

Minimal Residual Disease Testing Market Size, Share, Forecast, & Trends Analysis By Offering, Technology (PCR, Flow Cytometry, NGS) Application (Lymphoma, Leukemia, Multiple Myeloma, Solid Tumor) Sample (Blood, Bone Marrow) – Global Forecast to 2031

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Abstracts

Minimal Residual Disease Testing Market Size, Share, Forecast, & Trends Analysis by Offering, Technology (PCR, Flow Cytometry, NGS), Application (Lymphoma, Leukemia, Multiple Myeloma, Solid Tumor), Sample (Blood, Bone Marrow)—Global Forecast to 2031

According to a new market research report titled, 'Minimal Residual Disease Testing Market Size, Share, Forecast, & Trends Analysis by Offering, Technology (PCR, Flow Cytometry, NGS), Application (Lymphoma, Leukemia, Multiple Myeloma, Solid Tumor), Sample (Blood, Bone Marrow)—Global Forecast to 2031' the minimal residual disease testing market is expected to reach \$4.45 billion by 2031, at a CAGR of 14.6% during the forecast period 2024–2031.

Minimal Residual Disease (MRD) testing is crucial for cancer-affected patients. MRD tests provide early insights into whether a treated cancer patient is at risk of relapse or cancer recurrence. Early information helps physicians make treatment decisions depending on the cancer type and recurrence rates, which may lead to improved patient outcomes and better quality of life. Additionally, MRD testing is being increasingly used in clinical trials by pharmaceutical and biopharmaceutical companies focused on the development of cancer therapies. These are some of the major factors driving the adoption of MRD testing globally.

The growth of the minimal residual disease testing market is driven by the growing

incidence of cancer, the increasing application of MRD in hematological malignancies, the high recurrence rates of some cancers, and increasing investments and funding for MRD testing. Moreover, emerging economies, the rising adoption of personalized treatments & targeted therapies in the field of oncology, and the growing use of MRD testing in cases of solid tumors are expected to generate market growth opportunities.

Rising Adoption of Personalized Treatments & Targeted Therapies in the Field of Oncology

As researchers are able to identify the unique genetic profiles of tumors, MRD testing is gaining traction in personalized oncology medicine. By identifying residual cancer cells in a patient, physicians can make decisions about the intensity of the treatments or tailor treatments based on the individual's response to treatments. MRD testing goes hand in hand with personalized medicine to improve therapeutic efficacy and make patient management more precise.

The integration of MRD testing into clinical pathways supports the validation of targeted therapies. As new drugs are being developed to target specific genetic mutations, MRD testing can provide valuable insights into treatment effectiveness. For instance, in 2023, the U.S. FDA approved 16 personalized treatments for rare diseases, of which seven were for cancer. Combining targeted therapies and MRD testing can facilitate early intervention strategies, potentially preventing relapse and improving long-term outcomes for patients. Thus, the shift toward personalized treatments and targeted therapies in oncology is expected to generate growth opportunities for the players operating in the Minimal Residual Disease (MRD) testing market.

Minimal Residual Disease Testing Market: Future Outlook

The minimal residual disease testing market is segmented by Offering (Assays & Reagents, Instruments, and Software & Services), Technology (Flow Cytometry, Polymerase Chain Reaction [PCR], Next-generation Sequencing [NGS], and Other Technologies), Application (Blood Cancers [Lymphoma, Leukemia {Acute Lymphoblastic Leukemia, Chronic Lymphocytic Leukemia, and Other Leukemias}, Multiple Myeloma, and Other Blood Cancers], and Solid Tumors), Sample Type (Blood, Bone Marrow, and Other Sample Types), Customer Type (Pharmaceutical & Biopharmaceutical Companies, Hospitals, Diagnostic Laboratories, and Academic & Research Organizations/Institutions), and Geography (North America [U.S. and Canada], Europe [Germany, France, U.K., Spain, Italy, Switzerland, Netherlands, and

Rest of Europe], Asia-Pacific [China, Japan, India, Australia, South Korea, and Rest of Asia-Pacific], Latin America [Brazil, Mexico, and Rest of Latin America], and the Middle East & Africa.

Among the offerings studied in this report, in 2024, the assays & reagents segment is expected to account for the largest share of 76.7% of the minimal residual disease testing market. The recurrent use of assays & reagents, increasing research & development in the field of oncology leading to the emergence of new MRD tests, market players' focus on introducing new assays for minimal residual disease testing, and the rising adoption of MRD testing in clinical trials, contribute to the substantial market share of this segment.

Among the technologies studied in this report, in 2024, the flow cytometry segment is expected to account for the largest share of 42.7% of the minimal residual disease testing market. This segment's significant market share is attributed to the technology's ability to provide real-time, quantitative data on the number and type of cancer cells in a sample, the widespread availability of flow cytometers, and the relatively lower costs of flow cytometry consumables compared to more advanced technologies such as Next-generation Sequencing (NGS).

Among the applications studied in this report, in 2024, the blood cancers segment is expected to account for the larger share of the minimal residual disease testing market. The segment's large share is attributed to the growing incidence of blood cancers, the advent of new diagnostic technologies, the rising focus on precision oncology, high investments in MRD testing for blood cancers, and the wide availability of MRD testing solutions for blood cancers.

Among the sample types studied in this report, in 2024, the blood segment is expected to account for the largest share of the minimal residual disease testing market. This segment holds a large market share due to the growing cancer incidence, the noninvasiveness of procedures used to obtain blood samples, and better patient compliance in the case of regular blood-based MRD monitoring.

Among the customer types studied in this report, in 2024, the pharmaceutical & biopharmaceutical companies segment is expected to account for the largest share of the minimal residual disease testing market. This segment's large market share is attributed to the high adoption of MRD testing in clinical trials for oncology therapies, high investments in oncology drug development and research, and supportive initiatives by regulatory authorities to promote MRD testing in drug trials.

Among the geographies studied in this report, in 2024, APAC is estimated to register the highest CAGR during the forecast period. Asia-Pacific is becoming an increasingly active market for healthcare product manufacturers and service providers due to improving healthcare infrastructure in the region. Asia-Pacific's growing population is the key factor driving the region's healthcare sector. This growth is attracting investments from private and public organizations in the development of MRD testing solutions. The rising incidence of cancer, improving healthcare infrastructure, the growing focus on personalized therapies, increasing cancer screening initiatives, and the availability of funding for cancer research are driving market growth in Asia-Pacific.

Some of the major players studied in this report are?Illumina, Inc. (U.S.), Qiagen N.V. (Netherlands), PerkinElmer, Inc. (U.S.), F. Hoffmann-La Roche Ltd. (Switzerland), Thermo Fisher Scientific, Inc. (U.S.), Natera Inc (U.S.), Bio-Rad Laboratories, Inc. (U.S.), Adaptive Biotechnologies Corporation (U.S.), Sysmex Corporation, (Japan), Integrated DNA Technologies, Inc. (U.S.), Twist Bioscience Corporation (U.S.), and Invivoscribe Inc. (U.S.).

Scope of the Report:

Minimal Residual Disease Testing Market Assessment—by Offering

Assays & Reagents

Instruments

Software & Services

Minimal Residual Disease Testing Market Assessment—by Technology

Flow Cytometry

Polymerase Chain Reaction (PCR)

Next-generation Sequencing (NGS)

Other Technologies

Minimal Residual Disease Testing Market Assessment—by Application

Blood Cancers

Lymphoma

Leukemia

Acute Lymphoblastic Leukemia

Chronic Lymphocytic Leukemia

Other Leukemias

Multiple Myeloma

Other Blood Cancers

Solid Tumors

(Note: Other leukemias include chronic myeloid leukemia, B-cell prolymphocytic leukemia, and juvenile myelomonocytic leukemia.)

(Note: Other blood cancers include chronic myeloid leukemia, B-cell prolymphocytic leukemia, and juvenile myelomonocytic leukemia.)

Minimal Residual Disease Testing Market Assessment—by Sample Type

Blood

Bone Marrow

Other Sample Types

Minimal Residual Disease Testing Market Assessment—by Customer Type

Pharmaceutical & Biopharmaceutical Companies

Hospitals

Diagnostic Laboratories

Academic & Research Organizations/Institutions

Minimal Residual Disease Testing Market Assessment—by Geography

North America

U.S.

Canada

Europe

U.K.

Germany

France

Italy

Spain

Switzerland

Netherlands

Rest of Europe

Asia-Pacific

China

Japan

India

Australia

South Korea

Rest of Asia-Pacific

Latin America

Brazil

Mexico

Rest of Latin America

Middle East & Africa

Contents

1. INTRODUCTION

- 1.1. Market Definition
- 1.2. Market Ecosystem
- 1.3. Currency & Limitations
- 1.4. Key Stakeholders

2. RESEARCH METHODOLOGY

- 2.1. Research Process
- 2.2. Data Collection & Validation Process
 - 2.2.1. Secondary Research
 - 2.2.2. Primary Research
- 2.3. Market Sizing & Forecasting
 - 2.3.1. Market Size Estimation Approach
 - 2.3.2. Growth Forecast Approach
- 2.4. Assumptions for the Study

3. EXECUTIVE SUMMARY

4. MARKET INSIGHTS

- 4.1. Overview
- 4.2. Factors Affecting Market Growth
 - 4.2.1. Drivers
 - 4.2.1.1. Growing Incidence of Cancer
 - 4.2.1.2. Increasing Investments & Funding for MRD Testing & Research
 - 4.2.2. Restraints
 - 4.2.2.1. High Costs of Minimal Residual Disease Testing
 - 4.2.3. Opportunities
 - 4.2.3.1. Rising Adoption of Personalized Treatments & Targeted Therapies In the Field of Oncology
 - 4.2.3.2. Growing Use of MRD Testing In Cases of Solid Tumors
 - 4.2.4. Challenges
 - 4.2.4.1. Chances of False Positive/Negative Results
 - 4.2.5. Trends
 - 4.2.5.1. Emergence of Digital PCR

- 4.2.5.2. Use of Mass Spectrometry for MRD Testing
- 4.2.5.3. Integration of Single-Cell Multiomics & Artificial Intelligence Into Minimal Residual Disease Testing
- 4.2.6. Factors Analysis
- 4.3. Regulatory Analysis
 - 4.3.1. North America
 - 4.3.1.1. U.S.
 - 4.3.1.2. Canada
 - 4.3.2. Europe
 - 4.3.3. Asia-Pacific
 - 4.3.3.1. China
 - 4.3.3.2. Japan
 - 4.3.3.3. India
 - 4.3.4. Latin America
 - 4.3.5. Middle East
- 4.4. Porter's Five Forces Analysis
 - 4.4.1. Bargaining Power of Buyers
 - 4.4.2. Bargaining Power of Suppliers
 - 4.4.3. Threat of Substitutes
 - 4.4.4. Threat of New Entrants
 - 4.4.5. Degree of Competition
- 4.5. Technology Evolution Roadmap

5. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY OFFERING

- 5.1. Overview
- 5.2. Assays & Reagents
- 5.3. Instruments
- 5.4. Software & Services

6. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY TECHNOLOGY

- 6.1. Overview
- 6.2. Flow Cytometry
- 6.3. Polymerase Chain Reaction
- 6.4. Next-Generation Sequencing
- 6.5. Other Technologies

7. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY APPLICATION

- 7.1. Overview
- 7.2. Blood Cancers
 - 7.2.1. Lymphoma
 - 7.2.2. Leukemia
 - 7.2.2.1. Acute Lymphoblastic Leukemia (ALL)
 - 7.2.2.2. Chronic Lymphocytic Leukemia (CLL)
 - 7.2.2.3. Other Leukemias
 - 7.2.3. Multiple Myeloma
 - 7.2.4. Other Blood Cancers
- 7.3. Solid Tumors

8. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY SAMPLE TYPE

- 8.1. Overview
- 8.2. Blood
- 8.3. Bone Marrow
- 8.4. Other Sample Types

9. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY CUSTOMER TYPE

- 9.1. Overview
- 9.2. Pharmaceutical & Biopharmaceutical Companies
- 9.3. Hospitals
- 9.4. Diagnostic Laboratories
- 9.5. Academic & Research Organizations/Institutions

10. MINIMAL RESIDUAL DISEASE TESTING MARKET ASSESSMENT— BY GEOGRAPHY

- 10.1. Overview
- 10.2. North America
 - 10.2.1. U.S.
 - 10.2.2. Canada

10.3. Europe

10.3.1. Germany

10.3.2. U.K.

10.3.3. France

10.3.4. Italy

10.3.5. Spain

10.3.6. Switzerland

10.3.7. Netherlands

10.3.8. Rest of Europe

10.4. Asia-Pacific

10.4.1. China

10.4.2. Japan

10.4.3. India

10.4.4. South Korea

10.4.5. Australia

10.4.6. Rest of Asia-Pacific

10.5. Latin America

10.5.1. Brazil

10.5.2. Mexico

10.5.3. Rest of Latin America

10.6. Middle East & Africa

11. COMPETITIVE LANDSCAPE

11.1. Overview

11.2. Key Growth Strategies

11.3. Competitive Benchmarking

11.4. Competitive Dashboard

11.4.1. Industry Leaders

11.4.2. Market Differentiators

11.4.3. Vanguard

11.4.4. Emerging Companies

11.5. Market Share Analysis (2023)

11.5.1. Natera Inc. (U.S.)

11.5.2. Bio-Rad Laboratories, Inc. (U.S.)

11.5.3. F. Hoffmann-La Roche Ltd. (Switzerland)

11.5.4. Adaptive Biotechnologies Corporation (U.S.)

12. COMPANY PROFILES

- 12.1. Natera Inc.
- 12.2. Bio-Rad Laboratories, Inc.
- 12.3. F. Hoffmann-La Roche Ltd.
- 12.4. Adaptive Biotechnologies Corporation
- 12.5. Illumina, Inc.
- 12.6. Thermo Fisher Scientific, Inc.
- 12.7. Qiagen N.V.
- 12.8. Integrated DNA Technologies, Inc. (U.S.) (A Subsidiary of Danaher Corporation [U.S.]
- 12.9. Twist Bioscience Corporation
- 12.10. Sysmex Corporation
- 12.11. Invivoscribe, Inc.

13. APPENDIX

- 13.1. Available Customization
- 13.2. Related Reports

I would like to order

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