

# US Nucleic Acid Testing/NAT Market Forecasts and Supplier Shares 2017-2021: Emerging Opportunities and Growth Strategies for Instrument and Reagent Suppliers

<https://marketpublishers.com/r/UF6B5DFD906EN.html>

Date: December 2017

Pages: 1157

Price: US\$ 9,500.00 (Single User License)

ID: UF6B5DFD906EN

## Abstracts

### Highlights

Comprehensive 1,157-page market segmentation analysis of the US NAT market.

Major issues pertaining to the US NAT laboratory practice, as well as key economic, regulatory, demographic, social and technological trends with significant market impact during the next five years.

An extensive review of DNA probe and biochip technologies, test formats, detection methodologies, trends in testing automation and amplification methods.

Five-year test volume and reagent sales forecasts for the following categories:

Infectious Diseases

Cancer

Forensic Testing

Genetic Diseases

## Paternity Testing/HLA Typing

Review of testing methodologies and instrumentation technologies.

Feature comparison of automated and semiautomated analyzers.

Sales and market shares of leading suppliers.

Over 60 specific opportunities for NAT instruments, test systems, IT and auxiliary products.

Profiles of major suppliers, and emerging market entrants, including their sales, product portfolios, marketing tactics, technological know-how, new products in R&D, collaborative arrangements and business strategies.

Alternative market penetration strategies.

Potential market entry barriers and risks.

Business planning issues and concerns.

Contains 1,157 pages and 65 tables

## Contents

### **I. INTRODUCTION**

### **II. MAJOR PRODUCT DEVELOPMENT OPPORTUNITIES**

- A. Instrumentation
- B. Reagent Kits and Test Systems/panels
- C. Computers, Software and Automation
- D. Auxiliary Products

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

### **IV. ALTERNATIVE MARKET PENETRATION STRATEGIES**

- A. Internal Development
- B. Collaborative Arrangements
- C. University Contracts
- D. Distribution Strategies For Decentralized Testing Markets

### **V. 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

### **VI. WORLDWIDE MARKET AND TECHNOLOGY REVIEW**

- A. DNA Sequencing
  - 1. Introduction
  - 2. Sequencing Methods
  - 3. Autoradiography
  - 4. The Human Genome Project
  - 5. Sequencing Automation
  - 6. Image Scanners

7. Fluorescent Detection
  8. Gene Profiling
  9. Gene Expression
  10. Polymorphism Screening
  11. Protein Interaction Networks
- B. DNA and RNA Probe Technologies**
1. Basic Principles
  2. Probe Preparation
  3. The DNA Probe Test
  4. Test Formats
  5. Labeling Techniques
  6. Amplification Methods
- C. Detection Technologies**
1. Radioactive Methods
    - a. Overview
    - b. Major Isotopes
      - P-32
      - S-35
      - H-3
      - I-125
  2. Non-Isotopic Methods
    - a. Enzymatic Labels
    - b. Chemical Labeling
      - Indirect Chemical Labeling
      - Direct Chemical Labeling
    - c. Fluorescence
    - d. Chemiluminescence
    - e. Electrical Conductivity
- D. Molecular Diagnostic Instrumentation Review**
1. Abbott LCx
  2. Beckman Coulter/Biomek FK
  3. BD Viper System with XTR Technology
  4. BD Innova
  5. Becton Dickinson SDA
  6. bioMerieux NucliSENS easyMAG
  7. bioMerieux NucliSENS easyQ and MiniMAG
  8. Bio-Rad GeneScope
  9. Cepheid GeneXpert
  10. Curetis Unyvero

11. GenMark Dx eSensor XT-8
  12. Hologic/Gen-Probe Panther
  13. Hologic/Gen-Probe Tigris/DTS
  14. HTG Molecular Edge
  15. Life Technologies QuantStudio Dx
  16. Qiagen QIA Symphony RGQ
  17. Roche Cobas Amplicor
  18. Roche Cobas TaqMan 48
  19. Roche Cobas TaqMan
  20. Roche Cobas TaqMan AmpliPrep
  21. Roche LighCycler 480
  22. Roche Cobas 4800
  23. Roche Cobas s 201
  24. Siemens Versant
  25. Tecan LS Series
- E. Biochips: Genosensors, Microarrays, and Labs-on-the-Chip
- Liquid Transportation and Mixing
  - Separation
  - Reaction
  - Detection
- F. Pharmacogenomics
- G. Major Applications
1. Microbiology/Infectious Diseases
    - a. Overview
    - b. Major Infectious Diseases
      - AIDS: HIV/HIV-1/2/Combo, HIVAg/HIV NAT, Western Blot, HTLV-I/II
      - Adenovirus
      - Aeromonas
      - Anthrax/Bacillus Anthracis
      - Arboviruses
      - Babesiosis
      - Bacillary Epithelioid Angiomatosis (BEA) and Other Bartonella (Rochalimaea)
      - Blastocystis Hominis
      - Brucella
      - Campylobacter
      - Candida
      - Chagas Disease
      - Chancroid
      - Chlamydia

Clostridium Difficile  
Coronaviruses  
Coxsackieviruses  
Creutzfeldt-Jakob's Disease  
Cryptosporidium Parvum  
Cyclospora Cayetanensis  
Cytomegalovirus  
Ebola Virus  
E. Coli  
EchoVirus  
Encephalitis  
Enteroviruses  
Epstein-Barr Virus  
Giardia Lamblia  
Gonorrhea  
Granuloma Inguinale  
Hantavirus  
Helicobacter Pylori  
Hepatitis: HAV NAT, HBV NAT, HBs Ag, HCV, HCV NAT, Anti-HBc, Anti-HBs, Anti-HAV, Hepatitis Delta, HBc Ag, HBe Ag, ALT/SGPT  
Herpes Simplex Virus  
Human Herpes Virus-6 (HHV-6)  
Influenza Viruses  
Legionella  
Lyme Disease  
Lymphogranuloma Venereum (LGV)  
Malaria  
Measles (Rubeola)  
Meningitis  
Microsporidium  
Mononucleosis  
Mumps  
Mycoplasma  
Papillomaviruses  
Parvovirus B19  
Pneumonia  
Polyomaviruses  
Pseudomonas Aeruginosa  
Rabies

- Respiratory Syncytial Virus (RSV)
- Rhinoviruses
- Rotavirus
- Rubella
- Salmonellosis
- Septicemia
- Shigellosis
- Staphylococcus Aureus
- Streptococci
- Syphilis
- Toxoplasmosis
- Trichomonas Vaginalis
- Tuberculosis
- Vibrio
- West Nile Virus
- Yersina
- 2. Cancer Testing
  - a. Overview
  - b. Major Cancer Types
    - Prostate
    - Lung
    - Colon and Rectum
    - Breast
    - Skin
    - Uterine
    - Leukemia
    - Oral
  - c. Oncogenes
    - Abl/abl-bcr
    - AIB1
    - BCL-2
    - BRCA1
    - CD44
    - C-fos
    - C-myb
    - C-myc
    - CYP17
    - Erb-B
    - HPC1

N-myc

P40

P51

P53

PIK3CA

PTI-1

Ras

Reg

Sis

Src

### 3. Genetic Diseases

a. Overview

b. Nucleic Acid Amplification

c. Chromosome Imaging

d. Genomics Technologies

e. Proteomics Technologies

f. Current Pharmacogenomic Tests

g. Future Pharmacogenomic Testing

h. Major Diseases

Achondroplasia

Autosomal Dominant Polycystic Kidney Disease

Cancer

Cosmetogenomics

Cystic Fibrosis

Down's Syndrome

Duchenne and Becker Muscular Dystrophy

Factor V (Leiden)

Factor IX Deficiency

Fragile X Syndrome

Heart Disease

Hemochromatosis

Hemophilia

Huntington's Disease

Maternal-Fetal Incompatibility

Multiple Endocrine Neoplasia

Phenylketonuria (PKU)

Polycystic Kidney Disease (PKD)

Prenatal Screening

Retinitis Pigmentosa



- Retinoblastoma
- Sickle Cell Anemia
- Spinal Muscular Atrophy
- Vitamin B12 Metabolism
- i. Social Issues and Concerns
- 4. Forensic Testing
  - a. Overview
  - b. Multilocus and Single Locus Probes
    - Multilocus Probes
    - Single Locus Probes
    - PCR and RFLP
  - c. The FBI
  - d. DNA Profile Data Banks
    - U.S.A.
    - U.K.
  - e. Judicial Implementation
  - f. Major Crime Categories
  - g. Factors Contributing to the DNA Probe Market Expansion
    - Technology Availability
    - Use of Hair as Evidence
  - h. Wildlife Forensics
- 5. Paternity Testing/HLA Typing
- 6. Other Applications
  - a. Disease Susceptibility Testing
  - b. Cardiovascular Diseases
  - c. Diabetes
  - d. Alzheimer's Disease
  - e. Periodontal Disease
  - f. Plasma Purification
  - g. Organ Transplantation
  - h. Water Contamination
  - i. Other
- H. Competing/complementing
  - 1. Monoclonal Antibodies/Immunoassays
  - 2. RNA Probes
  - 3. Two-Dimensional Electrophoresis
  - 4. Flow Cytometry

## **VII. U.S.A. MOLECULAR DIAGNOSTICS MARKET**

- A. Executive Summary
- B. Business Environment
- C. Market Structure
- D. Market Size, Test Volume and Sales Forecasts, Major Supplier Sales and Market Shares

## **VIII. COMPETITIVE ASSESSMENTS**

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  
Eiken  
Elitech Group  
Enzo  
Exact Sciences  
Fujirebio  
Grifols  
Hologic/Gen-Probe  
Illumina  
Kreatech/Leica  
Li-Cor Biosciences  
Monogram Biosciences/LabCorp  
Myriad Genetics  
Ortho-Clinical Diagnostics  
Perkin Elmer/Caliper  
Proteome Sciences

Qiagen  
Roche  
Scienion  
Sequenom  
Shimadzu  
Siemens  
Sierra Molecular  
Takara Bio  
Tecan Group  
Thermo Fisher

### **XIII. APPENDIX: MAJOR UNIVERSITIES AND RESEARCH CENTERS DEVELOPING MOLECULAR DIAGNOSTIC TECHNOLOGIES**

## List Of Tables

### LIST OF TABLES

Major Companies Developing or Marketing AIDS Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Adenovirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Bartonella Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Campylobacter Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Candida Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Chlamydia Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Clostridium Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Coronavirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Cryptosporidium Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing CMV Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Echovirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Enterovirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing EBV Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Giardia Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Gonorrhoea Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Hantavirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Helicobacter Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Hepatitis Molecular Diagnostic and Other

Direct Identification Tests

Major Companies Developing or Marketing Herpes Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Influenza Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Legionella Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Lyme Disease Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Measles Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Meningitis Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Mononucleosis Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Mumps Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Mycoplasma Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Pneumonia Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing RSV Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Rotavirus Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Rubella Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Salmonella Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Septicemia Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Shigella Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Streptococci Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Syphilis Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Toxoplasmosis Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Trichomonas Molecular Diagnostic and Other Direct Identification Tests

Major Companies Developing or Marketing Tuberculosis Molecular Diagnostic and Other Direct Identification Tests

Oncogenes Potential Application in Cancer Diagnosis

Major Companies Developing or Marketing Cancer Molecular Diagnostic Tests

Major Companies Developing or Marketing Molecular Diagnostic Tests For Genetic Diseases

U.S.A. Molecular Diagnostics Test Volume And Sales By Major Application

U.S.A. Laboratories Performing DNA Sequencing By Market Segment

U.S.A. Molecular Diagnostics Market Potential Laboratory Universe by Market Segment 2014

U.S.A. Molecular Diagnostics Test Volume by Major Application

U.S.A. Major Infectious Disease Test Volume by Assay

U.S.A. Major Infectious Disease Test Volume by Method

U.S.A. Molecular Diagnostics Market By Major Application

U.S.A. Molecular Diagnostics Market Estimated Sales And Market Shares of Major Suppliers

U.S.A. Major Infectious Disease Diagnostics Market by Assay

U.S.A. AIDS Testing Market Estimated Sales by Major Supplier

U.S.A. Adenovirus Testing Market Estimated Sales by Major Supplier

U.S.A. Chlamydia Testing Market Estimated Sales by Major Supplier

U.S.A. CMV Testing Market Estimated Sales by Major Supplier

U.S.A. Echovirus Testing Market Estimated Sales by Major Supplier

U.S.A. Enterovirus Testing Market Estimated Sales by Major Supplier

U.S.A. EBV Testing Market Estimated Sales by Major Supplier

U.S.A. Gonorrhoea Testing Market Estimated Sales by Major Supplier

U.S.A. Hepatitis Testing Market Estimated Sales by Major Supplier

U.S.A. Hepatitis C Testing Market Estimated Sales by Major Supplier

U.S.A. HIV/Hepatitis Blood Screening NAT Market Reagent Sales by Major Supplier

U.S.A. Herpes Testing Market Estimated Sales by Major Supplier

U.S.A. Influenza Testing Market Estimated Sales by Major Supplier

U.S.A. Meningitis Testing Market Estimated Sales by Major Supplier

U.S.A. Mycoplasma Testing Market Estimated Sales by Major Supplier

U.S.A. Pneumonia Testing Market Estimated Sales by Major Supplier

U.S.A. Rabies Testing Market Estimated Sales by Major Supplier

U.S.A. RSV Testing Market Estimated Sales by Major Supplier

U.S.A. Salmonella Testing Market Estimated Sales by Major Supplier

U.S.A. Shigella Testing Market Estimated Sales by Major Supplier

## U.S.A. West Nile Virus Nat Market Reagent Sales by Major Supplier

## I would like to order

Product name: US Nucleic Acid Testing/NAT Market Forecasts and Supplier Shares 2017-2021:  
Emerging Opportunities and Growth Strategies for Instrument and Reagent Suppliers

Product link: <https://marketpublishers.com/r/UF6B5DFD906EN.html>

Price: US\$ 9,500.00 (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/UF6B5DFD906EN.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



