

High-Throughput Screening: Technologies and Global Markets

<https://marketpublishers.com/r/H57CE3F4BC5EN.html>

Date: January 2019

Pages: 214

Price: US\$ 1,375.00 (Single User License)

ID: H57CE3F4BC5EN

Abstracts

Report Scope:

The HTS market has significant potential due to the rising demand for drug discovery, DNA sequencing, toxicity studies and genomics applications. The capabilities and possibilities of market growth increase with new technologies and technological advancement. Emerging economies such as China, India, Latin American and Eastern Europe are considered lucrative regions that are creating opportunities and scope for the HTS market. Significant investments and funding are coming from government and private ventures, research institutes and universities to explore the potential of this market.

The scope of this study includes the current market for drug discovery, protein analysis, biological active compound screening and compound profiling. The report also includes regulations, recent developments, market projections, the competitive landscape and market share. An analysis of patents, clinical trials, innovations, opportunities and the latest trends are also discussed in the report. The report explains the key trends of HTS technologies and applications in regions around the world. It also discusses the market determinants that act as motivating and restraining factors and provides insights to stakeholders and potential entrants. The report will be a key decision-making tool for government organizations, researchers, private players, angel investors, potential entrants and so forth.

Report Includes:

60 data tables and 30 additional tables

An industry analysis of technologies and global markets for the high-throughput screening (HTS) within the industry

Analyses of global market trends with data from 2017 to 2018, and projections of compound annual growth rates (CAGRs) through 2023

Characterization and quantification of the market potential for HTS by geographical regions, technology types, detection methods, components, application segments and end-use industries

A look at the influence of government regulations, technological updates and the economic factors augmenting the growth of the market

Relevant patent analysis within the global HTS market

Company profiles of the major market players and their corporate profiles, including Agilent Technologies Inc., Bio-Rad Laboratories Inc., Danaher Corp., GE Healthcare, Nikon Instruments Inc., PerkinElmer Inc., Sysmex Corp. and Thermo Fisher Scientific Inc.

Contents

CHAPTER 1 INTRODUCTION

Study Goals and Objectives
Intended Audience
Scope of Report
Information Sources
Methodology
Geographic Breakdown
Analyst's Credentials
BCC Custom Research
Related BCC Research Reports

CHAPTER 2 SUMMARY AND HIGHLIGHTS

CHAPTER 3 MARKET AND TECHNOLOGY BACKGROUND

Market Trends
North America Dominates the Market
Significant Growth in APAC
Major Opportunities for Software and Bioinformatics
Evolution of High-Throughput Screening
Miniaturization of Assays for High-Throughput Screening
Optimization of High-Throughput Screening
Traditional and Novel Targets for Lead Discovery
HTS Milestones Since Inception
Conclusion
Overview of Microscope and Imaging Technologies
Scanning Probe Microscopy
Scanning Electron Microscopy
Transmission Electron Microscopy
Artificial Intelligence and Automated Devices in HTS
Technological Advancements
Cytometers
Detectors and Sensors
Liquid Handling Instruments
Technological Trends
Label-Free Technology

Microplate Technologies
Automation and Miniaturization
Microfluidics
Market Dynamics
Market Drivers
Market Opportunities
Limitations and Challenges

CHAPTER 4 MARKET BREAKDOWN BY DETECTION METHOD

Spectroscopy
Fluorescence Spectroscopy
Total Internal Reflection Fluorescence (TIRF)
Nuclear Magnetic Resonance (NMR)
Fourier Transformed Infrared (FTIR)
Light Scattering
Mass Spectrometry (MS)
Imaging Mass Spectrometry
MALDI Mass Spectrometry
Secondary Ion Mass Spectrometer
Mass Spectrometry Instruments
Chromatography
Gas Chromatography
Thin-Layer Chromatography
Liquid Chromatography
Ion Exchange Chromatography
Affinity Chromatography
Reversed-Phase Chromatography
Hydrophobic Interaction Chromatography
Calorimetry
Isothermal Titration Calorimetry
Differential Scanning Calorimetry
X-ray Diffraction
Microscopy

CHAPTER 5 MARKET BREAKDOWN BY COMPONENT

Instruments/Platforms
Imaging Devices

Microplate Readers
Cytometers
Liquid Handling Instruments
Consumables: Reagents and Kits
Software and Analytics (Bioinformatics)
ProMass Deconvolution Software by Thermo Fisher Scientific
Services
ADME Screening
SiRNA Screening

CHAPTER 6 MARKET BREAKDOWN BY TECHNOLOGY

Cell-Based Assays
Lab-on-a-Chip
Ultra-High-Throughput Screening
Label-Free Technology

CHAPTER 7 MARKET BREAKDOWN BY END USER

Pharmaceutical and Biotechnology Companies
Research and Government Institutes
Lab and Pathology Facilities
Contract Research Organizations

CHAPTER 8 MARKET BREAKDOWN BY APPLICATION

Drug Discovery
Biological Active Compound Screening
Genomics Application
DNA Sequencing
Protein Analysis
Microarray Screening
Toxicity Studies
Compound Profiling

CHAPTER 9 MARKET BREAKDOWN BY REGION

North America
United States

Canada
Europe
United Kingdom
Germany
France
Spain
Italy
Rest of Europe
Asia-Pacific
India
Japan
China
Rest of APAC
Rest of the World
Middle East
Africa
Latin America

CHAPTER 10 PATENT ANALYSIS AND NEW DEVELOPMENTS

New Technologies
DNA-Encoded Libraries
High-Throughput Screening with CRISPR-Cas9 and RNAi
High-Throughput Screening Using Artificial Intelligence and Machine Learning
High-Throughput Screening in Academia for Biomedical Research
Advances in Zebrafish High-Throughput Screening Technologies
Evolution of Ultra-High-Throughput Screening
Patent Analysis
New Developments
New Product Development

CHAPTER 11 ANALYSIS OF MARKET OPPORTUNITIES

Key Supplier and Manufacturer Positioning and Strategy
Key Market Players in the High-Throughput Screening Market
Albany Molecular Research Inc.
PerkinElmer Inc.
Bio-Rad Laboratories Inc.
Thermo Fisher Scientific Inc.

Analysis of Primary Strategies
Research and Development Activities

CHAPTER 12 COMPANY PROFILES

AGILENT TECHNOLOGIES INC.
ALBANY MOLECULAR RESEARCH INC.
AURELIA BIOSCIENCE LTD.
AXXAM SPA
BECTON, DICKINSON AND CO.
BIO-RAD LABORATORIES INC.
BIOTEK INSTRUMENTS INC.
CARL ZEISS AG
CELL SIGNALING TECHNOLOGY INC.
CHARLES RIVER LABORATORIES INC.
CORNING INC.
CREATIVE BIOLABS INC.
CURIOS BIOSYSTEMS PTE LTD.
CYTOO SA
DANAHER CORP.
DE NOVO SOFTWARE
EUROFINS DISCOVERX CORP.
EVOTEC AG
FLUXION BIOSCIENCES INC.
GE HEALTHCARE
GENEDATA AG
HUDSON ROBOTICS INC.
INSTRUMENT SYSTEMS GMBH
INTELLICYT CORP.
MILLIPORESIGMA
MOLECULAR DEVICES LLC
NEMAMETRIX INC.
NIKON INSTRUMENTS INC.
OLYMPUS CORP.
PERKINELMER INC.
PHENOVISTA BIOSCIENCES LLC
PLATYPUS TECHNOLOGIES
SYSMEX CORP.
TECAN GROUP LTD.

THERMO FISHER SCIENTIFIC INC.
TTP LABTECH LTD.

VALA SCIENCES INC.

List Of Tables

LIST OF TABLES

Summary Table: Global Market for High-Throughput Screening, by Region, Through 2023

Table 1: Microscope Manufacturers Using HTS, 2018

Table 2: Automated Microplate Handling Systems in High-Throughput Screening

Table 3: R&D Spending of Major Pharmaceutical Companies, 2013

Table 4: R&D Spending in Pharmaceuticals, by Select OECD Countries, 2011–2012

Table 5: Uses of High-throughput Platforms for Investigating Stem Cell Microenvironments

Table 6: Comparison of High-Throughput Screening Microscopes, 2018

Table 7: Global Market for High-Throughput Screening, by Detection Method, Through 2023

Table 8: Global Market for Spectroscopy, by Region, Through 2023

Table 9: Microplate Reader Products of BMG Labtech, with Detection Method

Table 10: Global Market for Mass Spectrometry, by Region, Through 2023

Table 11: Global Market for Chromatography, by Region, Through 2023

Table 12: Chromatographers Available in the Market

Table 13: Typical Applications for Predictor 96-Well Plates

Table 14: Gas Chromatography Instruments, by Shimadzu Corp. for High-Throughput Screening

Table 15: High-Performance Liquid Chromatography Systems

Table 16: Global Market for Calorimetry, by Region, Through 2023

Table 17: DCS Products Example

Table 18: Global Market for X-Ray Diffraction, by Region, Through 2023

Table 19: Select Available Products

Table 20: Global Market for Microscopy, by Region, Through 2023

Table 21: Global Market for High-Throughput Screening, by Component, Through 2023

Table 22: Global Market for Instruments/Platform, by Segment, Through 2023

Table 23: Global Market for Instruments and Platforms, by Region, Through 2023

Table 24: High-Throughput Screening Instruments

Table 25: Cytometers on the Market

Table 26: Automated Liquid Handling Modules on the Market

Table 27: Global Market for Consumables, by Region, Through 2023

Table 28: Global Market for Software and Analytics, Through 2023

Table 29: Global Market for High-Throughput Screening, by Region, Through 2023

Table 30: Global Market for High-Throughput Screening, by Technology, Through 2023

- Table 31: Global Market for Cell-Based Assays, by Region, Through 2023
- Table 32: Types of Cell-Based Assays Used in High-Throughput Screening for Drug Discovery
- Table 33: Examples of Cell-Based Assays for High-Throughput Screening
- Table 34: Global Market for Lab-on-a-Chip, by Region, Through 2023
- Table 35: Global Market for Ultra-High-Throughput Screening, by Region, Through 2023
- Table 36: Global Market for Label-Free Technology, by Region, Through 2023
- Table 37: Label-Free Technology for High-Throughput Screening
- Table 38: Global Market for High-Throughput Screening, by End User, Through 2023
- Table 39: Global Market for Pharmaceutical and Biotechnology Company End Users of High-Throughput Screening, by Region, Through 2023
- Table 40: Global Market for Research and Government Institute End Users of High-Throughput Screening, by Region, Through 2023
- Table 41: Research Institutes with High-Throughput Screening Facilities
- Table 42: Global Market for Lab and Pathology Facility End Users of High-Throughput Screening, by Region, Through 2023
- Table 43: Global Market for Contract Research Organization End Users of High-Throughput Screening, by Region, Through 2023
- Table 44: Global Market for High-Throughput Screening, by Application, Through 2023
- Table 45: Global Market for Drug Discovery Applications of High-Throughput Screening, by Region, Through 2023
- Table 46: Global Market for Biological Active Compound Screening Applications of High-Throughput Screening, by Region, Through 2023
- Table 47: Global Market for Genomics Applications of High-Throughput Screening, by Region, Through 2023
- Table 48: Global Market for DNA Sequencing Applications of High-Throughput Screening, by Region, Through 2023
- Table 49: Global Market for Protein Analysis Applications of High-Throughput Screening, by Region, Through 2023
- Table 50: Global Market for Microarray Applications of High-Throughput Screening, by Region, Through 2023
- Table 51: Global Market for the Application of High-Throughput Screening in Toxicity Studies, by Region, Through 2023
- Table 52: Global Market for Compound Profiling Applications of High-Throughput Screening, by Region, Through 2023
- Table 53: Global Market for High-Throughput Screening, by Region, Through 2023
- Table 54: North American Market for High-Throughput Screening, by Country, Through 2023
- Table 55: North American Market for High-Throughput Screening, by Technology,

Through 2023

Table 56: North American Market for High-Throughput Screening, by Component, Through 2023

Table 57: North American Market for High-Throughput Screening, by End User, Through 2023

Table 58: North American Market for High-Throughput Screening, by Application, Through 2023

Table 59: North American Market for High-Throughput Screening, by Detection Method, Through 2023

Table 60: Total Pharmaceutical Business R&D Expenditures, 2011–2015

Table 61: European Market for High-Throughput Screening, by Country, Through 2023

Table 62: European Market for High-Throughput Screening, by Technology, Through 2023

Table 63: European Market for High-Throughput Screening, by Component, Through 2023

Table 64: European Market for High-Throughput Screening, by End User, Through 2023

Table 65: European Market for High-Throughput Screening, by Application, Through 2023

Table 66: European Market for High-Throughput Screening, by Detection Method, Through 2023

Table 67: Asia-Pacific Market for High-Throughput Screening, by Country, Through 2023

Table 68: Asia-Pacific Market for High-Throughput Screening, by Technology, Through 2023

Table 69: Asia-Pacific Market for High-Throughput Screening, by Component, Through 2023

Table 70: Asia-Pacific Market for High-Throughput Screening, by End User, Through 2023

Table 71: Asia-Pacific Market for High-Throughput Screening, by Application, Through 2023

Table 72: Asia-Pacific Market for High-Throughput Screening, by Detection Method, Through 2023

Table 73: Vaccine Manufacturers in India

Table 74: Clinical Research Institutes in India

Table 75: R&D Presence in China of Top 20 Pharmaceutical Companies

Table 76: Academic Screening Facilities in China

Table 77: RoW Market for High-Throughput Screening, by Technology, Through 2023

Table 78: RoW Market for High-Throughput Screening, by End User, Through 2023

Table 79: RoW Market for High-Throughput Screening, by Component, Through 2023

Table 80: RoW Market for High-Throughput Screening, by Detection Method, Through 2023

Table 81: RoW Market for High-Throughput Screening, by Application, Through 2023

Table 82: Total Number of Patents in High-Throughput Screening, 2016–2018

Table 83: Number of Patents on High-Throughput Screening, by Key Players, 2016–2017

Table 84: U.S. Patents on High-Throughput Screening, January 2016 to July 2018

Table 85: European Patents on High-Throughput Screening, January 2016 to July 2018

Table 86: Japanese Patents on High-Throughput Screening, January 2016 to July 2018

Table 87: Company Product Portfolios of High-Throughput Screening Systems

Table 88: Albany Molecular Research Subsidiaries and Their Business Activities, 2015–2016

Table 89: Innovations and Advancements in Existing Products of Thermo Fisher Scientific, 2018

List Of Figures

LIST OF FIGURES

Summary Figure: Global Market for High-Throughput Screening, by Region, 2017-2023

Figure 1: High-Throughput Screening Well Specification

Figure 2: Triangle of High-Throughput Screening

Figure 3: First-Generation High-Throughput Screening, 1993–2000: Throughput

Figure 4: Second-Generation High-Throughput Screening, 2001–2006: Efficiency

Figure 5: Third-Generation High-Throughput Screening, 2007 Onward: Flexibility

Figure 6: Alternative Approaches to Image Sample Surface

Figure 7: Top 10 CRO Companies, by Revenue, 2017

Figure 8: Global Pharmaceutical R&D Spending, 2009–2015

Figure 9: Global Funding for Diseases, 2014–2016

Figure 10: GDP Growth Rate of India and China, 2013–2016

Figure 11: Components of Mass Spectrometer

Figure 12: Advantages of MALDI-TOF instruments

Figure 13: Advantages of Thin-Layer Chromatography

Figure 14: Features of 1290 Infinity II High-Throughput System

Figure 15: Advantages and Disadvantages of Ion Exchange Chromatography

Figure 16: Research Challenges for High-Throughput Light Microscope Analysis of Cells and Tissue

Figure 17: Features of ProMass Deconvolution Software

Figure 18: Features of Trace Finder Software

Figure 19: Process of uHTS System

Figure 20: Key Pharmaceutical and Biotechnology Companies Providing High-Throughput Screening

Figure 21: Drug Discovery Process Using High-Throughput Screening

Figure 22: Benefits of High-Throughput Screening in Biological Active Compound Screening

Figure 23: Types of Toxicity Studies

Figure 24: Strategies to Improve Screening Using Compound Profiling

Figure 25: Gross Domestic Spending on Healthcare R&D in North American Countries, 2016

Figure 26: U.S. Healthcare Expenditures on R&D, by State, FY 2016

Figure 27: Surveillance of Viral Hepatitis in the U.S., 2015

Figure 28: Total Health Expenditure Shares in Canada, by Source of Funds, 2016

Figure 29: Distribution of Causes of Mortality in Canada, 2017

Figure 30: Horizon 2020 Funding, by Sector, 2014–2022

- Figure 31: European Healthcare Expenditures as a Share of GDP, by Sector, 2015
- Figure 32: European Healthcare Expenditures, as a Share of GDP, 2015
- Figure 33: Biotech Funding in the U.K., by Type of Source, 2017
- Figure 34: Investors in New and Existing Capital Expenditures, 2016
- Figure 35: Germany's Total Healthcare Spending, 2013–2016
- Figure 36: R&D Funding in Healthcare Research and the Healthcare Industry, 2016 and 2017
- Figure 37: Systems Used in High-Throughput Screening Platform at I-Stem
- Figure 38: Mortality from Cancer in Italy, 2011–2017
- Figure 39: European Countries with High Cancer Mortality, 2014
- Figure 40: Indian Healthcare Expenditures, 2004–2014
- Figure 41: Pharmaceutical R&D Expenditures in Japan, 1995–2015
- Figure 42: China's Healthcare Expenditures, by Sector, 2016
- Figure 43: Factors That Allow AMRI To Stay Competitive in The Market
- Figure 44: PerkinElmer Strategies
- Figure 45: Strategies Adopted by Key Market Players

I would like to order

Product name: High-Throughput Screening: Technologies and Global Markets

Product link: <https://marketpublishers.com/r/H57CE3F4BC5EN.html>

Price: US\$ 1,375.00 (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/H57CE3F4BC5EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970