

# Table of Contents and List of Tables



*Over 1,000 corporations in 70 countries are relying on our market intelligence, expert analysis, and strategic insight, critical to the development and implementation of effective business, R&D and marketing programs.*

[www.LeadingMarketResearch.com](http://www.LeadingMarketResearch.com)

[www.VPGMarketResearch.com](http://www.VPGMarketResearch.com)

[reports@vpgcorp.com](mailto:reports@vpgcorp.com)

+1 212 564 2838

## Table of Contents

### **I. Introduction**

### **II. Worldwide Technology and Market Overview**

#### **A. Major Blood Typing, Grouping and Infectious Disease Screening Tests**

##### **1. Blood Typing and Grouping Tests**

- a. ABO
- b. Antibody Panels
- c. Antibody Screening
- d. Antigen Typing
- e. Antiglobulin Test
- f. Crossmatch
- g. HLA Typing
- h. Rh
- i. Other Blood Groups

##### **2. Blood Group Genotyping**

- a. PCR
- b. PCR-RFLP
- c. AS-PCR or PCR-SSP
- d. Multiplex PCR
- e. Real Time PCR
- f. Sanger DNA Sequencing
- g. Pyrosequencing
- b. Microarrays
  - BeadChip Array
  - BloodChip
  - Genome Lab SNP Stream
  - Fluidic Microarray Systems
  - TaqMan OpenArray
  - MALDI-TOF-MS
  - Mini-Sequencing

##### **3. Infectious Disease Screening Tests**

- a. AIDS
  - Structure and Composition
  - Classification
  - Origin of AIDS
  - Animal Lentivirus Systems
  - Virus Receptors

## **Table of Contents (continued)**

- HIV Infections in Humans
  - Pathogenesis & Pathology
  - Overview of Course of HIV Infection
- 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
  - Protozoa
  - Fungi
  - Bacteria
- Viruses
- Cancer
- Immunity
- Laboratory Diagnosis
  - Virus Isolation
  - Serology
  - Detection of Viral Nucleic Acid or Antigens
- Epidemiology
  - Worldwide Spread of AIDS
  - United States
  - Routes of Transmission
- Prevention, Treatment, And Control
  - Antiviral Drugs
  - Vaccines Against HIV
- Transmission of HIV in Blood Products
- HIV Transmission in Transplant and Artificial Insemination Recipients
- Diagnostic Tests
  - Enzyme Immunoassay Interpretation
  - Specificity, Sensitivity, and Predictive Value of Enzyme Immunoassay
- Competition Assays
- Western Blot Technique
- Immuno-Fluorescence Assay (IFA)
- Radioimmunoprecipitation
- HIV-1/HIV-2 Combination Testing

## **Table of Contents (continued)**

- Methods of HIV-Antigen Detection
- Antigen Assays and Blood Screening
- Urine Tests
- DNA Probes
  - Overview
  - Quantitative Polymerase Chain Reaction
  - In Situ PCR
  - Needed Improvements
- Viral Load/Drug Resistance Testing
- Genotype and Phenotype Testing
- Blood Banking Considerations
- b. Hepatitis
  - Hepatitis A
  - Hepatitis B
    - Structure and Composition
    - Replication of Hepatitis B Virus
  - Hepatitis C
  - Hepatitis D (Delta Hepatitis)
  - Hepatitis E
  - Hepatitis G
  - Hepatitis Virus Infections In Humans
    - Pathology
  - Clinical Findings
  - Laboratory Features
    - Hepatitis A
    - Hepatitis B
    - Hepatitis C
    - Hepatitis D
    - Hepatitis E
  - Virus-Host Immune Reactions
  - Epidemiology
    - Hepatitis A
    - Hepatitis B
    - Hepatitis C
    - Hepatitis D (Delta Agent)
  - Vaccines and Drugs
- c. Cytomegalovirus
  - Background
  - Chorioretinitis
  - Gastrointestinal

## Table of Contents (continued)

- Central Nervous System Disease
- Diagnostic Tests
- Vaccines and Drugs
- d. Syphilis
  - Background
  - Diagnostic Tests
  - Vaccines and Drugs
- e. West Nile Virus
  - Background
  - Clinical Syndromes
  - Diagnostic Tests
  - Vaccines and Drugs
- f. Parvovirus B19
  - Microbiology
  - Epidemiology
  - Clinical Syndromes
    - Erythema Infectiosum Slapped (cheek)
    - Adult Polyarthropathy
    - Transient Aplastic Crisis
    - Transient Pancytopenia
    - Red Cell Aplasia in the Immunocompromised
    - Perinatal Infections
  - Diagnosis
  - Treatment
- g. Creutzfeldt-Jakob's Disease
  - Background
  - Transmission
  - Diagnostic Tests
  - Major Commercial and Academic Players
    - Bayer
    - Disease Sciences/BioTec 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

## Table of Contents (continued)

- Drugs
- Vaccines

- h. Malaria
- i. Chagas Disease
- j. Babesiosis

### **4. Pathogen Reduction**

### **5. Leukocyte Reduction**

- Background
- Methods

## **B. Instrumentation Review: Operating Characteristics, Features and Selling Prices of Leading Automated and Semiautomated Analyzers Manufactured by:**

- Abbott
- Beckman Coulter/Danaher
- Becton Dickinson
- Bio-Rad
- BioMerieux
- Cepheid
- Curtis Unyvero
- Gen-Probe/Hologic
- GenMark
- Grifols
- HTG
- Immucor
- Life Technologies
- Nanosphere
- Ortho-Clinical Diagnostics
- Qiagen
- Roche
- Sarstedt
- Siemens
- Tecan

## **C. Major in Vitro Diagnostic Technologies And Their Potential Applications**

### **1. Molecular Diagnostics**

- a. Overview
- b. NAT

### **2. Monoclonal and Polyclonal Antibodies**

### **3. Immunoassays**

- a. Technological Principle
- b. Chemiluminescence

## **Table of Contents (continued)**

### c. Enzyme Immunoassays (EIA)

- Overview
- ELISA
- EMIT
- Electrochemical

### d. Radioimmunoassays (RIA)

### e. Immunoprecipitation

### f. Affinity Chromatography

## **4. Microtitration Plates**

## **5. IT and Automation**

## **6. Lasers**

## **7. Robotics**

## **8. Synthetic Red Cell Substitutes**

## **9. Genetically Engineered Blood Components**

- a. Albumin
- b. Factor VIII
- c. Alpha-2 Antiplasmin
- d. Antithrombin III
- e. Factor IX
- f. Von Willebrand's Factor
- g. Fibrinogen
- h. t-PA

## **10. Blood Preservation**

## **11. Autologous Blood Transfusion/Freezing**

## **III. U.K.**

### A. Executive Summary

### B. Business Environment

### C. Market Structure

### D. Market Size, Growth and Major Supplier

Sales and Market Shares for Blood Typing, Grouping  
and Infectious Disease Screening Tests

## Table of Contents (continued)

### **IV. Major Product Development Opportunities**

- A. Molecular Blood Typing and Grouping
- B. Infectious Disease Screening
- C. Auxiliary

### **V. Alternative Market Penetration Strategies**

- A. Internal Development
- B. Collaborative Arrangements
- C. University Contracts

### **VI. Potential Market Entry Barriers and Risks**

- A. Market Maturity
- B. Cost Containment
- C. Competition
- D. Technological Edge and Limitations
- E. Patent Protection

### **VII. Competitive Assessments**

Abbott  
Beckman Coulter/Danaher  
Becton Dickinson  
Biokit  
bioMerieux  
Bio-Rad  
Diagast  
DiaSorin  
Fujirebio  
Grifols  
Hologic  
LabCorp  
Proteome Sciences  
Quest Diagnostics  
QuidelOrtho  
Roche  
Siemens Healthineers  
Tecan  
Thermo Fisher  
Werfen/Immucor



## **List of Tables**

Major Companies Developing or Marketing  
Blood Typing and Grouping Tests

Major Companies Developing or Marketing  
HLA Typing Tests

Major Companies Developing or Marketing  
AIDS Tests

Major Companies Developing or Marketing  
Hepatitis Tests

Major Companies Developing or Marketing  
CMV Tests

Major Companies Developing or Marketing  
Syphilis Tests

Major Companies Developing or Marketing  
Blood Bank Analyzers

Executive Summary Table: U.K., Total Blood Bank  
Test Volume and Reagent Sales Forecast  
by Test Category

U.K., Facilities Performing Blood  
Bank Tests by Market Segment

U.K., Hospital Laboratories Performing  
Blood Bank Tests by Bed Size

U.K., Commercial/Private Laboratories  
Performing Blood Bank Tests  
by Annual Test Volume

U.K., All Market Segments Blood Typing  
And Grouping Test Volume Forecast  
by Market Segment

## **List of Tables (continued)**

U.K., All Market Segments Blood Typing  
And Grouping Test Volume Forecast

U.K., Hospital Laboratories Blood  
Typing and Grouping Test Volume Forecast

U.K., Blood Banks Blood Typing  
And Grouping Test Volume Forecast

U.K., Commercial/Private Laboratories  
Blood Typing and Grouping Test Volume Forecast

U.K., All Market Segments Infectious  
Disease Screening Test Volume Forecast by Market  
Segment

U.K., All Market Segments Infectious  
Disease Screening Test Volume Forecast

U.K., Blood Banks Infectious Disease  
Screening Test Volume Forecast

U.K., Hospital Laboratories  
Infectious Disease Screening Test Volume Forecast

U.K., Commercial/Private Laboratories Infectious  
Disease Screening Test Volume Forecast

U.K., All Market Segments Blood Typing  
And Grouping Reagent Market Forecast  
By Market Segment

U.K., All Market Segments Blood Typing  
And Grouping Reagent Market Forecast  
by Major Test

U.K., Hospital Laboratories Blood  
Typing and Grouping Reagent Market Forecast  
By Major Test

## **List of Tables (continued)**

U.K., Blood Banks Blood Typing and  
Grouping Reagent Market Forecast by Major Test

U.K., All Market Segments Infectious  
Disease Screening Reagent Market Forecast  
By Market Segment

U.K., All Market Segments Infectious  
Disease Screening Reagent Market Forecast  
Segment By Test

U.K., Blood Banks Infectious Disease  
Screening Reagent Market Forecast by Test

U.K., Hospital Laboratories  
Infectious Disease Screening Reagent Market Forecast  
By Test

U.K., Commercial/Private Laboratories Infectious  
Disease Screening Reagent Market Forecast by Test

U.K., Major Suppliers of Blood Typing  
And Grouping Reagents Estimated Sales  
And Market Shares

U.K., HIV-1/2 Blood Screening Market,  
Reagent Sales by Major Supplier

U.K., Hepatitis Blood Screening Market,  
Reagent Sales by Major Supplier

U.K., Syphilis Blood Screening Market,  
Reagent Sales by Major Supplier