

Organ-on-a-Chip: Global Markets

Market Research Report | 2025-04-04 | 113 pages | BCC Research

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Report description:

Description

Report Scope:

This report analyzes trends in the global organ-on-a-chip (OoC) market. The market is segmented based on products and services, applications, end users, and regions. The application segment is characterized by drug discovery and development, toxicological research, and physiological model development. End-users include academic and research institutes, pharmaceutical and biotechnology companies, and the cosmetics industry. Products and services include organ chips, instruments, software, and services. Organ chips are further segmented into single-organ and multi-organ-on-a-chip products. The single-organ-on-a-chip products are further sub-segmented into liver, lung, heart, kidney, and other organs.

The report focuses on the major trends and challenges that affect the market and vendor landscape. It analyzes patents and emerging technologies related to the market. The report includes an analysis of the competitive landscape and industry structure and concludes with profiles of the leading companies.

In this report, the OoC market is segmented by geographical region into North America, Europe, Asia Pacific, South America, and the Middle East and Africa (MEA). The North American region consists of the U.S., Canada, and Mexico. Europe includes Germany, the U.K., Italy, France, Spain and the Rest of Europe; Asia-Pacific includes China, Japan, India, South Korea, Australia and the Rest of Asia-Pacific. The report covers global revenue (\$ millions) for the base year of 2023, estimated data for 2024, and forecast values for 2025 through 2029.

Report Includes:

- 77 data tables and 53 additional tables
- Analyses of trends in the global organ-on-a-chip (OoC) market, with revenue data for 2021 to 2023, estimates for 2024, as well as projected CAGRs through 2029

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- Estimates of the market size and revenue prospects for the global market, along with a market share analysis by product and service, application, end user and region
- Facts and figures pertaining to the market dynamics, technological progress, innovations, prospects, regulations and the impact of various macroeconomic factors
- A look at why organ-on-a-chip technology is gaining traction as an alternative to animal testing in life science research, toxicology testing and drug development studies
- Insights derived from the Porter's Five Forces model, as well as global supply chain and PESTLE analyses
- Overview of sustainability trends and ESG developments, with emphasis on consumer attitudes, and the ESG scores and practices of leading companies
- Analysis of the industry structure, including companies' market shares and rankings, strategic alliances, M&A activity and a venture funding outlook
- Profiles of leading companies, including Emulate Inc., Mimetas, TissUse GmbH, InSphero AG, and CN Bio Innovations Ltd.

Executive Summary

Summary:

The global Organ-on-a-Chip market is expected to grow from \$153.2 million in 2024 and is projected to reach \$651.9 million by the end of 2029, at a compound annual growth rate (CAGR) of 33.6% during the forecast period of 2024 to 2029.

Organs-on-a-chip are microfluidic systems that can be used in place of animals for preclinical testing. Organ-on-a-chip products have applications in drug development, toxicological research, and physiological model development. OoC has the potential to reduce R&D costs and shorten drug development timelines. The growing demand for personalized medicines contributes to the growth of the OoC market.

Liver-on-a-chip and lung-on-a-chip are the most established OoC models. While pharmaceutical companies and academic institutions use many types of single-OoC models, they are transitioning towards using multi-organ models in drug development.

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