

Thermal Cyclers Market Sees Robust Growth Amidst Biotech Advancements

Increased research and development activities within academia and the pharmaceutical industry have elevated demand for reliable and efficient Thermal Cyclers

VANCOUVER, BC, CANADA, February 3, 2025 /EINPresswire.com/ -- The [Thermal Cyclers Market](#) is expected to grow from an estimated USD 814.5 million in 2024 to USD 1614.7 million in 2033, at a CAGR of 7.90%. The Thermal Cyclers market is experiencing

significant growth, driven by

advancements in biotechnology and life sciences. The increasing reliance on sophisticated equipment for gene amplification and sequencing in research, personalized medicine, and drug development is a key factor propelling this growth. Both academia and the pharmaceutical industry are ramping up research and development activities, leading to higher demand for reliable and efficient thermal cyclers.

Technological innovations are at the forefront, with next-generation models featuring real-time PCR capabilities, enhanced throughput, and improved temperature uniformity. This technological progress is encouraging the adoption of thermal cyclers across various sectors. Additionally, rising healthcare spending, especially in developing regions, is bolstering the expansion of laboratories and research facilities. Notably, in October 2023, the Canadian government invested CA\$ 15 million to develop its first-of-its-kind Pan-Canadian Genome Library.

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Several factors continue to fuel the market's growth. These include increasing awareness of genetic testing, the emergence of point-of-care testing, the expansion of biobanking activities, and heightened funding for genomic research, including initiatives like the Human Genome Project.



However, the market does face challenges. The high cost of advanced thermal cyclers, equipped with sophisticated features, makes them less accessible to smaller laboratories, clinics, and research institutions operating under budget constraints.

Market Drivers

Life Science Research: The growing importance of life science research is a major driver for thermal cyclers. They are essential for tasks like gene expression pattern analysis, DNA sequencing, RNA and DNA quantification, and sequence-tagged site detection. The pharmaceutical industry's investment in life sciences research is increasing, driven by the need for insights into disease processes and the development of innovative medical equipment and treatments.

Healthcare and Pharmaceutical Pressure: The healthcare and pharmaceutical industries are under pressure to develop treatments for existing illnesses, thus driving the need for advanced research tools like thermal cyclers.

Market Restraints

Lack of Infrastructure: The usage of thermal cyclers requires key infrastructure elements such as temperature control, reliable power supplies, and maintenance capabilities. Many regions, particularly underdeveloped or politically unstable countries, lack access to the modern utilities needed to support widespread use of thermal cyclers. According to the International Energy Agency, nearly 775 million people worldwide lacked regular access to electricity in 2022.

Market Segmentation Insights

Type-Based Segmentation: The global market is divided into gradient and real-time segments. The real-time category, also known as reverse transcription PCR (RT-PCR) or quantitative PCR (qPCR) devices, showed the highest revenue. These devices are widely used in research and diagnostic applications due to their ability to measure or monitor DNA or RNA amplification in real-time. They are essential for processes like viral load measurement, genetic testing, and gene expression analysis.

Gradient Thermal Cyclers: These devices create thermal gradients throughout the well plate or block, enabling the evaluation of several annealing temperatures simultaneously in a single run. Gradient thermal cyclers are anticipated to exhibit the fastest compound annual growth rate (CAGR) during the forecast period.

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The market is poised for continued growth despite the challenges, with ongoing technological advancements and increased investments in the life sciences and healthcare sectors. The price of entry-level thermal cycler models ranges from USD 2,000 to USD 10,000, making them accessible to a wide range of laboratories and research institutions.

Thermal Cyclers Top Companies and Competitive Landscape

Thermo Fisher Scientific Inc., Merck KGaA, Bio-Rad Laboratories, and Roche Diagnostics. To gain a competitive edge over one another, these businesses use a range of business tactics, including partnerships, acquisitions, and the introduction of new products.

In April 2023, One of the top life science idea developers and manufacturers of diagnostic equipment, Bio-Rad Laboratories, Inc., introduced the PTC Tempo Deepwell Thermal Cyclers and PTC Tempo 96. It is anticipated that these products will enhance PCR applications, including genotyping, sequencing, and cloning. Both items fall under the category of conventional PCR heat cyclers of the next generation.

Some of the key companies in the global Thermal Cyclers Market include:

Thermo Fisher Scientific

Bio-Rad Laboratories

QIAGEN

Agilent Technologies

BioMérieux

Eppendorf AG

Roche Diagnostics

Illumina Inc.

Fluidigm Corporation

Analytik Jena AG

Becton

Dickinson and Company (BD)

Merck KGaA

Takara Bio Inc.

PerkinElmer Inc.

Promega Corporation

Techne Corporation

Enzo Life Sciences

Corbett Life Science

Cepheid

ThermoGenesis Holdings Inc.

VWR International LLC

Hamilton Company

Bioline

Jena Bioscience GmbH

Astec Co. Ltd

Thermal Cyclers Latest Industry Updates

In November 2023, Roche unveiled the LightCycler PRO System, enhancing its molecular PCR testing portfolio. Building on the legacy of the LightCycler Systems, this advanced platform sets new standards for performance and usability. It addresses the needs of healthcare professionals across translational research and in-vitro diagnostics, supporting applications such as cancer, infectious disease, and public health testing.

In November 2023, For everyday lab tasks that are not only dependable and effective but also sophisticated, Eppendorf has introduced the Mastercycler X40.

Browse The Full Thermal Cyclers Market Report Description, Along With The Tocs And List Of Facts And Figures @ <https://www.emergenresearch.com/industry-report/thermal-cyclers-market>

Thermal Cyclers Market Segmentation Analysis

By Type Outlook (Revenue, USD Million; 2020-2033)

Gradient

Real-Time

By End User Outlook (Revenue, USD Million; 2020-2033)

Academic & Research Foundations

Pharmaceutical Industry

Diagnostic Laboratories

Others

By Application Outlook (Revenue, USD Million; 2020-2033)

Genotyping

Diagnostics

Manufacturing & Quality Control Testing

Mutagenesis

Cloning

Forensics

Clinical Research

Others

By Regional Outlook (Revenue, USD Million; 2020-2033)

North America

United States

Canada

Mexico

Europe

Germany

France

United Kingdom

Italy

Spain

Benelux

Rest of Europe

Asia-Pacific

China

India

Japan

South Korea

Rest of Asia-Pacific

Latin America

Brazil

Rest of Latin America

Middle East and Africa

Saudi Arabia

UAE

South Africa

Turkey

Rest of MEA

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