+357 96 030922
info@marketpublishers.com

United States DNA Barcoding Services Market By Type (Plant DNA Barcoding Services, Animal DNA Barcoding Services, Microbial DNA Barcoding Services), By Method (Sanger Sequencing, Short Read Sequencing, Long Read Sequencing), By Application (Pathogen Identification and Monitoring, Product Authentication and Quality Control, Biodiversity and Conservation Monitoring, Forensic and Legal Investigations, Others), By End Use (Pharmaceutical & Biotechnology Companies, Agriculture and Food Industry, Academic & Research Institutes, Others), By Region and Competition, Forecast & Opportunities, 2020-2030F

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Abstracts

Market Overview

The United States DNA Barcoding Services Market was valued at USD 64.38 million in 2024 and is projected to reach USD 124.95 million by 2030, growing at a CAGR of 11.66%. This growth is being fueled by technological advancements in sequencing, particularly the adoption of next-generation sequencing (NGS), which has improved the speed, accuracy, and scalability of DNA barcoding. These services are increasingly in demand across sectors such as biodiversity research, environmental monitoring, and forensics for accurate species identification and genetic analysis. With growing environmental sustainability efforts and a heightened focus on biodiversity conservation,

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DNA barcoding is being embraced as a key tool for monitoring ecosystem health, detecting invasive species, and ensuring regulatory compliance in agriculture and forestry. Despite the market's promising trajectory, challenges such as high sequencing costs and the need for skilled professionals to interpret complex genetic data could limit broader adoption. Nonetheless, ongoing innovation and integration with technologies like eDNA are set to reinforce the role of DNA barcoding in modern scientific and environmental initiatives.

Key Market Drivers

Expansion of Biodiversity and Conservation Programs

The expansion of biodiversity and conservation programs in the United States is significantly boosting the demand for DNA barcoding services. Initiatives led by agencies like the U.S. Fish and Wildlife Service (FWS) and U.S. Geological Survey (USGS) underscore the growing reliance on genetic tools for environmental monitoring. In 2023, FWS conducted nearly 1,900 habitat projects, improving over 167,000 acres, while USGS utilized environmental DNA (eDNA) sampling technologies from sea surface to seabed to explore marine biodiversity. These efforts have increased the need for efficient and non-invasive species identification methods. DNA barcoding allows conservationists to track species distribution, detect invasive organisms, and assess ecological health with precision and scale. As government-supported programs grow and prioritize advanced monitoring tools, the demand for DNA barcoding services continues to rise. This reflects a shift toward molecular approaches in conservation science, with DNA barcoding becoming integral to biodiversity management strategies across the country.

Key Market Challenges

High Cost of Equipment and Analysis

The substantial cost of equipment and data analysis remains a key barrier for the widespread adoption of DNA barcoding services in the United States. High-performance sequencing instruments, reagents, and data-processing software demand considerable financial investment, which is often out of reach for small research institutions or businesses with limited budgets. Moreover, the operation of such equipment requires technically skilled professionals, adding to operational expenses. Costs are also driven by the need for constant updates in both hardware and bioinformatics tools to keep pace with evolving technologies. These financial hurdles restrict market penetration,

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especially among smaller stakeholders who may struggle to justify or afford the high upfront and maintenance costs. Addressing this challenge will require cost-reduction strategies, improved funding support, and wider availability of affordable service packages to ensure broader accessibility and market expansion.

Key Market Trends

Integration of DNA Barcoding with Environmental DNA (eDNA) Monitoring

A key trend shaping the United States DNA barcoding services market is the integration of DNA barcoding with environmental DNA (eDNA) monitoring. This approach enables the identification of species through genetic material found in environmental samples like water, soil, and air—without requiring direct collection of organisms. Combined with barcoding, eDNA monitoring enhances ecological assessments by offering faster, less invasive, and more comprehensive data on species presence and abundance. This trend is increasingly utilized for monitoring endangered species, managing invasive populations, and supporting habitat restoration efforts. The application of next-generation sequencing (NGS) has further improved the resolution and throughput of these techniques, enabling high-precision biodiversity studies. Government agencies and conservation organizations are embracing this integrated methodology to inform data-driven policy decisions. As environmental concerns continue to rise, this fusion of eDNA and DNA barcoding is expected to drive broader implementation across ecological research and environmental management practices in the U.S.

Key Market Players

Eurofins Genomics

CD Genomics

BIOSERVE

Illumina, Inc.

PacBio

Oxford Nanopore Technologies

AllGenetics & Biology SL

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info@marketpublishers.com

1st BASE

Bento Bioworks Ltd

Genetika Science

Report Scope:

In this report, the United States DNA Barcoding Services Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

United States DNA Barcoding Services Market, By Type:

Plant DNA Barcoding Services

Animal DNA Barcoding Services

Microbial DNA Barcoding Services

United States DNA Barcoding Services Market, By Method:

Sanger Sequencing

Short Read Sequencing

Long Read Sequencing

United States DNA Barcoding Services Market, By Application:

Pathogen Identification and Monitoring

Product Authentication and Quality Control

Biodiversity and Conservation Monitoring

Forensic and Legal Investigations

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Others

United States DNA Barcoding Services Market, By End Use:

Pharmaceutical & Biotechnology Companies

Agriculture and Food Industry

Academic & Research Institutes

Others

United States DNA Barcoding Services Market, By Region:

North-East

Mid-West

West

South

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the United States DNA Barcoding Services Market.

Available Customizations:

United States DNA Barcoding Services Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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