

# 2016 New Frontiers in the US Automated Microbiology Market: Business Challenges, Emerging Technologies, Competitive Landscape

<https://marketpublishers.com/r/2D8610727FAEN.html>

Date: October 2015

Pages: 436

Price: US\$ 7,880.00 (Single User License)

ID: 2D8610727FAEN

## Abstracts

Complete report **\$9,850**. DataPack (test volumes, sales forecasts, supplier shares) **\$6,400**.

“2016 New Frontiers in the US Automated Microbiology Market” is VPGMarketResearch’s new analysis of the major business opportunities emerging in the automated microbiology market during the next five years. The report examines key trends in the U.S. automated microbiology market; reviews current and emerging assays; analyzes potential applications of innovative diagnostic technologies; forecasts volume and sales for molecular diagnostic, microbial identification, antibiotic susceptibility, blood culture, urine screening and immunodiagnostic procedures, as well as over 100 infectious disease tests by assay, application, market segment, profiles leading players and potential market entrants; and suggests alternative business expansion strategies for suppliers.

## Rationale

The level of automation in the microbiology laboratory has been lagging behind that of other major clinical laboratory segments, such as chemistry and hematology. The slow acceptance of the technology is in part due to the complexity of developing automation suitable for microbiology tests.

The introduction of automated microbiology instrumentation has been delayed by a number of intrinsic and technical problems. The diffusion of automated microbiology systems, once the technology was developed, has not matched that of other automated laboratory technologies. The acquisition of automation in microbiology has been slowed

by forces less easily identifiable than the effects of various reimbursement plans. Some laboratorians still believe that current instrumentation is not the ultimate technology and expect better automation on the horizon.

The driving force behind the need for rapid reporting of microbiological test results is the clinical relevance in a time of financial austerity, a time when cost and health care effectiveness to the patient and diagnostician looms ever larger, and where after-the-fact results at high expense are coming under severe scrutiny worldwide.

This comprehensive report will assist diagnostics industry executives, as well as companies planning to diversify into the dynamic and rapidly expanding microbiology market, in evaluating emerging opportunities and developing effective business strategies.

### **Supplier Shares, Sales and Volume Forecasts**

- Sales and market shares of major suppliers of microbiology products, by individual test.
- Five-year test volume and sales forecasts for over 100 microbiology assays.
- Test volume estimates by method (molecular, serology/immunodiagnostics, culture/microscopy).

### **U.S. Market Overview**

- Review of the market dynamics, trends, structure, size, growth and major suppliers.
- Estimated universe of laboratories performing microbiology testing.
- Specimen, test volume and sales forecasts.

### **Business Opportunities and Strategic Recommendations**

- Emerging opportunities for new analyzers, reagents kits, IT and other products with significant market appeal during the next five years.

- Design criteria for decentralized testing products.

- Alternative market penetration strategies.

- Potential market entry barriers and risks.

### **Specimen Types**

- Urine

- Sterile Fluids: Blood, Serum, CSF

- Throat Swabs, Respiratory Secretions

- Genital Secretions

- Stool

- Abscess/Wound

- Sputum

- Saliva

### **Applications**

- Microbial Identification

- Antibiotic Susceptibility

- Urine Screening

- Blood Cultures

### **Review of Major Automated Systems**

- Review of major automated molecular diagnostic, multipurpose, specialized, microbial identification, antibiotic susceptibility, blood culture, urine screening, and immunodiagnostic analyzers.

- The report features analyzers manufactured by Abbott, Alifax, Anagen, BD, Beckman Coulter/Danaher, Biochem, Biolog, bioMerieux, Bio-Rad, Biotrol, Cepheid, Curetis, GenMark, Hologic/Gen-Probe, HTG, Iris, J&J, LabSystems, Life Technologies, MiDI, Olympus, Qiagen, Roche, Siemens, Sy-Lab, Sysmex, Tecan, Thermo Fisher, Tosoh.

### **Infectious Diseases Analyzed in the Report**

AIDS/HIV, Adenovirus, Aeromonads, Bartonella, Blastocystis Hominis, Campylobacter,

Candida, Chancroid, Chlamydia, Clostridium, Coronavirus, Coxsackievirus, Cryptosporidium,

Cyclospora, CMV, E. Coli, Echovirus, Encephalitis, Enterovirus, EBV, Giardia, Gonorrhea,

Granuloma Inguinale, Hantavirus, H. Pylori, Hepatitis, Herpes Influenza, Legionella, Lyme disease,

Lymphogranuloma, Malaria, Measles, Meningitis, Microsporidium, Mononucleosis, Mumps,

Mycoplasma, HPV, Parvovirus, Pneumonia, Polyomaviruses, Pseudomonas, Rabies, RSV, Rhinovirus, Rotavirus, Rubella, Salmonella, Septicemia, Shigella, Staphylococci, Streptococci, Syphilis, Toxoplasmosis, Trichomonas, TB, Vibrio, West Nile, Yersinia and others.

### **Technology Assessment**

- Assessment of molecular diagnostic, monoclonal antibody, immunoassay, and other technologies and their potential applications for the microbiology market.

- Global listings of companies developing or marketing microbiology products by individual test.

### **Competitive Strategies**

- Strategic assessments of major suppliers and start-up firms developing innovative technologies and products, including their sales, product portfolios, marketing tactics, collaborative arrangements, and new products in R&D.

- The companies analyzed in the report include:

- Abbott
- Affymetrix
- Agilent Technologies
- Applied Gene Technologies
- Arca Biopharma
- Beckman Coulter/Danaher
- Becton Dickinson
- Biokit

- bioMerieux
- Bio-Rad
- Biotest
- Cepheid
- CellMark Forensics/LabCorp
- Decode Genetics
- Diadexus
- Diamedix
- DiaSorin
- Eiken Chemical
- Elitech Group
- Enzo Biochem
- Exact Sciences
- Fujirebio
- Grifols
- Hologic/Gen-Probe
- Illumina
- ID Biomedical/GSK

- Kreatech/Leica
- Li-Cor Biosciences
- Lonza
- Monogram Biosciences
- Myriad Genetics
- Ortho-Clinical Diagnostics
- Perkin Elmer/Caliper
- Proteome Sciences
- Qiagen
- Roche
- Scienion
- Sequenom
- SeraCare
- Siemens
- Sierra Molecular
- Shimadzu
- Takara Bio
- Tecan
- Thermo Fisher

- Wallac/PE

- Wako

Contains 436 pages and 94 tables



## Contents

### I. INTRODUCTION

### II. WORLDWIDE MARKET AND TECHNOLOGY OVERVIEW

#### A. Introduction

1. Major Factors Affecting Market Penetration of Microbiology Instrumentation
2. Traditional Practices
3. Technological Challenges
4. Automation: Impact on the Microbiology Laboratory and the Patient

#### B. Major Specimen Types

1. Urine
2. Sterile Fluids: Blood, Serum, and CSF
3. Throat Swabs and Respiratory Secretions
4. Genital Secretions
5. Stool
6. Abscess/Wound
7. Sputum
8. Saliva

#### C. Test Applications

1. Microbial Identification
2. Antibiotic Susceptibility
3. Urine Screening
  - a. Photometry
  - b. Bioluminescence
  - c. Colorimetric Filtration
  - d. Enzymatic Detection
  - e. Optical Detection
4. Blood Cultures

#### D. Major Microbiology Automated and Semiautomated Systems

1. Multiple Purpose Microbiology Systems
2. Specialized Microbiology Systems
3. Molecular Diagnostic Systems
4. Immunodiagnostic Systems

#### E. Emerging Diagnostic Technologies

1. Molecular Diagnostics (Amplification Methods, Sequencing, Microarrays/Biochips)
  - a. DNA Sequencing  
Introduction

- Sequencing Methods
- Autoradiography
- The Human Genome Project
- Sequencing Automation
- Image Scanners
- Fluorescent Detection
- Gene Profiling
- Gene Expression
- Polymorphism Screening
- Protein Interaction Networks
- b. DNA And RNA Probe Technology
  - Basic Principles
  - Probe Preparation
  - The DNA Probe Test
    - Sample Preparation
    - Hybridization
    - Separation
    - Detection/Measurement
  - Test Formats
    - Filter Hybridization
    - Southern Blot
    - Northern Blot
    - In Situ Hybridization
    - Others
  - Labeling Techniques
  - Amplification Methods
    - Polymerase Chain Reaction
      - Temperature Cyclers
    - PCR Variations
      - Immuno-PCR
      - QC-PCR
      - DAP-PCR
    - Strand Displacement Activation
  - TMA
  - Ligase Chain Reaction
  - Branched DNA
    - Hybridization Protection Assay
  - Nucleic-Acid Sequence-Based Amplification
  - Self-Sustained Sequence Replicase

## Others

Ampliprobe

CAR

CAS

CPT

Dendritic Polymer Technology

ISO-CR

LAT

Probe

RAMP

Repair Chain Reaction

Rolling Circles

Sequence Independent Gene Amplification

Sequence Initiation Reaction

SISPA

Solid Phase Amplification

## c. Detection Technologies

Radioactive Methods

Overview

Major Isotopes

P-32

S-35

H-3

I-125

Non-Isotopic Methods

Enzymatic Labels

Chemical Labeling

Indirect Chemical Labeling

Direct Chemical Labeling

Fluorescence

Chemiluminescence

Electrical Conductivity

## d. Biochips: Genosensors, Microarrays, and Labs-on-the-Chip

Liquid Transportation and Mixing

Separation

Reaction

Detection

## 2. Monoclonal Antibodies

## 3. Immunoassays

4. Differential Light Scattering
5. Information Technology
6. Artificial Intelligence
7. Liposomes
8. Flow Cytometry
9. Chromatography
10. Diagnostic Imaging
11. Gel Microdroplets
12. Other

### **III. U.S.**

- A. Business Environment
- B. Market Structure
- C. Market Size, Growth and Major Supplier Sales and Market Shares

### **IV. MAJOR PRODUCT DEVELOPMENT OPPORTUNITIES**

### **V. DESIGN CRITERIA FOR DECENTRALIZED TESTING PRODUCTS**

### **VI. ALTERNATIVE MARKET PENETRATION STRATEGIES**

- A. Internal Development
- B. Collaborative Arrangements
- C. University Contracts
- D. Distribution Strategies for Decentralized Testing Markets
  1. Marketing Approaches
  2. Product Complexity
  3. Customer Preference
  4. Established Suppliers
  5. Emerging Suppliers
  6. Major Types of Distributors
  7. Market Segmentation

### **VII. POTENTIAL MARKET ENTRY BARRIERS AND RISKS**

- A. Market Maturity
- B. Cost Containment
- C. Competition

- D. Technological Edge and Limitations
- E. Patent Protection
- F. Regulatory Constraints
- G. Decentralized Testing Market Challenges

## **VIII. COMPETITIVE ASSESSMENTS**

Abbott  
Affymetrix  
Agilent Technologies  
Applied Gene Technologies  
Arca Pharma  
Beckman Coulter/Danaher  
Becton Dickinson  
Biokit  
bioMerieux  
Bio-Rad  
Biotest  
Cepheid  
CellMark Forenciscs/Lab Corp  
Decode Genetics  
Diadexus  
Diamedix  
DiaSorin  
Eiken Chemical  
Elitech Group  
Enzo Biochem  
Exact Sciences  
Fujirebio  
Grifols  
Hologic/Gen-Probe  
Illumina  
ID Biomedical/GSK  
Kreatech/Leica  
Li-Cor Biosciences  
Lonza  
Monogram Biosciences  
Myriad Genetics  
Ortho-Clinical Diagnostics

Perkin Elmer/Caliper  
Proteome Sciences  
Qiagen  
Roche  
Scienion  
Sequenom  
SeraCare  
Siemens  
Sierra Molecular  
Shimadzu  
Takara Bio  
Tecan  
Thermo Fisher  
Wallac/PE  
Wako

## List Of Tables

### LIST OF TABLES

Major Companies Developing or Marketing AIDS Tests  
Major Companies Developing or Marketing Adenovirus Tests  
Major Companies Developing or Marketing Bartonella Tests  
Major Companies Developing or Marketing Campylobacter Tests  
Major Companies Developing or Marketing Candida Tests  
Major Companies Developing or Marketing Chlamydia Tests  
Major Companies Developing or Marketing Clostridium Tests  
Major Companies Developing or Marketing Coronavirus Tests  
Major Companies Developing or Marketing Cryptosporidium Tests  
Major Companies Developing or Marketing CMV Tests  
Major Companies Developing or Marketing Echovirus Tests  
Major Companies Developing or Marketing Enterovirus Tests  
Major Companies Developing or Marketing EBV Tests  
Major Companies Developing or Marketing Giardia Tests  
Major Companies Developing or Marketing Gonorrhoea Tests  
Major Companies Developing or Marketing Hantavirus Tests  
Major Companies Developing or Marketing Helicobacter Pylori Tests  
Major Companies Developing or Marketing Hepatitis Tests  
Major Companies Developing or Marketing Herpes Tests  
Major Companies Developing or Marketing Influenza Tests  
Major Companies Developing or Marketing Legionella Tests  
Major Companies Developing or Marketing Lyme Disease Tests  
Major Companies Developing or Marketing Lymphogranuloma Tests  
Major Companies Developing or Marketing Malaria Tests  
Major Companies Developing or Marketing Measles Tests  
Major Companies Developing or Marketing Meningitis Tests  
Major Companies Developing or Marketing Microsporidium Tests  
Major Companies Developing or Marketing Mononucleosis Tests  
Major Companies Developing or Marketing Mumps Tests  
Major Companies Developing or Marketing Mycoplasma Tests  
Major Companies Developing or Marketing Papilloma Virus Tests  
Major Companies Developing or Marketing Parvovirus Tests  
Major Companies Developing or Marketing Pneumonia Tests  
Major Companies Developing or Marketing RSV Tests  
Major Companies Developing or Marketing Rotavirus Tests

Major Companies Developing or Marketing Rubella Tests  
Major Companies Developing or Marketing Salmonella Tests  
Major Companies Developing or Marketing Septicemia Tests  
Major Companies Developing or Marketing Shigella Tests  
Major Companies Developing or Marketing Staphylococci Tests  
Major Companies Developing or Marketing Streptococci Tests  
Major Companies Developing or Marketing Syphilis Tests  
Major Companies Developing or Marketing Toxoplasmosis Tests  
Major Companies Developing or Marketing Trichomonas Tests  
Major Companies Developing or Marketing Tuberculosis Tests  
Major Companies Developing or Marketing West Nile Tests  
Major Companies Developing or Marketing Yersinia Tests  
U.S.A. Laboratories Performing Microbiology Tests by Market Segment  
U.S.A. Hospital Laboratories Performing Microbiology Tests by Bed Size  
U.S.A. Commercial/Private Laboratories Performing Microbiology Tests by Annual Test Volume  
U.S.A. All Market Segments Microbiology Specimen Volume  
U.S.A. Hospital Laboratories Microbiology Specimen Volume  
U.S.A. Physician Offices/Group Practices Microbiology Specimen Volume  
U.S.A. Public Health Laboratories Microbiology Specimen Volume  
U.S.A. Commercial/Private Laboratories Microbiology Specimen Volume  
U.S.A. Microbiology Test Volume by Market Segment  
U.S.A. Microbiology Test Volume by Application  
U.S.A. Microbial Identification Test Volume by Market Segment  
U.S.A. Urine Screening Test Volume by Market Segment  
U.S.A. Blood Culture Test Volume by Market Segment  
U.S.A. Antibiotic Susceptibility Test Volume by Market Segment  
U.S.A. Microbiology Consumables Market by Application  
U.S.A. Microbiology Consumables Market by Market Segment  
U.S.A. Microbial Identification Consumables Sales by Market Segment  
U.S.A. Antibiotic Susceptibility Consumables Sales by Market Segment  
U.S.A. Blood Culture Consumables Sales by Market Segment  
U.S.A. Urine Screening Consumables Sales by Market Segment  
U.S.A. All Market Segments Infectious Disease Test Volume Forecast by Assay  
U.S.A. All Market Segments Infectious Disease Diagnostics Market Forecast by Test  
U.S.A. Infectious Disease Blood Screening NAT Volume Forecast by Assay  
U.S.A. Infectious Disease Blood Screening NAT Reagent Market Forecast by Assay  
U.S.A. HIV/AIDS Testing Market Diagnostics Sales by Major Supplier  
U.S.A. HIV/Hepatitis Blood Screening NAT Market Diagnostics Sales by Major Supplier



U.S.A. Adenovirus Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Campylobacter Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Candida Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Chancroid Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Chlamydia Testing Market Diagnostics Sales by Major Supplier  
U.S.A. CMV Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Cryptosporidium Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Echovirus Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Enterovirus Testing Market Diagnostics Sales by Major Supplier  
U.S.A. EBV Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Giardia Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Gonorrhoea Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Helicobacter Pylori Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Hepatitis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Hepatitis C Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Herpes Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Influenza Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Legionella Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Lyme Disease Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Measles Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Meningitis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Mononucleosis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Mumps Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Mycoplasma Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Pneumonia Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Rabies Testing Market Diagnostics Sales by Major Supplier  
U.S.A. RSV Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Rotavirus Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Rubella Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Salmonella Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Septicemia Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Shigella Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Streptococci Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Syphilis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Toxoplasmosis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Tuberculosis Testing Market Diagnostics Sales by Major Supplier  
U.S.A. Molecular Diagnostics Market Sales and Shares of Major Suppliers

## I would like to order

Product name: 2016 New Frontiers in the US Automated Microbiology Market: Business Challenges, Emerging Technologies, Competitive Landscape

Product link: <https://marketpublishers.com/r/2D8610727FAEN.html>

Price: US\$ 7,880.00 (Single User License / Electronic Delivery)

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

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/2D8610727FAEN.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

