

# Germany Nucleic Acid Testing Market: Innovative Technologies and Emerging Business Opportunities

<https://marketpublishers.com/r/G75F3284A1FEN.html>

Date: December 2012

Pages: 850

Price: US\$ 4,720.00 (Single User License)

ID: G75F3284A1FEN

## Abstracts

### Highlights

Comprehensive 850-page market segmentation analysis of the German NAT market.

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

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

Ten-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 850 pages and 36 tables

## Contents

### INTRODUCTION

### WORLDWIDE MARKET AND TECHNOLOGY OVERVIEW

- 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 Technology
  - 1. Basic Principles
  - 2. Probe Preparation
  - 3. The DNA Probe Test
    - a. Sample Preparation
    - b. Hybridization
    - c. Separation
    - d. Detection/Measurement
  - 4. Test Formats
    - a. Filter Hybridization
    - b. Southern Blot
    - c. Northern Blot
    - d. In Situ Hybridization
    - e. Others
  - 5. Labeling Techniques
  - 6. 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 Networks

RAMP

Repair Chain Reaction

Rolling Circles

Sequence Independent Gene Amplification

Sequence Initiation Reaction

SISPA

Solid Phase Amplification

## 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. Instrumentation Review
  - 1. Abbott LCx
  - 2. Beckman Coulter/Biomek FK
  - 3. Becton Dickinson SDA
  - 4. Bio-Rad GeneScope
  - 5. Gen-Probe Tigris
  - 6. Roche Cobas Amplicor
  - 7. 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
        - Structure and Composition
        - Classification
        - AIDS Origins
        - Animal Lentivirus Systems
        - Virus Receptors
        - HIV Infections in Humans
          - Pathogenesis and Pathology
        - CD4T Lymphocytes and Memory Cells
        - Monocytes and Macrophages
        - Lymphoid Organs
        - Neural Cells
        - Viral Coinfections
          - Clinical Findings
        - Plasma Viral Load
        - Pediatric AIDS
          - Neurologic Disease
          - Opportunistic Infections
          - Cancer
        - Immunity

- Virus Isolation
- Serology
- Viral Nucleic Acid/Antigen Detection
- Epidemiology
  - Worldwide Spread of AIDS
  - United States
  - Routes of Transmission
- DNA Probes
  - Overview
  - Quantitative PCR
  - In Situ PCR
  - Needed Improvements
- Viral Load/Drug Resistance Testing
- Genotype and Phenotype Testing
- Blood Banking Considerations
- Adenovirus
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
  - Adeno-Associated Viruses (AAV)
- Anthrax/Bacillus Anthracis
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Babesiosis
  - Background
- BEA and Other Bartonella Diseases
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Chagas Disease
  - Background
- Campylobacter
  - Background
  - Diagnostic Tests
    - Culture Identification
  - Vaccines and Drugs
- Chlamydia
  - Background

- Chlamydia psittaci
- Chlamydia pneumoniae
- Chlamydia trachomatis
- Diagnostic Tests
- Vaccines and Drugs
- Creutzfeldt-Jakob's Disease
  - Background
  - Blood Transmission
  - Diagnostic Tests
  - Major Commercial and Academic Players
    - Bayer
    - Disease Sciences/Bio Tec Global
    - Imperial College School of Medicine
  - Ortho-Clinical Diagnostics
    - Pall
    - ProMetic Life Sciences
    - Proteome Sciences/Idexx
    - Q-One Biotech
    - Serono
    - U.S. Agricultural Research Service
  - Drugs
  - Vaccines
- Cytomegalovirus
  - Background
  - Chorioretinitis
  - Gastrointestinal
  - Central Nervous System Disease
  - Diagnostic Tests
  - Vaccines and Drugs
- Ebola Virus
  - Background
    - Epidemiology
    - Clinical Syndromes
  - Diagnostic Tests
  - Vaccines and Drugs
- EchoVirus
  - Background
    - Acute Aseptic Meningitis
    - Encephalitis

- Exanthems
- Respiratory Disease
- Myopericarditis
- Neonatal Infections
- Diagnostic Tests
- Vaccines and Drugs
- Encephalitis
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Enteroviruses
  - Background
  - Diagnostic Tests
    - Viral Isolation and Identification
    - Antibody Tests
  - Vaccines and Drugs
- Epstein-Barr Virus
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Gonorrhea
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Hepatitis
  - Hepatitis A
  - Hepatitis B
    - Structure and Composition
    - Replication
  - Hepatitis C
  - Hepatitis D (Delta)
  - Hepatitis E
  - Hepatitis G
  - Hepatitis Infections Pathology
  - Clinical Findings
  - Laboratory Tests
    - Hepatitis A
    - Hepatitis B
    - Hepatitis C



- Hepatitis D
- Hepatitis E
- Virus-Host Immune Reactions
- Epidemiology
  - Hepatitis A
  - Hepatitis B
  - Hepatitis C
  - Hepatitis D (Delta)
- Vaccines and Drugs
- Herpes Simplex Virus
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Legionella
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- Lyme Disease
  - Background
  - Clinical Description
  - Clinical Case Definition
  - Laboratory Criteria for Diagnosis
  - Case Classification
  - Diagnostic Tests
  - Vaccines and Drugs
- Malaria
- Mycoplasma
  - Background
    - Ureaplasma Urealyticum & Mycoplasma Hominis
  - Diagnostic Tests
  - Vaccines and Drugs
- Papillomaviruses/HPV
  - Background
    - HPV in Cancer
    - Cervical Neoplasm
  - Diagnostic Tests
  - Vaccines and Drugs
  - Prevention

## Parvovirus B19

### Background

Microbiology

Epidemiology

Clinical Syndromes

Erythema Infectiosum (Slapped Cheek)

Adult Polyarthropathy

Transient Aplastic Crisis

Transient Pancytopenia

Red Cell Aplasia in Immunocompromised

Perinatal Infections

### Diagnostic Test

### Vaccines and Drugs

## Pneumonia

### Background

### Diagnostic Tests

### Vaccines and Drugs

## Polyomaviruses

### Background

### Diagnostic Tests

### Vaccines and Drugs

## Salmonellosis

### Background

### Diagnostic Tests

### Vaccines and Drugs

## Shigellosis

### Background

### Diagnostic Tests

### Vaccines and Drugs

## Streptococci

### Background

### Diagnostic Tests

### Vaccines and Drugs

Group A Streptococci

Group B Streptococci

## Toxoplasmosis

### Background

### Diagnostic Tests

### Vaccines and Drugs

- Tuberculosis
  - Background
  - Diagnostic Tests
    - Microscopic Characteristics
    - Cultural Characteristics
  - Skin Tests
  - MDRTB
  - Vaccines and Drugs
- West Nile Virus
  - Background
  - Clinical Syndromes
  - Diagnostic Tests
  - Vaccines and Drugs
- Yersinia
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- c. Antibiotic Susceptibility
- 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 Technologies
  - 1. Monoclonal Antibodies/Immunoassays
  - 2. RNA Probes
  - 3. Two-Dimensional Electrophoresis
  - 4. Flow Cytometry

- I. Worldwide Market Overview
  - 1. Business Environment
  - 2. Market Structure
  - 3. Market Size and Growth

## **GERMANY**

- A. Executive Summary
- B. Business Environment
- C. Market Structure
- D. Market Size, Growth And Major Suppliers' Sales And Market Shares Major Product Development Opportunities
  - A. Instrumentation
  - B. Reagent Kits and Test Systems/panels
  - C. Computers, Software and Automation
  - D. Auxiliary Products

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

### **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

### **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

## **COMPETITIVE PROFILES**

Abbott  
Affymetrix  
Agilent  
Applied Gene Technologies  
Arca  
Beckman Coulter/Danaher  
Becton Dickinson  
Biokit  
BioMerieux  
Bio-Rad  
Biotest  
Caliper  
Cepheid  
Decode  
Diadexus  
Eiken  
Enzo  
Exact Sciences  
Fujirebio  
Gen-Probe  
Hologic  
Illumina  
Innogenetics/Solvay  
Kreatech  
Li-Cor Biosciences  
Life Technologies  
Monogram Biosciences  
Myriad Genetics  
Nanogen/Elitech  
Novartis  
Orchid CellMark  
Ortho-Clinical Diagnostics  
Proteome Sciences

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

## **APPENDIXES**

Appendix I: Major Universities and Research Centers  
Developing NAT Technology  
Appendix II: Glossary of Terms  
Appendix III: Currency Exchange Rates



## List Of Tables

### LIST OF TABLES

Major Companies Developing or Marketing AIDS NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Adenovirus NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Campylobacter NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Chlamydia NAT And Other Direct Identification Tests

Major Companies Developing or Marketing CMV 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 Gonorrhoea NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Hepatitis NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Herpes NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Legionella NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Lyme Disease NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Mycoplasma NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Papilloma Virus NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Pneumonia NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Salmonella NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Shigella NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Streptococci NAT And Other Direct Identification Tests

Major Companies Developing or Marketing Toxoplasmosis NAT And Other Direct Identification Tests

## Identification Tests

Major Companies Developing or Marketing Tuberculosis NAT And Other Direct Identification Tests

Oncogenes Potential Application in Cancer Diagnosis

Major Companies Developing or Marketing Cancer NAT Tests

Major Companies Developing or Marketing NAT Assays For Genetic Diseases

Summary Table Germany, NAT Test Volume And Sales Forecast by Major Application

Germany, Laboratories Performing DNA Sequencing by Market Segment

Germany, NAT Market Potential Laboratory Universe by Market Segment

Germany, NAT Test Volume Forecast By Major Application

Germany, Major Infectious Disease Molecular Diagnostics Test Volume Forecast

Germany, Infectious Disease Screening NAT Volume Forecast

Germany, NAT Market Forecast By Major Application

Germany, Infectious Disease Screening NAT Reagent Market Forecast by Test

Germany, NAT Market by Major Supplier

Germany, HIV/Hepatitis NAT Market Reagent Sales by Major Supplier

## I would like to order

Product name: Germany Nucleic Acid Testing Market: Innovative Technologies and Emerging Business Opportunities

Product link: <https://marketpublishers.com/r/G75F3284A1FEN.html>

Price: US\$ 4,720.00 (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/G75F3284A1FEN.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

