

# **New Frontiers in the German Hematology and Flow Cytometry Market: Business Challenges, Emerging Technologies, Competitive Landscape**

## **Table of Contents**

### **I. Introduction**

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

#### **A. Major Routine and Special Hematology Tests**

1. Introduction
2. CBC Analysis
  - a. Hemoglobin Concentration
  - b. Hematocrit Determination
  - c. Red Blood Cell Count
  - d. Red Cell Indices
    - MCV
    - RDW
    - MCHC
    - CHCM
    - HDW
    - MCH
  - e. Red Cell Size Histograms
  - f. Platelets
    - Platelet Count
    - Platelet Size/MPV
    - PDW
    - Automated Systems
  - g. Reticulocytes
3. White Blood Cell Analysis
  - a. WBC Count
  - b. Five-Partial Differential Major Suppliers
    - Abbott
    - Beckman Coulter/Danaher
    - Siemens
    - Sysmex
  - c. Pattern Recognition Systems
    - IRIS
  - d. Comparison of Major Differential Analyzers

## Table of Contents (continued)

4. Reticulocytes
5. Platelet Function Tests
6. Erythrocyte Sedimentation Rate/CRP
7. Red Cell Analysis
8. 2, 3 DPG
9. Red Cell Deformability
10. Neutrophil Function Tests
11. Semen Analysis
12. Bone Marrow Analysis
13. Urinalysis

### **B. Major Flow Cytometry Applications**

1. Cell Surface Markers
  - a. Lymphocyte Subclassification CD4/CD8/CD34
    - Instrumentation and Reagent Test Kits
      - \* BD
      - \* Beckman Coulter/Danaher
      - \* T Cells Diagnostics
  - b. Other Cell Markers
2. DNA Content Analysis
3. RNA Content Analysis
4. Chemotherapy Monitoring
5. Cell Cycle Analysis
6. Chromosome Analysis
7. Fetal Cell Analysis
8. HLA Typing
9. Microbiology
10. Protein Content Analysis
11. Multiparameter Analysis
12. Other Applications

### **C. Instrumentation Review**

1. Hematology Analyzers
  - a. Overview
    - Electrical Aperture-Impedance Analyzers
    - Light Scatter Analyzers
  - b. System Review
    - Abbott
    - Beckman Coulter/Danaher
    - Biocode Hycel

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

- CellaVision
  - Drew-Scientific
  - Horiba
  - Medica
  - Menarini
  - Nihon Kohden
  - Siemens
  - Sysmex
  - 2. Flow Cytometers
    - a. Introduction
    - b. System Overview
      - Becton Dickinson
      - Beckman Coulter/Danaher
  - 3. Platelet Aggregometers
  - 4. Sedimentation Rate Analyzers
    - Diesse Ves Matic
    - Polymedco
  - D. Current Market Needs and Future Demand For Hematology Analyzers**
  - E. Reagents and Controls**
  - F. Current and Emerging Technologies**
    - 1. Molecular Diagnostics (Amplification Methods, Sequencing, Microarrays/Biochips)
    - 2. Information Technologies
    - 3. Automation and Robotics
    - 4. Lasers
    - 5. Artificial Intelligence
    - 6. Monoclonal Antibodies
    - 7. Microdrop Technology
- III. Germany**
- A. Executive Summary
  - B. Business Environment
  - C. Market Structure
  - D. Market Size, Growth and Major Suppliers' Instrument Placements, Installed Base, Sales and Market Shares

## Table of Contents (continued)

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

- A. Instrumentation
- B. Reagent Kits and Test Systems/Panels
- C. Information Technology
- D. Auxiliary Products

### **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 the Decentralized Testing Markets
  - 1. Four Marketing Approaches
  - 2. Product Complexity Factor
  - 3. Customer Preference Factor
  - 4. Established Suppliers
  - 5. Emerging Suppliers
  - 6. Major Types of Distributors
  - 7. Market Segmentation Factor

### **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
- Agilent Technologies
- Beckman Coulter/Danaher
- Becton Dickinson

## Table of Contents (continued)

- Bio-Rad
- CellaVision
- Horiba
- Iris
- Nihon Kohden
- Ortho-Clinical Diagnostics
- Roche
- Siemens
- Sysmex

### **IX. Appendix:** Major Universities and Research Centers Developing Hematology/Flow Cytometry Technologies and Applications

## **List of Tables**

Summary Table I: Germany, All Market Segments  
Total Hematology and Flow Cytometry  
Specimen Volume Forecast

Summary Table II: Germany, All Market Segments  
Total Hematology and Flow Cytometry  
Test Volume Forecast

Summary Table III: Germany, All Market Segments  
Total Hematology and Flow Cytometry Market Forecast

Germany, Laboratories Performing Hematology and  
Flow Cytometry Testing By Market Segment

Germany, Hospital Laboratories Performing  
Hematology and Flow Cytometry Tests By Bed Size

Germany, Commercial/Private Laboratories  
Performing Hematology and Flow Cytometry Tests  
By Annual Test Volume

Germany, Physician Office Laboratories  
Performing Hematology and Flow Cytometry Tests  
By Annual Test Volume

Germany, Total Routine Hematology Specimen  
Volume Forecast By Market Segment

Germany, Total Flow Cytometry and Special  
Hematology Specimen Volume Forecast By Market Segment

Germany, Hospital Laboratories, Hematology  
And Flow Cytometry Specimen Volume Forecast

Germany, Commercial/Private Laboratories  
Hematology and Flow Cytometry Specimen Volume Forecast

Germany, Total Routine Hematology Test  
Volume Forecast By Market Segment

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

Germany, Total Flow Cytometry and Special Hematology Test Volume Forecast By Market Segment

Germany, All Market Segments, Total Routine Hematology Test Volume Forecast

Germany, Hospital Laboratories, Routine Hematology Test Volume Forecast

Germany, Commercial/Private Laboratories, Routine Hematology Test Volume Forecast

Germany, Physician Office Laboratories, Routine Hematology Test Volume Forecast

Germany, All Market Segments, Total Flow Cytometry and Special Hematology Test Volume Forecast

Germany, Hospital Laboratories, Flow Cytometry And Special Hematology Test Volume Forecast

Germany, Commercial/Private Laboratories, Flow Cytometry and Special Hematology Test Volume Forecast

Germany, Major Hematology Analyzers, Estimated Placements and Installed Base

Germany, Major Flow Cytometers, Estimated Placements and Installed Base

Germany, Total Hematology Market Forecast By Market Segment

Germany, Hematology Consumable Market Forecast By Market Segment

Germany, Hematology Instrument Market Forecast By Market Segment

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

Germany, Total Flow Cytometry Market Forecast  
By Market Segment

Germany, Flow Cytometry Consumable Market Forecast  
By Market Segment

Germany, Flow Cytometry Instrument Market Forecast  
By Market Segment

Germany, Total Hematology Market  
By Major Supplier

Germany, Hematology Consumable Market  
By Major Supplier

Germany, Hematology Instrument Market  
By Major Supplier

Germany, Total Flow Cytometry Market  
By Major Supplier

Germany, Flow Cytometry Consumable Market  
By Major Supplier

Germany, Flow Cytometry Instrument Market  
By Major Supplier