

# NGS Sample Preparation Market : Report Position, Recent Developments, Trends And Future Forecast Until 2023 To 2028

*Global Remote Healthcare Remote Diagnostics Market size is expected to reach USD 4.1 billion at a CAGR of 13% over the forecast period 2023 to 2028.*

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A recent report by the [Global Market Studies](#) has estimated the growth of the NGS Sample Preparation Market to USD 4.1 billion, growing at a CAGR of approximately 13%. The outbreak of the COVID-19 pandemic led to the need to develop effective and quick sequencing methods. NGS sample preparation emerged as a more efficient technology, swiftly replacing PCR and now has a wide range of applications in virology - the detection of novel viruses from metagenomic samples, reconstruction of whole or almost complete viral genome sequences, and viral evolution and subspecies analysis.

The NGS Sample Preparation Market refers to a massively parallel sequencing technology that offers ultra-high throughput, scalability, and speed. The technology is used to determine the order of nucleotides in entire genomes or targeted regions of DNA or RNA.



To Access a sample of the report and more information about NGS Sample Preparation Market : [Click Here](#)

## Market Dynamics

### 1) Drivers:

□ Use of NGS as substitute for PCR: A major driver for the NGS sample preparation market has been NGS technology substituting for PCR amidst rising Covid-19 cases worldwide.

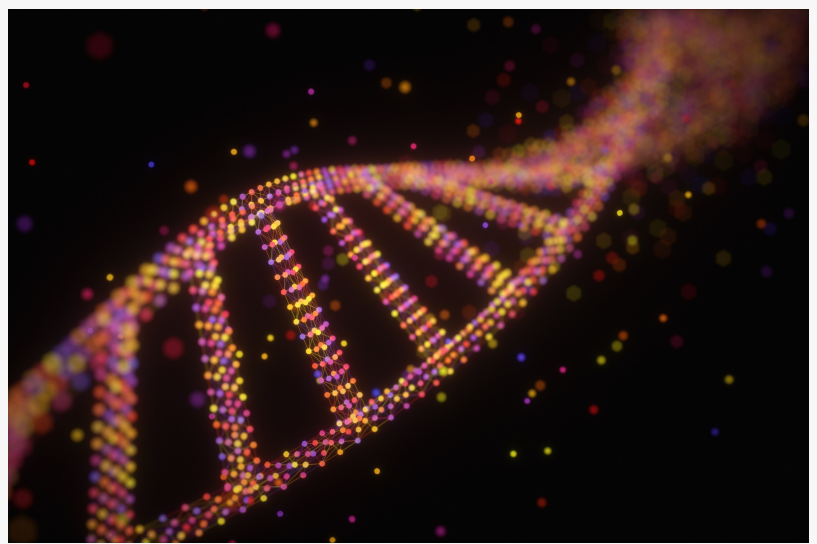
□ Precision Medicine: Growing focus on precision medicine, i.e. customised medical treatments to individual patients basis their genetic makeup, is driving the need for precise and reliable NGS-based diagnostic tools.

□ Increased Availability at Low Costs: With a more widespread use of NGS Systems and rising infectious diseases, the cost of NGS systems has reduced, thereby making it more affordable and available.

### 2) Restraints:

□ High cost: NGS sample preparation can be costly, requiring specialized equipment and reagents. This is a significant barrier, especially for smaller research institutions or companies with limited budgets.

□ Regulatory environment: NGS is a rapidly evolving technology and regulatory frameworks are still being developed in many regions. This can cause uncertainty for companies and researchers, hampering adoption of the technology.



### 3) Opportunities:

- Advances in NGS platforms: Constant innovations in NGS technologies, such as improved sequencing chemistry, software algorithms, and hardware platforms are driving the development of new sample preparation methods to accommodate these technologies.
- Rising Demand for Across Fields: As the demand for NGS technologies rises in a various fields like biomedical research, clinical diagnostics and drug discovery, the need for high-quality and efficient sample preparation methods is also increasing.
- Adoption of Automation: A growing trend towards the adoption of automated sample preparation due to the need for high-throughput and reproducible sample preparation methods, is creating the demand for more efficient automated sample preparation systems, which are less prone to manual errors.
- Surging Investment in Research and Development: Companies are investing heavily in research and development to stay ahead of competition in this highly competitive market.

### 4) Challenges :

- Complexity: NGS sample preparation can be complex, requiring specialized expertise. This can be challenging for researchers and technicians who are unfamiliar with it and need additional training.
- Data Management: NGS generates large amounts of data, which can be unmanageable. This may require specialized software and infrastructure, posing a challenge for researchers
- Intellectual Property: There are many patents and intellectual property rights associated with NGS sample preparation. This can create legal and regulatory hurdles, hampering innovation in the field.

### Recent Developments:

- Single-cell sequencing: An increased demand for single-cell sequencing, which requires specialized sample preparation methods, has led companies such as 10x Genomics and Fluidigm to offer products for the same.
- Automation: High volume of samples has created the need for automation. Thermo Fisher Scientific and Qiagen offer automated solutions for NGS sample preparation.
- Sample preservation: Growing demand for sample preservation, particularly for rare or difficult-to-obtain samples has led companies such as DNA Genotek to offer sample collection

and preservation kits for DNA and RNA analysis.

□ Nanopore sequencing: Nanopore sequencing is an emerging technology that allows for real-time sequencing without PCR amplification. This requires specific protocols which companies such as Oxford Nano-pore Technologies offer sample preparation kits for.

□ Improved Library Preparation: A critical step in NGS sample preparation is library preparation. Companies such as Illumina and NEB offer library preparation kits with improved protocols and optimized reagents.

□ Illumina Inc. launched NovaSeqX: In September 2022, Illumina Inc. launched its next-generation NovaSeq X systems, which can generate more than 20,000 whole genomes per year - 2.5 times that of prior sequencers.

□ QIAGEN expansion: In August 2022, QIAGEN expanded its portfolio with the launch of QIAseq Targeted DNA Pro Panels and the QIAseq UPXome RNA Library Kit. Both have set new standards in preparing samples for determining their nucleic acid sequences.

Key Players:

□ Illumina: Illumina, a leading provider of NGS systems, offers a range of sample preparation products, including library preparation kits and automated sample preparation systems.

□ Thermo Fisher Scientific: Thermo Fisher Scientific offers library preparation kits, PCR amplification kits, and automated sample preparation systems.

□ Qiagen: Qiagen offers products for NGS analysis, including nucleic acid extraction kits, library preparation kits, and automated sample preparation systems.

□ Becton, Dickinson and Company (BD): BD offers automated sample preparation systems and nucleic acid extraction kits for a variety of sample types.

□ New England Biolabs (NEB): NEB offers a range of library preparation kits for NGS analysis, nucleic acid extraction kits, and other products for sample preparation and processing.

□ Zymo Research: Zymo Research offers library preparation kits, nucleic acid extraction kits, and epigenetics sample preparation kits.

□ Takara Bio: Takara Bio offers library preparation kits, PCR amplification kits, and automated sample preparation systems.

□ Bio-Rad Laboratories: Bio-Rad Laboratories offers a library preparation kits, PCR amplification kits, and automated sample preparation systems.

## Frequently Asked Questions

□ What is the projected market value of the global NGS Sample Preparation Market?

- The NGS Sample Preparation Market is expected to reach a value of approximately \$4.1 billion by 2028.

□ What is the estimated CAGR of the Global NGS Sample Preparation Market over the 2023 to 2028 forecast period?

- The NGS Sample Preparation market is expected to grow at a CAGR of approximately 13% from 2021 to 2028.

□ Who are the key players in the NGS Sample Preparation Market?

- Illumina, Thermo Fisher Scientific, Qiagen, Becton, Dickinson and Company (BD), New England Biolabs (NEB), Zymo Research, Takara Bio, Bio-Rad Laboratories.

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