

# **Global PCR Technologies Market Assessment, By Product [Instruments, Reagents, Consumables, Software and Services, Others], By Technology [Conventional PCR, qPCR (Real-Time PCR), dPCR (Digital PCR), Other PCR Technologies], By Application [Research Applications, Diagnostics Applications, Others], By End-user [Hospital, Diagnostic Centre, Pharmaceutical and Biotechnology Companies, Clinical Research Organizations, Academia Laboratories], By Region, Opportunities and Forecast, 2017-2031F**

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## **Abstracts**

Global PCR technologies market size was valued at USD 15.05 billion in 2023, and is expected to reach USD 29.75 billion in 2031, with a CAGR of 8.89% for the forecast period between 2024 and 2031F. The Polymerase Chain Reaction technologies market is a rapidly growing field in molecular biology, life sciences, and biotechnology. The PCR technologies market is expanding owing to the increasing application of PCR in clinical disease diagnosis and genetic and molecular testing. The prevalence of infectious diseases like hepatitis, influenza, HIV infection, and COVID-19 infection which require PCR techniques for diagnosis, have been on the rise in recent years, driving demand in the global PCR technologies market.

Advancements in PCR techniques, such as digital PCR (dPCR) and real-time PCR (qPCR), offer benefits like low reagent consumption, automation of workflow, and greater reproducibility and precision, which are encouraging the adoption of PCR

technologies, further fueling the market growth. Growing market penetration in emerging countries and attractive opportunities in the PCR technologies market have led to increased funding and investments. With increasing interest from investors and market players, the demand and supply both are significantly increasing. Additionally, government support for research and development is further encouraging market development. However, the high cost of PCR instruments, technical limitations of PCR technology, and lack of skilled professionals to perform the protocols are major restraints for the global PCR technologies market.

In November 2023, QIAGEN announced the launch of three new kits (QIAcuity Mycoplasma Quant Kit, QIAcuity OneStep Advanced EG Kit, and QIAcuity Mericon Food Testing Kits) for using them with its QIAcuity systems. The launch has a part where major new software updates are designed to expand the portfolio of applications for the use of dPCR technology in areas like cell and gene therapies, quantification of DNA and RNA, as well as food and pharmaceutical safety.

#### Increasing Prevalence of Infectious and Genetic Diseases

The increasing prevalence of infectious diseases like hepatitis, influenza, HIV is a significant driver for the PCR technologies market. The rise in infectious diseases and genetic diseases has led to a growing demand for PCR technologies, as they play a crucial role in the diagnosis and monitoring of these diseases. PCR is widely used in the detection of various infectious agents, including viruses, bacteria, and fungi, making it an indispensable tool in infectious disease management. PCR technologies are also used in the detection of genetic abnormalities causing genetic diseases, further fueling the market for growth.

According to WHO, about 39.0 million people were living with HIV at the end of 2022, including about 1.5 million children within the age group of 0 to 14 years. Seasonal influenza throughout the winter can infect up to 20% of the population and result in significant death. According to WHO data, respiratory illnesses associated with seasonal influenza causes up to 650,000 deaths globally each year.

#### Expanding Applications in Clinical Diagnosis and Genetic and Molecular Testing

PCR technology has several practical applications in the field of clinical diagnosis and in recent years, with increasing research and development, a significant expansion of PCR applications has been observed. PCR technology has been extensively utilized for COVID-19 diagnosis, driving demand in the market. Several notable applications of

PCR technologies include broad-spectrum pathogen detection, assessment and surveillance of emerging infections, early detection of biological threat agents, and antimicrobial resistance analysis. Market players are coming up with innovative products for emerging applications of PCR technologies. In August 2022, GenScript USA Inc. launched a monkeypox virus PCR test kit, which was developed in partnership with Anbio Biotechnology. The kit was developed to address the monkeypox public health emergency in the United States.

### Reagents and Consumables Segments are Expected to Dominate the Market

Reagents and consumables segments are expected to grow at a fast rate in the forecasted period. The instruments used for PCR tests are one-time investments while the reagents and consumables are repeatedly consumed and purchased, which drives major revenue. Reagents like primers, polymerase, nucleotides, reaction buffers, and consumables like well plates and pipette tips are consumed completely in each PCR process and need to be refilled for the next test, drawing reoccurring revenue in the market.

### North America is Expected to Lead the PCR Technologies Market

North America dominates the global PCR market, with the United States and Canada holding largest market shares. The region's dominance is attributed to several factors, including extensive research infrastructure and a well-established regulatory framework that expedites approvals for new therapies. The presence of major pharmaceutical and biotechnology companies in the region has driven the development and adoption of PCR technologies. Additionally, North America has attracted significant investments in PCR research and development, enabling the establishment of state-of-the-art facilities and access to advanced technologies.

### Key Players Landscape and Outlook

The market landscape for PCR technologies is growing with several key players contributing to its development and commercialization. The key players in this market include Bio-Rad Laboratories Inc., Merck KGaA, QIAGEN and others. These companies are involved in various growth strategies, such as partnerships, agreements, collaborations, new product launches, geographical expansions, mergers, and acquisitions to enhance their presence.

In September 2023, Bio-Rad Laboratories, Inc. announced the launch of two new PCR

instruments named PTC Tempo 48/48 and PTC Tempo 384 Thermal Cyclers. PTC Tempo 48/48 and PTC Tempo 384 Thermal Cyclers are a novel addition to Bio-Rad Laboratories' portfolio of conventional PCR instruments. PTC Tempo 48/48 has the unique feature of two separate compartments with manual lids which allows two protocols to run simultaneously. The launch aims to support PCR applications in basic and translational research, process development, and quality control.

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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work

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