New Frontiers in Physician Office Diagnostic Testing: Business Challenges, Emerging Technologies, Competitive Landscape

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- 23. Magnesium
- 24. Phosphorus
- 25. Protein
- 26. Triglycerides
- 27. Troponin
- 28. Uric Acid
- 29. Urinalysis
- 30. Vitamin B12

Infectious Disease Tests

- 1. AIDS
- 2. Adenovirus
- 3. Campylobacter
- 4. Candida
- 5. Chlamydia
- 6. Clostridium Difficile
- 7. Cytomegalovirus
- 8. Enteroviruses
- 9. Epstein-Barr Virus
- 10. Gonorrhea
- 11. Helicobacter Pylori
- 12. Hepatitis
 - a. Hepatitis A
 - b. Hepatitis B
 - c. Hepatitis C
 - d. Hepatitis D
- 13. Herpes Simplex Virus
- 14. Human Herpes Virus-6 (HHV-6)
- 15. Influenza Viruses
- 16. Legionella
- 17. Lyme Disease
- 18. Measles (Rubeola)
- 19. Meningitis

- 20. Mononucleosis
- 21. Mumps
- 22. Mycoplasma
- 23. Papillomaviruses
- 24. Pneumonia
- 25. Respiratory Syncytial Virus (RSV)
- 26. Rheumatoid Arthritis
- 27. Rotavirus (Reovirus)
- 28. Rubella (German Measles)
- 29. Salmonellosis
- 30. Shigellosis
- 31. Staphylococcus Aureus
- 32. Streptococci
- 33. Syphilis

Tumor Markers

- 1. Alpha-Fetoprotein (AFP)
- 2. Carcinoembrionic Antigen (CEA)
- 3. Occult Blood
- 4. Prostatic Acid Phosphatase (PAP)
- 5. Prostate-Specific Antigen (PSA)

Major Routine and Special Hematology Tests

- 1. CBC Analysis
 - a. Hemoglobin Concentration
 - b. Hematocrit Determination
 - c. Red Blood Cell Count
 - d. Platelets

Endocrine Function Tests

- 1. Cortisol
- 2. Follicle-Stimulating Hormone (FSH)
- 3. Gastrin
- 4. Human Chorionic Gonadotropin (HCG)
- 5. LH
- 6. Prolactin
- 7. T3
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- 9. Free T3
- 10. Thyroxine (T4)
- 11. Free T4
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- 2. Carbamazepine
- 3. Digoxin
- 4. Gentamicin
- 5. Lidocaine
- 6. Lithium
- 7. Phenytoin/Dilantin
- 8. Procainamide
- 9. Quinidine
- 10. Theophylline
- 11. Valproic Acid

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- 2. Activated Partial Thromboplastin Time (APTT)
- 3. Alpha-2 Antiplasmin
- 4. Antithrombin III
- 5. Bleeding Time
- 6. D-Dimer
- 7. Factor VIII
- 8. Fibrin Degradation Products
- 9. Fibrinogen
- 10. Heparin
- 11. Proteins C and S
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- 1. CRP
- 2. Immunoglobulins

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- 3. Amphetamines
- 4. Barbiturates
- 5. Benzodiazepines
- 6. Cannabinoids/Marijuana
- 7. Cocaine

- 8. Lysergic Acid Diethylamide (LSD)
- 9. Methadone
- 10. Methaqualone
- 11. Opiates
- 12. Phencyclidine

Instrumentation

1. Chemistry Analyzers Manufactured by:

- Abaxis
- Abbott
- Alfa Wassermann
- Awareness Technologies
- Beckman Coulter/Danaher
- bioMeriuex
- Carolina Chemistries
- Horiba
- Inverness
- Medica
- Nova Biomedical
- Ortho-Clinical Diagnostics
- Polimedco
- Randox
- Roche

2. Hematology Analyzers Manufactured by:

- Abbott
- Becton Dickinson
- Beckman Coulter/Danaher
- Biocode
- Drew-Scientific
- Diesse Ves Matic
- Horiba
- Menarini
- Nihon Kohden
- Polymedco
- Sysmex

3. Coagulation Analyzers Manufactured by:

- Behnk Elektronik
- Bio/Data
- Cardiovascular Diagnostics

- Diagnostica Stago
- Helena Laboratories
- Instrumentation Laboratory
- ITC Hemochron
- Roche
- Siemens
- Sysmex
- Teco Medical Instruments
- Trinity Biotech

Current and Emerging Technologies

- 1. Monoclonal Antibodies
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 - b. Enzyme Immunoassays (EIA)
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 - ? ELISA
 - ? Dot Immunobinding Assays
 - ? Capillary Immunoassays
 - ? Particle-Membrane Capture Immunoassay
 - ? Enzyme Amplification
 - c. Fluorescent Immunoassays
 - ? Fluorescent Polarization
 - ? Time-Resolved Pulse Fluorescence
 - d. Luminescence
 - ? Chemiluminescence
 - ? Bioluminescence
 - e. Latex Agglutination
 - f. Immunoprecipitation
- 3. Dry Chemistry
- 4. Biosensors
- 5. IT and Automation
- 6. Molecular Diagnostics
 - a. Technology Overview
 - b. Amplification Methods
 - ? Polymerase Chain Reaction
 - ? Ligase Chain Reaction
 - ? Branched DNA
 - ? Q-Beta Replicase
 - ? Strand Displacement Activation
 - ? Self-Sustained Sequence Replicase

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U.S.A.

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 - c. Reimbursement
 - d. Industry Consolidation
 - e. Managed Care
 - ? PPO
 - ? HMO
 - f. Hospitals
 - g. Admissions
 - h. Length of Stay
 - i. Industry Diversification
 - j. Physician Demographics
 - k. Aging Population
 - ? More Chronic Illness
 - ? Disease Incidence
 - ? Susceptibility to latrogenesis
 - ? Multiple Illnesses Cases
 - I. Laboratory Regulations
 - 2. Market Structure
 - a. Hospitals
 - b. Commercial/Private Laboratories
- B. Physician Offices/Group Practices
 - 1. Market Summarv
 - 2. Market Structure
 - 3. Test Volume and Sales Forecasts
- C. Major Suppliers' Instrument Placements, Installed Base, Consumables Sales and Market Shares

Major Product Development Opportunities

- A. Routine and Special Chemistry
- B. Microbiology/Infectious Diseases
- C. Hematology and Flow Cytometry
- D. Coagulation

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

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- A. Market Maturity
- B. Cost Containment
- C. Competition
- D. Technological Edge and Limitations
- E. Patent Protection
- F. Regulatory Constraints
- G. Decentralized Testing Market Challenges

Company Profile

- Abbott
- ADI/America Diagnostica
- Agilent Technologies
- Axis-Shield
- Beckman Coulter/Danaher
- Becton Dickinson
- Bio/Data
- Biomerieux
- Bio-Rad
- Biosite/Inverness/Alere

- Cepheid
- Chrono-Log
- Corgenix
- Decode
- Diadexus
- Diagnocure
- Diagnostica Stago/Trinity Biotech
- Diamedix
- Diasorin
- Eiken Chemical
- EKF Diagnostics
- Fujirebio/Innogenetics
- Grifols
- Helena Laboratories
- Hologic/Gen-Probe
- Horiba
- Instrumentation Laboratory
- International Technidyne/Nexus DX
- Kreatech
- Kyowa Medex
- Lonza
- Mackay Life Sciences
- Matritech
- Nihon Kohden
- Ortho-Clinical Diagnostics
- Polartechnics
- Polymedco
- Qiagen
- Roche
- SDIX
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Major Companies Developing or Marketing HDL Tests

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Major Companies Developing or Marketing LDH Tests

Major Companies Developing or Marketing Magnesium Tests

Major Companies Developing or Marketing Phosphorus Tests

Major Companies Developing or Marketing Protein Tests

Major Companies Developing or Marketing Triglycerides Tests

Major Companies Developing or Marketing Uric Acid Tests

Major Companies Developing or Marketing Vitamin B-12/Folate Tests

Major Companies Developing or Marketing AIDS Tests

Major Companies Developing or Marketing Adenovirus Tests

Major Companies Developing or Marketing Campylobacter Tests

Major Companies Developing or Marketing Candida Tests

Major Companies Developing or Marketing CMV Tests

Major Companies Developing or Marketing EBV Tests

Major Companies Developing or Marketing Gonorrhea 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 Measles Tests

Major Companies Developing or Marketing Meningitis 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 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 Shigella Tests

Major Companies Developing or Marketing Streptococci Tests

Major Companies Developing or Marketing Syphilis Tests

Major Companies Developing or Marketing AFP Tests

Major Companies Developing or Marketing CEA Tests

Major Companies Developing or Marketing Occult Blood Tests

Major Companies Developing or Marketing Prostatic Acid Phosphatase Tests

Major Companies Developing or Marketing PSA Tests

Major Companies Developing or Marketing FSH Tests

Major Companies Developing or Marketing HCG Tests

Major Companies Developing or Marketing LH Tests

Major Companies Developing or Marketing Prolactin Tests

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