Biological Polymerase Chain Reaction (PCR) Technology Market Projected to Reach $24.31 Billion with 10% CAGR by 2029

The Business Research Company's Biological Polymerase Chain Reaction (PCR) Technology Global Market Report 2025 - Market Size, Trends, And Forecast By 2034

The Business Research Company

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What Is The Expected Cagr For The Biological Polymerase Chain Reaction (PCR) Technology Market Through 2025?

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The market size of the biological Polymerase Chain Reaction (PCR) technology has seen rapid expansion in the recent times. It is projected to rise from $15.06 billion in 2024 to $16.62 billion in 2025 with a compound annual growth rate (CAGR) of 10.3%. This growth in the historical period is primarily due to factors like enlargement of forensic DNA analysis, increase in funding for academic and clinical research, advancement in agricultural biotechnology, expansion of the biopharmaceutical industry, and the rise of genetic testing services.

The market size for biological polymerase chain reaction (PCR) technology is anticipated to witness swift growth over the upcoming years. Projected to reach $24.31 billion by 2029 with a compound annual growth rate (CAGR) of 10.0%, this progressive trend can be credited to the advent of miniaturization and point-of-care (PoC) devices, liquid biopsies and non-invasive tests, regulatory assistance and fast-track approvals, usage of reagents and consumables, and ample funding from both government and private sources. Noteworthy market developments projected for the forecast period embrace microfluidic PCR systems, enhancements in real-time

PCR, the technology of multiplex PCR, collaboration with next-generation sequencing, as well as the application of artificial intelligence (AI) and machine learning in PCR analysis.

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What Are The Key Factors Driving Growth In The Biological Polymerase Chain Reaction (PCR) Technology Market?
The biological polymerase chain reaction (PCR) technology market is anticipated to surge due to the escalating occurrence of infectious diseases. Infectious diseases, which can be caused by bacteria, viruses, fungi, or parasites, are disorders provoked by organisms like bacteria, viruses, fungi, or parasites. The augmentation in the incidence of infectious diseases is attributed to the rise in global travel which expedites the rapid and broader transmission of pathogens across various regions. Biological polymerase chain reaction (PCR) technology offers a solution to fight infectious diseases as it enables quick and precise detection of pathogens. This promotes early diagnosis, prompt treatment, and successful control of outbreaks. For example, the World Health Organization, a Switzerland-based international organization, reported in November 2023 that there were approximately 249 million cases of malaria globally in 2022. This represented an increase of 5 million cases (2%) from 2021. Hence, the escalating occurrence of infectious diseases is fuelling the expansion of the biological polymerase chain reaction (PCR) technology market.

What Are The Top Players Operating In The Biological Polymerase Chain Reaction (PCR) Technology Market?
Major players in the Biological Polymerase Chain Reaction (PCR) Technology Global Market Report 2025 include:

- F. Hoffmann-La Roche Ltd.
- Thermo Fisher Scientific Inc.
- Danaher Corporation
- Merck KGaA
- Agilent Technologies Inc.
- Sartorius AG
- Revvity Inc.
- Bio-Rad Laboratories Inc.
- QIAGEN N.V.
- Eppendorf AG

What Are The Major Trends That Will Shape The Biological Polymerase Chain Reaction (PCR) Technology Market In The Future?
Key corporations participating in the biological polymerase chain reaction (PCR) technology industry are concentrating their efforts on crafting inventive strategies such as microfluidic

partitioning. This approach is intended to boost the efficiency, accuracy, and yield of PCR-based diagnostic and research procedures. Microfluidic partitioning involves isolating a fluid specimen into thousands or even millions of minuscule, evenly-sized divisions (like droplets or wells) using microfluidic technology. For example, F. Hoffmann-La Roche AG, a pharmaceutical corporation from Switzerland, released the digital PCR system in August 2022. This platform offers a robust new approach in battling cancer and other diseases. The digital PCR (dPCR) system possesses unique qualities that set it apart from conventional PCR technologies. Among its standout features is microfluidic partitioning which divides a sample into thousands or even millions of solitary reaction compartments. This permits accurate measurement of targeted DNA or RNA without the necessity for standard curves. The dPCR systems afford remarkable sensitivity and precision, making them optimal for identifying scarcely found targets, rare mutations, and minimal residual disease.

Comprehensive Segment-Wise Insights Into The Biological Polymerase Chain Reaction (PCR) Technology Market
The biological polymerase chain reaction (PCR) technology market covered in this report is segmented

1) By Product Type: Reagents, Consumables, Software And Services
2) By Technique: Real-Time Polymerase Chain Reaction (PCR), Conventional Polymerase Chain Reaction (PCR), Digital Polymerase Chain Reaction (PCR), Reverse Transcription Polymerase Chain Reaction (PCR), Hot-Start Polymerase Chain Reaction (PCR), Multiplex Polymerase Chain Reaction (PCR), Other Polymerase Chain Reaction (PCR) Techniques
3) By Application: Diagnostic Applications, Genotyping, Nucleic Acid Detection, Gene Expression Analysis, Nucleic Acid Synthesis, Genetic Sequencing, Environmental Applications, Standard Validation Or Verification, Other Applications
4) By End User: Hospital Laboratories, Diagnostic Laboratories, Academic And Government Organizations, Pharma-Biotech Companies, Other End Users

Subsegments:
1) By Reagents: DNA Polymerase, DNTPs, Primers And Probes, Buffers And Master Mixes, Enzymes, Nucleic Acid Templates, Additives And Enhancers
2) By Consumables: PCR Tubes, PCR Plates, Sealing Films And Mats, Microplates, Reaction Vessels, Pipette Tips, PCR Strips
3) By Software And Services: PCR Data Analysis Software, Real-Time PCR Analysis Software, Cloud-Based Data Storage Solutions, PCR Workflow Management Tools, Technical Support Services, Calibration And Maintenance Services, Training And Consultation Services

View the full biological polymerase chain reaction (pcr) technology market report:
https://www.thebusinessresearchcompany.com/report/biological-polymerase-chain-reaction-pcr-technology-global-market-report

Global Biological Polymerase Chain Reaction (PCR) Technology Market - Regional Insights

The Biological Polymerase Chain Reaction (PCR) Technology Global Market Report 2025 highlights North America as the leading region in the market in 2024. Meanwhile, Asia-Pacific is anticipated to record the highest growth rate in the forecast period. The report includes comprehensive coverage of various regions such as Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East, and Africa.

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