

## **Nucleic Acid Isolation And Purification - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)**

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### **Report description:**

The Nucleic Acid Isolation And Purification Market size is estimated at USD 4.85 billion in 2025, and is expected to reach USD 7.42 billion by 2030, at a CAGR of 8.89% during the forecast period (2025-2030).

COVID-19 significantly impacted the growth of the market during the pandemic period. This was mainly due to the significant increase in testing and drug research about the disease. During the pandemic, the need for nucleic acid and purification grew due to research in this field to better understand the dynamics of the SARS-CoV-2 virus and COVID-19 infection. For instance, as per the NCBI article published in November 2021, a direct capture method for the purification and detection of viral nucleic acid enabled epidemiological surveillance of SARS-CoV-2. Also, the usage of nucleic acid and purification in the diagnostic assays and molecular testing of COVID-19, along with vaccine development, played a vital role in the market's growth. In addition, the rising research activities due to the emergence of mutant strains of COVID-19 during the post-pandemic period are expected to contribute to the market growth over the forecast period.

Factors such as an increase in demand for sequencing platforms in clinical diagnostics, a rise in genomics research, and growth in funding for research and development in molecular biology are anticipated to drive the market growth over the forecast period. For instance, PCR Biosystems offered grants for UK researchers worth EUR 10,000 (USD 10,591.08) for funding polymerase chain reaction (PCR) reagents to scientists working in human health, microbiology, plant sciences, environment, and sustainability, and other such research areas. Thus, research will likely require more nucleic acid extraction and isolation products, thereby driving market growth over the forecast period.

Furthermore, product launches and collaboration by the key players are anticipated to strengthen the competition in the market. For instance, in April 2022, Purigen Biosystems, Inc., a provider of next-generation technologies for extracting and purifying

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nucleic acids from biological samples, launched the Ionic Cells to Pure DNA Kit. The new kit was optimized to allow users of the Ionic Purification System to extract increased yields of high-quality DNA from WBCs, peripheral blood mononuclear cells (PBMCs), and cultured or sorted cells. Furthermore, in November 2021, Bertin Bioreagent launched two kits to extract DNA and total RNA from animal tissues. These kits are part of a complete sample preparation workflow that starts with tissue homogenization using Precellys instruments. The Bertin Life Sciences R&D team validated their quality.

Hence, due to the rise in research activities, funding in the field of nucleic acid isolation and purification, and an increase in reagent product launches, the nucleic acid isolation and purification market is anticipated to witness growth over the forecast period. However, the increasing cost of automated instruments and the lack of skilled professionals are expected to restrain the market's growth over the forecast period.

#### Nucleic Acid Isolation & Purification Market Trends

##### The Equipment Segment is Expected to Hold a Major Market Share in the Nucleic Acid Isolation and Purification Market

The equipment segment of the market studied is growing at a good pace. There are significant advancements in the field of molecular diagnostics that have facilitated rapid and continuous advancements in nucleic acid isolation and purification technologies, driven by the new knowledge provided by the mapping of genetic risk factors behind many diseases, where lifestyle has an important role to play.

For procedures including sample preparation, gene expression, DNA/RNA analysis, and PCR, automated nucleic acid purification equipment extract and purify genomic and plasmid DNA from cells, tissue, and whole blood samples. There are systems that use sealed cartridges to solve compatibility and contamination concerns, as well as open and closed platforms. Magnetic bead-based methods and spin-column purification are two technologies for nucleic acid extraction and purification that provide quick, dependable nucleic acid recovery and purity while lowering human error and standardizing procedures.

The market is expanding as a result of the availability of cutting-edge technological products. For instance, QIAGEN's sample homogenization, automated DNA and RNA extraction, and automated RNA extraction solutions are effortlessly integrated into daily research and enable the transformation of biological samples into important molecular insights quickly. Additionally, over the past few decades, magnetic beads (particles) were created that could aid in overcoming the difficulties now present. They enable the quick and effective direct purification of the DNA/RNA from crude cell extracts using an appropriate buffer solution. Workflow is automated by the Aurora VERSA and ADNAP extraction systems, two generations of equipment that are based on the Magnetic Bead RNA/DNA Extraction technique.

Thus, the growth in laboratory automation may lead to the growth of the equipment segment of the market studied.

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

North America is expected to witness growth in the nucleic acid isolation and purification market. This is due to various factors, such as a rise in research and development in the genomic field that requires nucleic acid isolation and purification procedures, an increase in demand for sequencing platforms in clinical diagnostics, and growth in funding for research and development in molecular biology. In June 2021, UCLA Health received a USD 4.8 million grant from the National Institutes of Health to develop methods that were likely to improve genetic risk estimates and polygenic risk scores for specific diseases in people from diverse populations and mixed ancestries.

Furthermore, in September 2021, Beckman Coulter Life Sciences launched the EMnetik System to semi-automate workflows while reducing the time required for a PCR cleanup. Built using electromagnets, EMnetik 24 and the accompanying EMnetik PCR

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Cleanup Kit and EMnetik Plasmid Purification Kit use magnetic bead-based technology to clean nucleic acids in a stationary device. The benchtop instrument can run 1-24 samples at a time. The streamlined cleanup process and semi-automation also helped eliminate potential errors.

Besides, the high prevalence of genetic disorders is contributing to market growth. For instance, according to the CDC data published in 2020, Hemophilia A affects 1 in 5,000 male births in the United States. Each year approximately 400 babies are born with hemophilia A. Such frequency of genetic disorders is expected to drive the demand for nucleic acid and purification for the effective diagnostics and development of effective treatment procedures.

Thus, due to the rise in research and development in the genomic field that requires nucleic acid isolation and purification procedures, along with the surge in product launches, North America is anticipated to witness a growth in the nucleic acid isolation and purification market over the forecast period.

## Nucleic Acid Isolation & Purification Industry Overview

The nucleic acid isolation and purification market is fragmented in nature and consists of several major players. The competitive landscape includes an analysis of a few international and local companies that hold market shares and are well known. Major market players include Agilent Technologies, Bio-Rad Laboratories Inc., Danaher Corporation, F. Hoffmann-La Roche Ltd, GE Healthcare, Promega Corporation, Qiagen NV, and Thermo Fisher Scientific Inc., among others

Additional Benefits:

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

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