

Global Automated Microscopy Market Size study & Forecast, by Product Type (Optical Microscope, Electron Microscope, Scanning Probe Microscope), by Application (Medical Diagnosis, Life Science Research, Drug Discovery and Pharmaceutical), by End User (Diagnostic Laboratories, Research Facilities, Pharmaceutical Industry) and Regional Analysis, 2023-2030

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## **Abstracts**

Global Automated Microscopy Market is valued at approximately USD 7.1 billion in 2022 and is anticipated to grow with a healthy growth rate of more than 6.4% during the forecast period 2023-2030. An automated microscope is a cutting-edge scientific tool that improves picture acquisition. Unlike traditional microscopes, which require human adjustments and image capturing, automated microscopes are outfitted with advanced technology such as motorized stages, focus controllers, and digital imaging systems. These characteristics allow researchers to accurately regulate the microscope's position, focus, and magnification, frequently using computer software. An automated microscope produces high-resolution digital images or even time-lapse recordings of specimens, which can be saved and processed for a variety of applications, including biological research and medical diagnostics. The Automated Microscopy Market is expanding because of factors such as increased use of automated microscopes and rising prevalence of chronic diseases such as cancer, diabetes, and Alzheimer's disease.

The automation of microscopy operations has improved the accuracy and efficiency of disease detection. Automated microscopes can rapidly evaluate huge amounts of



biological samples with little human intervention, lowering the chance of error and expediting the diagnosis process. For instance according to a study by the National Library of Medicine in 2022 states that integrating automated image acquisition with a suitable artificial intelligence algorithm in the device for diagnosis considerably boosts its potential as a diagnostic tool in resource-limited settings. In addition, by focusing on high-throughput capabilities, advanced software integration, user-friendliness, and valueadded services, companies can capitalize on the growing market opportunities for efficient and automated scientific methods. For instance, According to FE Healthcare.com, with artificial intelligence (AI)-enabled automated digital microscopy, a pathologist's sample evaluation time can be reduced from 5 to 10 minutes to 30 seconds. However, the high cost of automated microscopes stifles market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Automated Microscopy Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022. This can be attributed to regions robust R&D Spending, for instance, according to National Science Foundation, the United States alone spends over 700 billion USD on R&D annually with a significant portion dedicated to life science and microscopic research, major companies focusing on automation and efficiency and concentration of renowned research institutions such as Harvard, MIT and Stanford. Asia Pacific is expected to grow significantly over the forecast period, owing to factors such as the booming pharmaceutical industry, technological advancements, government initiatives such as "Make in China" and "Digital India" and the presence of various research institutions in the region.

Major market player included in this report are:

**Olympus Corporation** 

Agilent Technologies, Inc

Etaluma, Inc.

Thermo Fisher Scientific, Inc.

**Bruker Corporation** 

Horiba Scientific



Nikon Corporation

Carl Zeiss AG

Leica Microsystems (Danaher Corporation)

Hitachi High-Technologies Corporation

Recent Developments in the Market:

In August 2022, Thermo Fisher Scientific launched a new linked and automated microscope, the Thermo Scientific Arctis Cryo-Plasma Focused Ion Beam. Cryo-ET has the potential to be used in cell biology research, such as studying infectious diseases, neurodegenerative diseases, and other structural biology applications.

In October 2022, Thermo Fisher Scientific announced the release of the Glacios 2 Cryo-Transmission Electron Microscope (Cryo-TEM), a powerful microscope with new automation and high-resolution imaging capabilities designed to assist cryo-electron microscopy (cryo-EM) researchers of varying experience levels in accelerating structure-based drug discovery.

In December 2022, Leica Microsystems announced a collaboration with Applied Scientific Instrumentation (ASI) to commercialize a customized microscope for advanced users. To express quick dynamics in 3D, the method combines standard sample preparation with soft imaging and high-speed volumetric imaging. This strategic development helped the organization to provide innovative solutions to its users, hence increasing revenue opportunities.

Global Automated Microscopy Market Report Scope:

Historical Data - 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive



Landscape, Growth factors, and Trends

Segments Covered – Product Type, Application, End-User, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Product Type:

**Optical Microscope** 

**Electron Microscope** 

Scanning Probe Microscope

By Application:

**Medical Diagnosis** 

Life Science Research

Drug Discovery And Pharmaceutical



By End-User:

**Diagnostic Laboratories** 

**Research Facilities** 

Pharmaceutical Industry

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

Global Automated Microscopy Market Size study & Forecast, by Product Type (Optical Microscope, Electron Micros...



South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa



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