genomics, and notable advancements by major industry players are anticipated to drive industry growth. As an example, the Canadian Cancer Society reported an estimated 6,700 Canadians diagnosed with leukemia in 2021, comprising 2,700 women and 4,000 men.

Major players in this market are ARUP laboratories, Novogene Co. Ltd., etc. In September 2022, Illumina Inc. unveiled the NovaSeq X Series, a new line of large-scale next-generation sequencers. These sequencers are designed to enhance the speed, efficiency, and environmental sustainability of sequencing processes.

The market analytics report segments the next-generation sequencers market using the following criteria:

- By Technology

- o Sequencing By Synthesis
- o Ion Semiconductor Sequencing
- o Single-molecule Real-time Sequencing
- o Nanopore Sequencing
- o Others

- By Application
 - o Diagnostics
 - o Drug Discovery
 - o Biomarker Discovery
 - o Agriculture & Animal Research
 - o Others

- By End-Use
 - o Hospitals & Clinics
 - o Pharmaceutical & Biotechnology Companies
 - o Academics & Research Institutes
 - o Others

- By Geography
 - o North America
 - United States
 - Canada
 - Mexico
 - o South America
 - Brazil
 - Argentina
 - Others
 - o Europe
 - United Kingdom
 - Germany
 - France
 - Spain
 - Others

o Middle East and Africa

- Saudi Arabia
- UAE
- Israel
- Others

o Asia Pacific

- China
- Japan
- India
- South Korea
- Indonesia
- Thailand
- Others

Companies Profiled:

- Quest Diagnostics Incorporated
- ARUP Laboratories
- Applied Biological Materials, Inc. (abm)
- Novogene Co, Ltd.
- Azenta Life Sciences (GENEWIZ)
- NanoString
- Illumina, Inc.
- PacBio

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