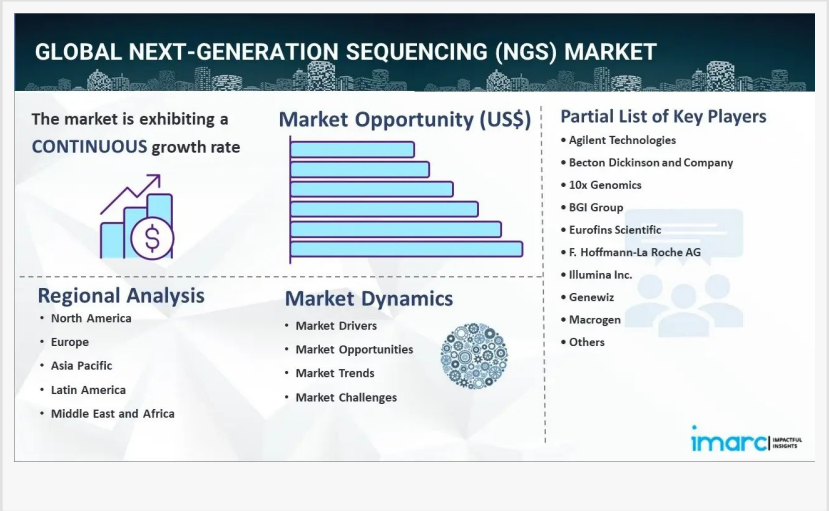
Next-Generation Sequencing (NGS) Market Size To Hit US$ 80.4 Billion By 2032 | Latest Report 2024

BROOKLYN, NY, USA, February 8, 2024 /EINPresswire.com/ -- According to IMARC Group, the global next-generation sequencing (NGS) market size reached US$ 20.1 Billion in 2023. Looking forward, IMARC Group expects the market to reach US$ 80.4 Billion by 2032, exhibiting a growth rate (CAGR) of 16.2% during 2024-2032.



Global Next-Generation Sequencing (NGS) Market Trends:

The market growth of Next-Generation Sequencing (NGS) is primarily driven by the declining costs of sequencing procedures, which have made these technologies more accessible to a wider range of research institutions and healthcare providers. Advancements in NGS technologies have significantly increased the speed and efficiency of sequencing, enabling the rapid analysis of large volumes of genetic data. This capability is crucial for personalized medicine, genetic research, and clinical diagnostics, fostering a greater demand for NGS. Additionally, the rise in genomic research activities and an increasing emphasis on customized healthcare solutions further propel the market's expansion. The integration of artificial intelligence and machine learning in NGS data analysis enhances data accuracy and interpretation, attracting investment and research interest in this field.

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Factors Affecting the Growth of the Next-Generation Sequencing (NGS) Industry:

- Technological Advancements:

Technological advancements in Next-Generation Sequencing (NGS) have significantly propelled the market's growth. The introduction of high-throughput sequencing technologies has

dramatically reduced the cost and increased the speed of sequencing, making genomic research more accessible and efficient. Innovations such as single-cell sequencing, long-read sequencing technologies, and improvements in data analysis software have expanded the applicability of NGS across various domains including oncology, genetic disorders, and agriculture. These advancements have enabled more detailed and accurate genomic analysis, facilitating personalized medicine, population genetics studies, and the identification of novel genetic markers. As technology continues to evolve, the potential for new applications and increased adoption of NGS is expected to further drive market growth.

- Increasing Clinical Applications:

The expansion of clinical applications for Next-Generation Sequencing is a significant factor driving its market growth. NGS technologies are increasingly being integrated into clinical practice for diagnostic purposes, personalized treatment planning, and disease susceptibility assessments. The ability of NGS to provide comprehensive genomic information has made it a crucial tool in precision medicine, especially in oncology for identifying targetable mutations and guiding therapy decisions. Furthermore, the use of NGS in prenatal screening, infectious disease identification, and rare genetic disorder diagnosis has underscored its versatility and impact on improving patient outcomes. As clinical evidence supporting the efficacy of NGS-based tests grows, regulatory approvals increase, and reimbursement scenarios improve, the adoption of NGS in clinical settings is expected to rise significantly.

- Government and Private Funding:

The growth of the Next-Generation Sequencing market is heavily influenced by government and private funding. Investment in genomics research has been a priority for many countries, aiming to advance healthcare, agriculture, and biotechnology. Government initiatives like the Genomic Medicine Program and private investments from pharmaceutical and biotech companies have provided substantial financial support for NGS research and development projects. This funding has facilitated the development of new NGS technologies, reduced sequencing costs, and supported large-scale genomics projects such as population genomics studies and cancer genomics consortia. Increased funding not only drives innovation but also promotes the adoption of NGS technologies by reducing financial barriers for research institutions and healthcare providers, thus stimulating market growth.

Next-Generation Sequencing (NGS) Market Report Segmentation:

Breakup by Sequencing Type:

- Whole Genome Sequencing
- Targeted Resequencing
- Whole Exome Sequencing
- RNA Sequencing

- CHIP Sequencing
- De Novo Sequencing
- Methyl Sequencing
- Others

Targeted Resequencing represented the largest segment due to its efficiency in focusing on specific genomic regions of interest, enhancing mutation detection accuracy.

Breakup by Product Type:

- Instruments
- Reagents and Consumables
- Software and Services

Reagents and Consumables represented the largest segment because of their recurring need in every sequencing procedure, driving continuous demand.

Breakup by Technology:

- Sequencing by Synthesis
- Ion Semiconductor Sequencing
- Single-Molecule Real-Time Sequencing
- Nanopore Sequencing
- Others

Sequencing by Synthesis represented the largest segment as it is the most widely adopted method, offering high throughput and accuracy.

Breakup by Application:

- Biomarker and Cancer
- Drug Discovery and Personalized Medicine
- Genetic Screening
- Diagnostics
- Agriculture and Animal Research
- Others

Biomarker and Cancer represented the largest segment, reflecting the critical role of NGS in identifying genetic markers for cancer diagnosis and treatment.

Breakup by End-User:

- Academic Institutes & Research Centers

- Hospitals & Clinics
- Pharmaceutical & Biotechnology Companies
- Others

Academic Institutes & Research Centers represented the largest segment, highlighting their leading role in conducting genomic research and NGS technology development.

Breakup by Region:

- North America (United States, Canada)
- Asia Pacific (China, Japan, India, South Korea, Australia, Indonesia, Others)
- Europe (Germany, France, United Kingdom, Italy, Spain, Russia, Others)
- Latin America (Brazil, Mexico, Others)
- Middle East and Africa

North America emerged as the largest market, attributed to advanced healthcare infrastructure, significant investment in R&D, and the presence of leading genomics companies.

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Competitive Landscape With Key Players:

The competitive landscape of the global next-generation sequencing market has been studied in the report with the detailed profiles of the key players operating in the market.

Some of these key players include:

- Agilent Technologies
- Becton Dickinson and Company
- 10x Genomics
- BGI Group
- Eurofins Scientific
- F. Hoffmann-La Roche AG
- Illumina Inc.
- Genewiz, Macrogen
- Oxford Nanopore Technologies
- Pacific Biosciences
- PerkinElmer
- Thermo Fisher Scientific
- Qiagen N.V.
- GenapSys Inc.

Key Highlights of the Report:

- Market Performance (2018-2023)
- Market Outlook (2024-2032)
- Market Trends
- Market Drivers and Success Factors
- Impact of COVID-19
- Value Chain Analysis
- Comprehensive mapping of the competitive landscape

If you need specific information that is not currently within the scope of the report, we will provide it to you as a part of the customization.

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IMARC's information products include major market, scientific, economic and technological developments for business leaders in pharmaceutical, industrial, and high technology organizations. Market forecasts and industry analysis for biotechnology, advanced materials, pharmaceuticals, food and beverage, travel and tourism, nanotechnology and novel processing methods are at the top of the company's expertise.

Our offerings include comprehensive market intelligence in the form of research reports, production cost reports, feasibility studies, and consulting services. Our team, which includes experienced researchers and analysts from various industries, is dedicated to providing high-quality data and insights to our clientele, ranging from small and medium businesses to Fortune 1000 corporations.

Elena Anderson
IMARC Services Private Limited
+ +1 631-791-1145
email us here