

Global Whole Genome Bisulfite Sequencing Market Size Study, By Product & Services (Instruments, Kits & Reagents, Services), By Workflow (Sample Preparation & Bisulfite Conversion, Library Preparation & Amplification, Sequencing, Data Analysis & Interpretation), By Application (Drug Development, Stem Cell Research, Developmental Biology, Others), By End-use (Academic & Research Institutes, Pharmaceutical & Biotechnology Companies, Others), and Regional Forecasts 2022-2032

<https://marketpublishers.com/r/G39C0CE23C48EN.html>

Date: March 2025

Pages: 285

Price: US\$ 3,218.00 (Single User License)

ID: G39C0CE23C48EN

Abstracts

The Global Whole Genome Bisulfite Sequencing Market is valued approximately at USD 267.47 million in 2023 and is anticipated to grow with a healthy growth rate of more than 16.8% over the forecast period 2024-2032. Whole Genome Bisulfite Sequencing (WGBS) has emerged as the gold standard technique for comprehensive DNA methylation profiling at a single-base resolution. With its ability to decipher epigenetic modifications across the entire genome, WGBS plays a crucial role in cancer research, developmental biology, and personalized medicine. The growing understanding of epigenetics in disease mechanisms, along with increasing investments in genomics research, has propelled the adoption of whole genome bisulfite sequencing across various sectors, including academic research institutes, pharmaceutical companies, and biotechnology firms.

The market is witnessing significant expansion, primarily due to technological

advancements in sequencing platforms. Companies like Illumina and PacBio have introduced high-throughput sequencing platforms that enhance efficiency, accuracy, and affordability, making WGBS more accessible for a broader range of applications. Continuous improvements in bisulfite conversion chemistry, library preparation kits, and sequencing workflows have also strengthened the market landscape by reducing sequencing errors associated with DNA degradation. Furthermore, the integration of AI-powered bioinformatics tools and cloud-based sequencing analysis has revolutionized data interpretation, enabling researchers to extract valuable insights with greater precision.

The increasing focus on cancer epigenomics has further boosted market growth. DNA methylation is a crucial biomarker for early cancer detection, and WGBS provides researchers and clinicians with an unparalleled understanding of cancer-related epigenetic modifications. Pharmaceutical companies are increasingly incorporating WGBS into their drug discovery pipelines to assess the effects of therapeutic interventions on the epigenome. Additionally, rising government funding for precision medicine and genomic research initiatives has contributed to the growing demand for WGBS. The market is also expanding beyond oncology into neurodegenerative disorders, autoimmune diseases, and metabolic conditions, further broadening its potential applications.

Regionally, North America leads the WGBS market, accounting for the highest revenue share in 2023. The region benefits from strong government funding, a well-established genomics research infrastructure, and a high concentration of leading biotechnology and pharmaceutical companies. The Asia Pacific region is expected to witness the fastest growth rate over the forecast period, driven by rising investments in genomics, increasing adoption of sequencing technologies, and expanding biopharmaceutical R&D activities in countries like China, Japan, and India.

Major Market Players Included in This Report Are:

Thermo Fisher Scientific, Inc.

Illumina, Inc.

Danaher

Merck KGaA

Zymo Research

QIAGEN

Agilent Technologies

BGI

Hologic Inc.

New England Biolabs

The Detailed Segments and Sub-segments of the Market are Explained Below:

By Product & Services:

Instruments

Kits & Reagents

Bisulfite Conversion Kits & Reagents

Library Preparation Kits & Reagents

DNA Extraction & Purification Kits & Reagents

PCR & Amplification Kits & Reagents

Sequencing Kits & Reagents

Others

Services

By Workflow:

Sample Preparation & Bisulfite Conversion

Library Preparation & Amplification

Sequencing

Data Analysis & Interpretation

By Application:

Drug Development

Stem Cell Research

Developmental Biology

Others

By End-use:

Academic & Research Institutes

Pharmaceutical & Biotechnology Companies

Others

By Region:

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Italy

Spain

Denmark

Sweden

Norway

Asia Pacific

Japan

China

India

Australia

South Korea

Thailand

Latin America

Brazil

Argentina

Middle East & Africa

South Africa

Saudi Arabia

UAE

Kuwait

Years Considered for the Study Are as Follows:

Historical Year – 2022

Base Year – 2023

Forecast Period – 2024 to 2032

Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032

Annualized revenues and regional-level analysis for each market segment

Detailed analysis of the geographical landscape with country-level breakdowns

Competitive landscape with information on major players in the market

Analysis of key business strategies and recommendations for future market approach

Assessment of competitive structure within the market

Demand-side and supply-side analysis of the market

Contents

CHAPTER 1. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET EXECUTIVE SUMMARY

- 1.1. Global Whole Genome Bisulfite Sequencing Market Size & Forecast (2022-2032)
- 1.2. Regional Summary
- 1.3. Segmental Summary
 - 1.3.1. By Product & Services
 - 1.3.2. By Workflow
 - 1.3.3. By Application
 - 1.3.4. By End Use
- 1.4. Key Trends
- 1.5. Recession Impact
- 1.6. Analyst Recommendation & Conclusion

CHAPTER 2. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET DEFINITION AND RESEARCH ASSUMPTIONS

- 2.1. Research Objective
- 2.2. Market Definition
- 2.3. Research Assumptions
 - 2.3.1. Inclusion & Exclusion
 - 2.3.2. Limitations
 - 2.3.3. Supply Side Analysis
 - 2.3.3.1. Availability
 - 2.3.3.2. Infrastructure
 - 2.3.3.3. Regulatory Environment
 - 2.3.3.4. Market Competition
 - 2.3.3.5. Economic Viability (Consumer's Perspective)
 - 2.3.4. Demand Side Analysis
 - 2.3.4.1. Regulatory Frameworks
 - 2.3.4.2. Technological Advancements
 - 2.3.4.3. Environmental Considerations
 - 2.3.4.4. Consumer Awareness & Acceptance
- 2.4. Estimation Methodology
- 2.5. Years Considered for the Study
- 2.6. Currency Conversion Rates

CHAPTER 3. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET DYNAMICS

3.1. Market Drivers

- 3.1.1. Growing demand for precision medicine and epigenetic biomarkers
- 3.1.2. Advancements in sequencing technologies improving efficiency
- 3.1.3. Increasing government and private funding in genomic research

3.2. Market Challenges

- 3.2.1. High cost of whole genome bisulfite sequencing and data analysis
- 3.2.2. Complex bioinformatics and data interpretation hurdles

3.3. Market Opportunities

- 3.3.1. Rising applications in drug discovery and oncology research
- 3.3.2. Expansion of sequencing services in emerging markets

CHAPTER 4. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET INDUSTRY ANALYSIS

4.1. Porter's 5 Forces Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry
- 4.1.6. Futuristic Approach to Porter's 5 Forces Model
- 4.1.7. Porter's 5 Forces Impact Analysis

4.2. PESTEL Analysis

- 4.2.1. Political
- 4.2.2. Economical
- 4.2.3. Social
- 4.2.4. Technological
- 4.2.5. Environmental
- 4.2.6. Legal

4.3. Top Investment Opportunities

4.4. Top Winning Strategies

4.5. Disruptive Trends

4.6. Industry Expert Perspective

4.7. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET SIZE

& FORECASTS BY PRODUCT & SERVICES 2022-2032

5.1. Segment Dashboard

5.2. Global Whole Genome Bisulfite Sequencing Market: Product & Services Revenue Trend Analysis, 2022 & 2032 (USD Billion)

5.2.1. Instruments

5.2.2. Kits & Reagents

5.2.3. Services

CHAPTER 6. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET SIZE & FORECASTS BY WORKFLOW 2022-2032

6.1. Segment Dashboard

6.2. Global Whole Genome Bisulfite Sequencing Market: Workflow Revenue Trend Analysis, 2022 & 2032 (USD Billion)

6.2.1. Sample Preparation & Bisulfite Conversion

6.2.2. Library Preparation & Amplification

6.2.3. Sequencing

6.2.4. Data Analysis & Interpretation

CHAPTER 7. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET SIZE & FORECASTS BY APPLICATION 2022-2032

7.1. Segment Dashboard

7.2. Global Whole Genome Bisulfite Sequencing Market: Application Revenue Trend Analysis, 2022 & 2032 (USD Billion)

7.2.1. Drug Development

7.2.2. Stem Cell Research

7.2.3. Developmental Biology

7.2.4. Others

CHAPTER 8. GLOBAL WHOLE GENOME BISULFITE SEQUENCING MARKET SIZE & FORECASTS BY END USE 2022-2032

8.1. Segment Dashboard

8.2. Global Whole Genome Bisulfite Sequencing Market: End Use Revenue Trend Analysis, 2022 & 2032 (USD Billion)

8.2.1. Academic & Research Institutes

8.2.2. Pharmaceutical & Biotechnology Companies

8.2.3. Others

CHAPTER 9. COMPETITIVE INTELLIGENCE

9.1. Key Company SWOT Analysis

9.1.1. Thermo Fisher Scientific, Inc.

9.1.2. Illumina, Inc.

9.1.3. QIAGEN

9.2. Market Share Analysis

9.3. Key Company Strategies

CHAPTER 10. RESEARCH PROCESS

10.1. Research Methodology

10.1.1. Primary Research

10.1.2. Secondary Research

10.1.3. Data Collection & Validation

10.1.4. Data Triangulation

10.2. Research Attributes

10.3. Market Estimation Techniques

10.3.1. Bottom-Up Approach

10.3.2. Top-Down Approach

10.3.3. Demand-Supply Analysis

10.3.4. Market Breakdown & Data Triangulation

10.4. Limitations of the Study

10.5. Assumptions & Caveats

List Of Tables

LIST OF TABLES

TABLE 1. Global Whole Genome Bisulfite Sequencing Market, Report Scope

TABLE 2. Global Whole Genome Bisulfite Sequencing Market Estimates & Forecasts by Region 2022-2032 (USD Billion)

TABLE 3. Global Whole Genome Bisulfite Sequencing Market Estimates & Forecasts by Product & Services 2022-2032 (USD Billion)

TABLE 4. Global Whole Genome Bisulfite Sequencing Market Estimates & Forecasts by Workflow 2022-2032 (USD Billion)

TABLE 5. Key Market Strategies Adopted by Leading Companies

TABLE 6. Competitive Benchmarking of Major Market Players

TABLE 7. Regulatory Frameworks Governing Epigenetic Sequencing

This list is not complete; the final report contains more than 100 tables. The list may be updated in the final deliverable.

List Of Figures

LIST OF FIGURES

FIG 1. Global Whole Genome Bisulfite Sequencing Market, Research Methodology

FIG 2. Market Growth Prospects 2022-2032

FIG 3. Competitive Landscape Analysis of Major Players

FIG 4. Market Trends in Drug Development Applications

FIG 5. Adoption of Sequencing Technologies by Region

FIG 6. Regulatory Compliance and Impact on Market Growth

FIG 7. Innovation in Whole Genome Bisulfite Sequencing Kits

FIG 8. Investment Trends in Epigenetics Research

This list is not complete; the final report contains more than 50 figures. The list may be updated in the final deliverable.

I would like to order

Product name: Global Whole Genome Bisulfite Sequencing Market Size Study, By Product & Services (Instruments, Kits & Reagents, Services), By Workflow (Sample Preparation & Bisulfite Conversion, Library Preparation & Amplification, Sequencing, Data Analysis & Interpretation), By Application (Drug Development, Stem Cell Research, Developmental Biology, Others), By End-use (Academic & Research Institutes, Pharmaceutical & Biotechnology Companies, Others), and Regional Forecasts 2022-2032

Product link: <https://marketpublishers.com/r/G39C0CE23C48EN.html>

Price: US\$ 3,218.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G39C0CE23C48EN.html>