

€15.–

Your guide to laboratory and pathology equipment in Europe

LAB BOOK

- Automation & Sample Processing
- Chemistry & Immunochemistry
- Hematology
- Pathology
- DNA
- Microbiology
- POCT
- IT
- Non-Diagnostic

2017



MAGLUMI 4000 Plus, as a new member of MAGLUMI Chemiluminescence Immunoassay (CLIA) analyzers, shares 138 parameters of MAGLUMI reagents which feature state-of-the-art illumination and separation technologies. Comprehensive test menus help your lab to do more with less and specialty immunoassays.

Imprint

published by

EUROPEAN HOSPITAL VERLAGS GMBH

Theodor-Althoff-Straße 45, 45133 Essen, Germany
phone: +49 201 871268-51
fax: +49 201 871268-64
info@european-hospital.com
www.healthcare-in-europe.com



DR. NEUMANN & KINDLER LTD. & CO. KG

Herner Straße 324, 44807 Bochum, Germany
phone: +49 234 9571969-0
info@labcore.de
www.labcore.de

EDITOR-IN-CHIEF

Markus Neumann

CONTRIBUTING WRITERS

John Brosky, Michael Krassnitzer, Mark Nicholls

EXECUTIVE DIRECTOR

Daniela Zimmermann

LAYOUT AND GRAPHIC DESIGN

Christoph Muschiol, Dorfen, Germany

ADVERTISING

Gavin Hua (China)
Eric Jund (E, F, I)
Simon Kramer (B, GB, L, NL)
Ralf Mateblowski (D, A, CH)
Jane Park (Korea)
Hanna Politis (U.S.A, Canada)
Charles Yang (Taiwan)

SUBSCRIPTION

Liane Kaiser, kaiser@european-hospital.com,
Subscription rate: € 15,- plus postage

PRINTED BY

SAFNER Druck und Verlags GmbH, Priesendorf, Germany

DISCLAIMER

The information and opinions expressed in articles and product entries published in LABBOOK are solely those of the manufacturers / companies, their authors and contributors, for which the publisher holds no responsibility.

All trademarks, product names, company names and logos in this publication are the property of their respective holders. Users must obtain permission from those holders before copying or using the owner's trademarks, product and company names or logos.

Errors and omissions excepted.

© 2017 by EUROPEAN HOSPITAL Verlags GmbH.
All rights reserved.



Dear reader,

welcome to Labbook 2017, the fourth edition of our product and feature guide for medical laboratories in Europe. Our objective – to serve Europe – is not a particularly popular one these days. With our continent being in political distress, it is remarkable that the European Congress of Clinical Chemistry and Laboratory Medicine devotes an entire session to Europe-wide harmonisation. Even more important: the session does not only focus on technical or scientific aspects but on the mutual recognition of professional training and certificates in order to realize the crucial vision of free movement of labour across Europe.

In the chapter on DNA we are tackling another contentious issue: gene editing. Professor Françoise Baylis, a Canadian bioethics expert, asks whether we can overcome our evolutionary limitations and whether we should be allowed to meddle with our genome.

In addition to big politics and big ideas the new Labbook continues to offer the true and tried: a handy guide to relevant products available on the European market, compiled with the support of European and international manufacturers of analyzers, diagnostics, reagents, supplies and software. Browse the Labbook and let yourself be inspired. Different colours indicating the sections on the lab sub-disciplines help you navigate the wealth of information. As of late June you will also be able to access the products in our product data base at www.labbook.eu or as e-paper at www.healthcare-in-europe.com. The search function and links to the manufacturers' websites take you straight to the relevant information. And if you need further details, please use the contact request form at www.healthcare-in-europe.com/en/global/contact.html.

The manufacturers, the authors and the editorial team – we all look forward to receiving your feedback, be it praise, criticism or suggestions what you would like to find in the next edition. Enjoy reading and browsing – and see you next year.

Your Labbook team



Trends & Topics

- 1 Editorial
- 6 Seeking greater harmonisation – in laboratory medicine
- 10 Total Laboratory Automation (TLA) – DiaSys and Tosoh join forces
- 22 Sample Preparation Module – for LC-MS/MS
- 29 Coagulation analysers – A new generation is available
- 40 An image is worth a thousand words
- 43 Streck – Cell-Free DNA BCT CE
- 48 Should we tweak human evolution?
- 51 Clostridium difficile – Routine diagnostics in the medical laboratory
- 65 LabCentre – agility and accuracy for all laboratory disciplines
- 69 Companies & Suppliers

Products & Systems



3 Automation & Sample Processing



11 Chemistry & Immunochemistry



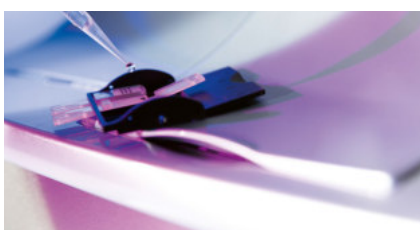
36 Pathology



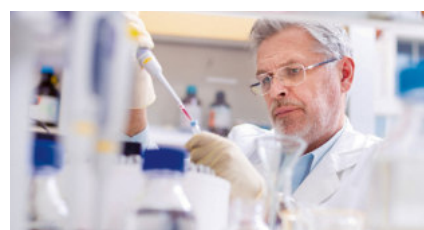
57 POCT



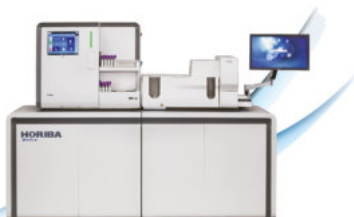
21 Mass Spectrometry



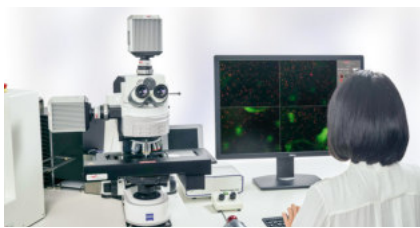
43 DNA



61 Information Technology



27 Hematology



53 Microbiology



66 Non-Diagnostic

Automation & Sample Processing

Sample Processing
Robotics
Automation



Sample Processing

SAMPLE PROCESSING

ASP Lab Automation – Bench-top Decapper Pluggo RH



Dimensions: 360 × 560 × 610 mm (h × w × d)
Sample throughput: Over 2,000 tubes per hour

Highlights: Pluggo RH decapper is a compact bench-top device that safely and efficiently removes original caps from blood specimen tubes.

- Avoids potential health risks from Carpel Tunnel Syndrome and aerosol contamination
- Tubes are loaded and decapped in analyzer racks
- Handles up to 15 racks each for input and output
- Available for many analyzer rack types
- Robust and simple design guarantees high reliability and uptime
- Smaller models available that handle single racks

ASP Lab Automation – Tube Sorter SortPro



Dimensions: 1,130 × 1,100 × 600 mm (h × w × d) for six sorting bins; + 200 mm for each two extra sorting bins

Sample throughput: Up to 2,000 tubes per hour

Highlights: The SortPro tube sorter is an economical automation device for the pre-analytics of small and high-volume labs.

- Early specimen identification and registration
- Fast presorting of specimens
- Separates problematic specimens (missing requests, bad barcode, etc.) from routine work
- Small and fast instrument, robust and reliable
- Bulk input and bulk output of specimens
- Freely configurable number of sort bins
- Processes all standard blood and urine tube types

Beckman Coulter – AutoMate 1250/2550



Aliquoter (1+1 aliquot): 700 primaries with 10 % aliquoted to a daughter tube (AutoMate 1250)
 900 primaries with 10 % aliquoted to a daughter tube (AutoMate 2550)

Weight: 720 kg (AutoMate 1250/2550)

Dimensions: 1,625 × 2,560 × 1,115 mm (without recapper)
 1,625 × 2,560 × 1,415 mm (with recapper)
 (h × w × d)

Highlights: The AutoMate 1250/2550 family of pre- and post-analytical sample processors and sorting systems boosts the possibilities of the laboratory automation system by providing a fully integrated sample bank solution for long-term archiving. The AutoMate 1250/2550's archiving, retrieval for re-run, sample re-introduction and sample disposal allows for an easy workflow and sample management.

SARSTEDT – Bulk Loader BL 1200 ID



Sample throughput: Up to 1,200 tubes/h

- Highlights:**
- Ideal in combination with any analytical platform
 - No sorting or handling required
 - Process any tube type of 80 to 110 mm length (with cap) and 11 to 16 mm diameter, including false bottom options
 - Suited for any sample type (serum / plasma, serum gel / plasma gel, EDTA, citrate, blood sugar, urine)
 - Integral ID module
 - Automatic sample accessioning
 - Customised sort rules to a variety of carrier types or bins
 - Safe, rapid and continuous operation without error

System range:

- BL 1200 ID – Bulk to Rack
- BL 2000 – Bulk to Bulk

SARSTEDT – Sorter DC/RC 900 Flex



Sample throughput: Up to 900 tubes/h

- Highlights:**
- Pre- and post-analytics in one system:
 - Processes any tube diameter from 11 to 16 mm
 - Compatible with most racks or carrier types
 - Online or offline operation
 - Opens tubes with push caps, stoppers and screw caps
 - Enables tube identification by barcode reader and colour sensor
 - Can be customised to sort by tube type, material (colour) or test request
 - Closes tubes with archiving caps
 - Retrofitting of decapping or recapping module is possible
 - Recapping with screw caps for SARSTEDT tubes with 13 or 15 mm diameter

SARSTEDT – Decapper DC 1200 / Recapper RC 1200



- Highlights:**
- Decapper DC 1200:**
- Automatic decapping of all tube diameters from 11 to 16 mm
 - Processes a variety of tube types in mixed operation
 - Sample pre-sorting for the decapping process is avoided
- Recapper RC 1200:**
- Automatic recapping of all tube diameters from 13 to 16 mm
 - Minimises the risk of exposure
 - Eliminates sample contamination
 - Archiving cap fits all tubes from 13 to 16 mm diameter
 - Automated decapping enabled

SARSTEDT – Sample Distribution System PVS 1625



- Highlights:**
- The PVS 1625 is a tailor made automation system for pre- and post-analytical processing of samples. It is capable to handle any kind of rack and tray type. As an open system, it is complementary to any analytical platform or can be used independently. Loading of unracked or racked sample tubes is via the Bulk Loader or in racks via the loading platform, which is suitable for closed and open tubes.

Full function pre- and post-analytical system

- Ideal in combination with any analytical platform
- Modular configuration according to customer needs with: Loading platform and / or Bulk Loader
- ID Module – Decapper – Recapper
- Aliquoter – Sorter
- For all common tube types: 13 – 16 mm diameter, 65 – 100 mm length
- Compatible with most racks or carrier types

ROBOTICS

Siemens Healthineers – VersaCell X3 Solution



- Dimensions:** 1,520 × 1,780 × 1,040 mm (h × w × d)
- Sample throughput:** Up to 200 samples tubes/h
- Power consumption:** 800 W
- Assays:** Menu varies based on analyzers connected

- Highlights:**
- Advance workflow capabilities, streamline processes, and meet changing needs with agility – at a cost labs can justify. VersaCell X3 Solutions use robotics with dynamic STAT management to provide the optimal mix of chemistry and/or immunoassay analytics with one-touch sample management. Connect up to three Siemens' instruments including ADVIA 1800 Chemistry System, ADVIA Centaur XPT and/or IMMULITE Immu-noassay Systems, and Dimension EXL and RxL Max Integrated Systems.

*Product availability varies by country.



Seeking greater harmonisation in laboratory medicine

Unifying recognition of professional qualifications

Improved harmonisation of laboratory medicine practice across Europe will help lead to better patient outcomes and produce comparable laboratory information irrespective of where and how the data have been generated, Mark Nicholls reports.

With harmonisation regarded as a fundamental aspect of quality in laboratory medicine, it is high on the agenda of delegates to the EuroMedLab 2017 congress to be held between from 11 to 15 June at the Megaron Athens International Conference Centre, Greece.

Harmonisation involves all the steps of the service (pre-analytical, analytical, and post-analytical phase) as well as embracing aspects of the profession in a symposium hosted by the European

Federation of Clinical Chemistry and Laboratory Medicine (EFLM). This will provide four lectures dealing with the harmonisation of the pre-analytical phase, medical laboratory accreditation, the mutual recognition of professional qualifications across Europe, as well as continuous professional development.

Speaking to European Hospital ahead of the conference, Gilbert Wieringa, Chair of EFLM's Professional Committee, explained the importance of harmonising the recognition of professional qualifications. 'It's to ensure that laboratory medicine is practised to common standards, so that patient safety is protected irrespective of the country the specialist emanates from.'

PROFILE:

Gilbert Wieringa chairs the European Federation of Clinical Chemistry and Laboratory Medicine's (EFLM) Professional Committee and is clinical lead for Laboratory Medicine in Bolton, England. Formerly the healthcare scientists programme lead in the Department of Health, and Greater Manchester Primary Care Trusts' pathology lead, his main interests are in the provision of antenatal screening services, quality assurance for 'high street' diagnostics and the harmonisation of growth hormone measurements.



'Under EU Directive 2013/55/EU – the Recognition of Professional Qualifications – harmonisation would extend opportunities for specialists to practice in other EU countries without having 'compensation measures' imposed on them such as the re-taking of local professional exams; in turn it could also catalyse a more equitable distribution of skills and resources across the EU.'

Dr Wieringa will highlight how EU Directive 2013/55/EU provides a passport to professional migration across EU borders for professions that can work to a Common Training Framework. He will also point to EFLM holding a 'Register of Specialists in Laboratory Medicine'; how the organisation is pursuing recognition as a unique cohort amongst laboratory medicine practitioners, and how achieving recognition raises the profile of the contribution of laboratory medicine to better health and best care.

Formed in 2007 through the merger of the Forum of European Societies of Clinical Chemistry (FESCC) and the European Communities Confederation of Clinical Chemistry (EC4), the EFLM connects national societies of clinical chemistry and laboratory medicine to create a platform for all European specialists in laboratory medicine. A strong advocate of the Register of Specialists, in adding weight to the argument for their recognition, in his talk Wieringa also intends to describe the backbone work that was already carried out by EFLM and its predecessor organi-

sation EC4 in setting standards for specialist practice, establishing the Register, an expected code of conduct, and adoption of the unifying term 'Specialist in Laboratory Medicine'. He will offer guidance on how to join the Register, as well as share an update on progress with implementation of the Recognition Directive at the EU Commission.

While medical staff already enjoys professional migration as members of the sectoral professions, the Directive offers equal opportunity to science and pharmacy trained specialists, once a Common Training Framework has been adopted by one third of the EU member states (i.e. 10). It remains unclear how long the harmonisation process will take, though EFLM is maintaining close contact with its leads at the EU Commission throughout.

The session will also hear from Wim Huisman, previously Head of the Laboratory for Clinical Chemistry and Haematology at the Medical Centre Haaglanden in Leidschendam; Ana-Maria Simundic, Professor in the Department of Medical Biochemistry at Zagreb University, and Elizabeta Topic, Professor of Medical Biochemistry at the Faculty of Pharmacy and Biochemistry University of Zagreb.

** The EuroMedLab 2017 EFLM symposium 'Harmonisation in laboratory medicine': 10.30 a.m. – 2.30 p.m., 12 June. Venue: Skalkotas Hall, Megaron Athens International Conference Centre, Greece.*



Directive 2013/55/EU will boost professional migration across EU borders, leading to more even distribution of skill and resources.

AUTOMATION

Beckman Coulter – Power Express

Dynamic inlet:	1,200 tubes/h
Centrifuges:	300 tubes/h (1), 600 tubes/h (2), 900 tubes/h (3), 1,200 tubes/h (4)
Decapper:	1,200 tubes/h
Aliquoter (1:1):	600 tubes/h



Highlights: Power Express is a high-throughput automated sample handling system that can process chemistry, immunochemistry, hematology and coagulation tubes. A four-lane track and intelligent sample handling helps reduce turnaround time (TAT), reduce errors and improve lab productivity. Power Express performs industry leading centrifugation, with the option for up to four centrifuges to match the capacity of the automation line at 1,200 tubes per hour, decapping/recapping, aliquoting, with refrigerated as well as ambient storage, finished with a specimen automated disposal unit, giving labs the ability to deliver rapid and dependable TATs to clinicians, thereby reducing errors and improving overall laboratory efficiency and productivity.

Beckman Coulter – AU680i

Highlights:

The AU680i offers laboratories the ability to combine an AU680 chemistry analyzer with a Dxl immunoassay analyzer to form an entry-level automated workcell, streamlining laboratory workflow. The AU680i delivers high-capacity specimen processing power and flexibility to meet clinical laboratory workload challenges. Designed to help enhance efficiency, reduce costs and speed the delivery of test results, the AU680i features:



- Parallel processing of shared chemistry and immunoassay specimens
- Single point of loading and unloading for shared chemistry and immunoassay samples for rapid processing
- Integrated decapper to minimize biohazard exposure risk and repetitive motion injuries

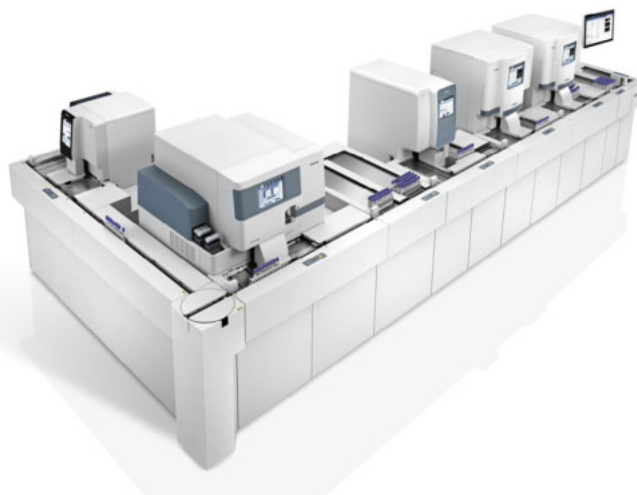
INPECO SA – Total Laboratory Automation (TLA)

Highlights:

FlexLab is an open automation system capable of managing the complete process of a patient sample. From loading patient samples to their time dependent disposal, Flexlab's dedicated pre analytical and post analytical modules (for identification, sorting, centrifugation, decapping, aliquoting, recapping, storage, disposing and retrieval) as well as having direct connections to all of the most common analyzers of any specialty. Flexlab is completely scalable adapting to your laboratory current and future needs. Last but not least, FlexLab includes an integrated middleware solution, called Data Management Software, that receives patient results from analyzers connected either directly to automation or off-track, and sends those results back to the Lab Information Systems.



Mindray – CAL 8000 New Generation Cellular Analysis Line



- Highlights:**
- More compact in size than the first generation
 - New track, higher efficiency and higher throughput
 - More flexible layout options to optimize use of laboratory space
 - Upgraded labXpert software to simplify data analysis
 - Automatic "Repeat", "Rerun" and "Reflex" in case of abnormal results

Siemens Healthineers – Aptio Automation



Highlights:

Aptio Automation combines intelligent technologies with Siemens workflow expertise in adaptable, multidisciplinary track designs with intelligent routing, single-sample flow and point-in-space sampling. Choose from a selection of pre- and post-analytical processing modules and automation-ready chemistry, immunoassay, hematology, hemostasis and specialty testing analyzers. Our experts perform data-driven simulations, optimization modeling and more to design and monitor your solution for ongoing productivity.

Snibe – Biolumi 8000



- Highlights:**
- Sample processing module
 - Loading 280 samples at one time
 - Continuous loading and unloading samples during operation
 - Specific STAT channel

- Biochemistry module (B)
- 1,600 tests/hour
- Clot detection, liquid level detection
- Wavelength range 340 – 800 nm, detect 16 different wavelengths simultaneously

- Electrolyte module (E)
- 1,000 tests/hour
- Clot detection, liquid level detection
- Immunoassay module (I)
- 280 tests/hour
- Clot detection, liquid level detection

Total Laboratory Automation (TLA)

DiaSys and Tosoh join forces to offer
a fast, precise and sensitive high-quality solution
for clinical laboratory testing

Tosoh and DiaSys announce a collaboration for clinical laboratory testing with the combination of Tosoh's new generation analyzers (AIA-CL1200 for immunoassay and G11 for HbA1c) and DiaSys' BioMajesty JCA-BM6010/C. Instruments are linked through Evoline and Evoline Manager, Tosoh's open laboratory automation and middleware solution. The collaboration addresses current requirements regarding clinical testing.

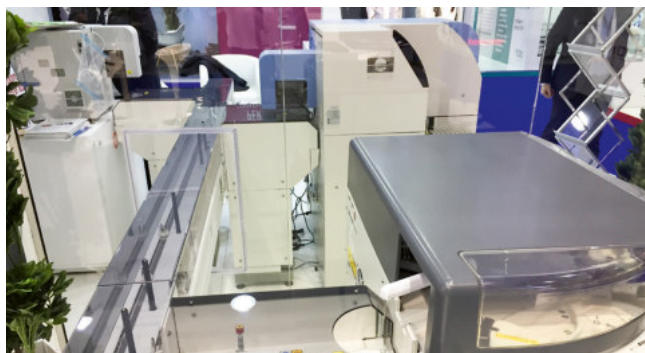
DiaSys BioMajesty JCA-BM6010/C

The BioMajesty JCA-BM6010/C is designed to increase the performance of medium-sized laboratories. It is also the ideal system for speciality laboratories. The throughput of up to 1,200 tests/hour, 43 reagent and 84 sample positions are a guarantee for flexibility in everyday use. It handles a full menu of photometric and immunoturbidimetric assays as well as Na, K, Cl determinations by indirect ISE methods.

Special emphasis was put on the software to combine highest user-friendliness with optimally secured results. A special feature is the integrated on-board hemolysis function for optimized HbA1c determination. Dynamic range extension avoids additional dilutions and a dedicated STAT port allows for immediate STAT processing. Clot detection and liquid level sensor technology ensure confidence in results. The analyzer works with very small sample volumes, making it the perfect instrument in pediatric and geriatric settings. The BioMajesty JCA-BM6010/C is the system with the smallest footprint in its class hence saving precious laboratory space. DiaSys supplies ready-to-use reagents well known for their excellent on-board stability with the instrument. The result in conjunction with extremely low reagent consumption is cost efficiency of the highest order.



TLA solution in Czech Republic: Input- output-module, decapper, two decapper, two BioMajesty, one Tosoh AIA2000



BioMajesty connected with Tosoh AIA-CL1200 and HPLC G11 at MedLab Dubai 2017

Open Lab Automation

The integration of a Tosoh and DiaSys analyzer into the automation implementation of a clinical laboratory offers significant benefits to the working processes and is intended to achieve the following goals:

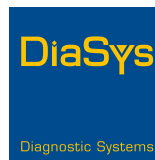
- Integration of multi-competence technologies
- Improvement of laboratory turnaround time with consistent throughput over time
- Simultaneous management of routine and emergency workloads
- Automation of repetitive manual procedures
- Elimination of the need for pre-sorting specimens
- Qualification of operators' work, taking them off tasks associated with pre-analysis
- Simple connection and a sophisticated data transmission system ensure analytical quality with minimal maintenance



CONTACT

DiaSys Diagnostics Systems GmbH
Alte Straße 9 · 65558 Holzheim / Germany
phone: + 49 (0)64 32 91 46-0
systems@diasys.de · www.diasys-diagnostics.com

Chemistry & Immunochimistry



Clinical Chemistry
Immunochimistry
Immunoassays
Integrated Systems
Mass Spectrometry
Electrophoresis/
Chromatography
Plasma Protein Testing
Infectious Disease Testing
Drug Testing
Urine Screening
Research Use Only

CLINICAL CHEMISTRY

Beckman Coulter – AU5800 Series



Dimensions: 1,260 × 2,600 × 1,580 mm (h × w × d)
Weight: 1,070 kg
Sample throughput: 2,000 – 9,800/h
Power consumption: 200 – 240 W

Highlights: The AU5800 series represents the highest throughput and fastest chemistry analyzers in the AU family. With true random-access capabilities and a throughput ranging from approximately 2,000 tests up to 9,800 tests per hour, the AU5800 is available in four different scalable models, positioned for the high-volume core hospital laboratory to the ultra-high volume commercial laboratory market segments.

Biomed – Cystatin C Turbidimetric Assay



Highlights:

- Cystatin C for screening and monitoring of impaired kidney function
- Measurement Range: 0,1 – 10 mg/L
- Cystatin C-Calibrator (IRMM ERM-DA471 / IFCC)
- Our turbidimetric Cystatin C latex test is a ready-to-use assay that can be run on all clinical chemical analyzers.
- Cystatin C is found to be more sensitive to actual changes in GFR in the early stages of chronic kidney disease than creatinine based GFR estimates in the so-called creatinine blind GFR.



Integrated
solution management
for your laboratory

dr. neumann&kindler

www.labcore.de

DiaSys Diagnostic Systems – BioMajesty JCA-BM6010/C



No of channels: 43
Assays: 55
Sample throughput: 1,200 samples/h
Dimensions: 1,220 × 1,108 × 850 mm (h × w × d)
Weight: 450 kg

Highlights: BioMajesty JCA-BM6010/C is designed to increase the performance of medium-sized laboratories. Throughput of up to 1.200 tests/hour, 43 reagent and 84 sample positions guarantee flexibility in everyday use. It handles a full menu of clinical chemistry assays as well as Na, K, Cl determination by indirect ISE. The possibility to connect the device to a sample conveyor system offers a complete automation solution and the consolidation of clinical chemistry with immunology and coagulation testing.

DiaSys Diagnostic Systems – respons910



No of channels: 30
Assays: 62
Sample throughput: 135 samples/h
Dimensions: 600 × 600 × 670 mm (h × w × d)
Weight: 60 kg

Highlights: respons910 is a fully-automated bench top analyzer for maximum efficiency. High on-board capacity of 30 methods and 30 sample positions combined with a throughput of 135 tests/h offers the flexibility for everyday use. A STAT port allows loading of emergency samples at any time. High-quality clinical chemistry and immunoturbidimetric tests from DiaSys round off the respons910 system. Onboard hemolysis and whole blood sample type introduction make respons910 dedicated for HbA1c testing.

Diatron – Intelligent Walk Away Chemistry with P500



Sample throughput: 300 tests/h, 480 with ISE
Dimensions: 900 × 660 × 620 mm (h × w × d)
Weight: 115 kg

Highlights:

- Bench top, fully automated Clinical Chemistry system
- Advanced Windows-based software
- Uninterrupted workflow, enhanced walk-away operation and remote access diagnostics
- Full range of barcoded reagents, controls and calibrators



- Reliable Infection Diagnostics
- Haematological Staining Solutions
- Complete Solutions for the Clinical Chemistry:
 Latex Enhanced Reagents, Control Sera, Calibrators

Short Distances. Fast Decisions.
www.biomed.de

 **BIOMED**
 A Good Choice for 40 Years

CLINICAL CHEMISTRY

Genrui – Auto Chemistry Analyzer GS480



Sample throughput : 400 tests/h
Dimensions: 1,100 × 1,120 × 810 mm (w × h × d)
Weight: 210 kg

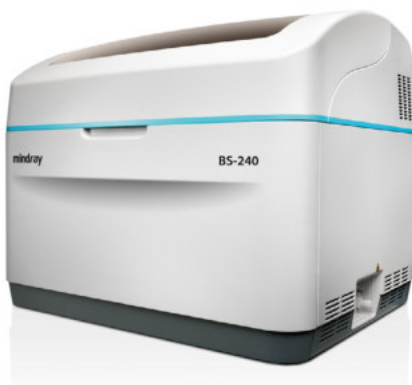
- Highlights:**
- Fully automated system with random access and STAT
 - 24-hour refrigerated reagent compartment
 - 9-step wash station with alkaline cleaning and hot water
 - 105 sample positions and 90 reagent positions
 - Grating optical system with 13 wavelengths (340–850 nm)
 - Liquid level detection, collision protection and depth auto-adjustment
 - Pre- and post-dilution and rerun for sample
 - Intuitive software with simple operation
 - Flexible connection with LIS

Mindray – BS-480 Clinical Chemistry Analyzer



- Highlights:**
- Discrete, random access, fully automated
 - Constant throughput with 400 photometric test per hour, up to 240 tests per hour for ISE
 - 24-hour on board refrigerated reagent compartment at 2~10° C
 - Reusable cuvettes with auto-washing station
 - Two independent mixing stirrers
 - Clot detection, automatic probe cleaning, liquid level detection & collision protection (vertical & horizontal)
 - Reversed grating system with 12 wavelengths (340~800nm)
 - Pre-dilution and post-dilution for sample
 - Built-in bar code scanner
 - Bi-directional LIS interface

Mindray – BS-240 Chemistry Analyzer



- Highlights:**
- One of the smallest 200 T/H throughput automated chemistry analyzers
 - Up to 80 sample and 80 reagent positions
 - Automatic hemolysate preparation for HbA1c test
 - A minimum of 100 µL reaction volume

Mindray – SAL 6000 Modular System



- Highlights:**
- Seamless integration of chemistry and immunology tests, workflow optimization
 - Uniform software interface, easy for operation
 - One tube sampling, flexible to test
 - Enhanced ALP+AMPPD CLIA technology
 - Flexible scalability, on-site upgrading
 - Comprehensive test menu

Sentinel – SENTiFIT270 (Sysmex)



Sample throughput: Up to 270 samples/h
Dimensions: 625 × 870 × 670 mm (h × w × d)
Weight: 120 kg
Assays: Fecal Immunochemical Test*
 Calprotectin will be launched in July 2017

Highlights: The SENTiFIT270 is a fully automated clinical-chemical system. It has been specially developed to measure the SENTiFIT pierceTube for quantitative determination of occult faecal haemoglobin.

- Continuous reloading of the racks during measurement
- Cooling the reagents for permanent storage in SENTiFIT 270
- Measure up to 1,250 tests without changing the reagent
- Automatic warning of deviation of the fluid level
- Integrated sensor prevents blocking of the sample needle
- Barcode reader for reagents

Siemens Healthineers – ADVIA Chemistry Systems



Sample throughput: Up to 2,400 tests/h with ADVIA Chemistry XPT System
 Up to 1,800 tests/h with ADVIA 1800 Clinical Chemistry System

Highlights: The ADVIA Chemistry XPT System is engineered for simple, continuous operation and provides fast, accurate results and predictable TAT through VeriSmart Technology and onboard aliquoting. Microvolume technology enables a high onboard test capacity of over 100,000 photometric tests for long walkaway times, especially valuable when running on Siemens Aptio Automation.

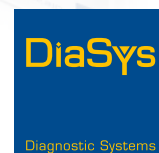
*Product availability varies by country.



DiaSys Diagnostic Systems

- Clinical chemistry
- Immunturbidimetric tests
- Automated analyzers for every need
- Point-of-care products

Quality Diagnostics. Made in Germany.
www.diasys-diagnostics.com



CHOOSING QUALITY.

IMMUNOCHEMISTRY

Beckman Coulter – Access AccuTnI+3 Troponin I Assay



Highlights: The Access AccuTnI+3 Troponin I assay delivers the precision, clinical sensitivity and clinical specificity necessary to assist physicians with the diagnosis of myocardial infarction (MI). Access AccuTnI+3 Troponin I in the core lab gets physicians the critical results they need and can cut triage time in half. The assay can use two serial samples collected within a 3-hour period, rather than waiting for a six-hour period, to provide a more accurate diagnoses. A large multicenter prospective clinical trial on the AccuTnI+3 assay confirmed that the assay provides the clinical performance needed for proper patient management.

Beckman Coulter – Anti-Mullerian Hormone (AMH)



Highlights: The measurement of circulating anti-Mullerian hormone (AMH) has been applied to a wide range of clinical applications. The Access AMH assay features convenient transition to automated testing through consistent and standardized results with Beckman Coulter's AMH Gen II assay improve support of fertility assessment through increased sensitivity and precision at the low end of the analytical measuring range. Today, its use is mainly based on its ability to reflect the number of antral and pre-antral follicles present in the ovaries (the ovarian reserve).

Beckman Coulter – phi (Prostate Health Index)



Highlights: phi (Prostate Health Index) is an index of three tests and combines the power of those tests into one answer or phi score. The Prostate Health Index is an aid in distinguishing prostate cancer from benign prostatic conditions, for prostate cancer detection in men aged 50 years and older with total PSA ≥ 4.0 to ≤ 10.0 ng/mL, and with digital rectal examination findings that are not suspicious for cancer. Prostatic biopsy is required for diagnosis of cancer.

Beckman Coulter – UniCel Dxl 800 Access Immunoassay System



Dimensions: 1,700 × 1,710 × 970 mm (h × w × d)
Weight: 630 kg
Sample throughput: Up to 400 tests/h
Assays: > 50 preprogrammed, bar-coded immunoassay methods

Highlights: The UniCel Dxl 800 has exceptional throughput, proven chemiluminescent technology and assay protocols similar to other analyzers in the Beckman Coulter family – so you can simplify and automate your immunoassay testing. The UniCel Dxl 800 immuno-assay system allows laboratories to decrease process steps and improve turnaround time – with ease of use.

Beckman Coulter – Vitamin D Assay



Highlights: Access 25(OH) Vitamin D Total is a new assay that will expand the Access Bone Metabolism portfolio on the UniCel DxI and Access 2 systems. The assay is standardized to the NIST-Ghent ID-LC-MS/MS Reference Method Procedure (RMP) and provides excellent stability and reproducibility. Features include a unique, opaque reagent pack designed to prevent light-induced reagent degradation; convenient assessment of deficient populations through a broad dynamic range; and speed and flexibility through instrumentation options (available on Beckman Coulter's Access 2 and DxI immunoassay platforms).

DRG Instruments – DRG:HYBRiD-XL



Sample throughput: 40 tests per run
No of parallel samples: 40
Assays: Immunoassay and Clinical Chemistry
Dimensions: 586 × 608 × 635 mm (h × w × d)
Weight: 52 kg

Highlights: This unique technology allows the simultaneous measurement of immunoassays and clinical chemistry parameters in one sample: Free Testosterone, Calprotectin, 17-OH Prog., Androstenedione, Renin, Aldosterone, 25-OH Vitamin D, Hepcidin-25, HbA1c, Cystatin C and others.

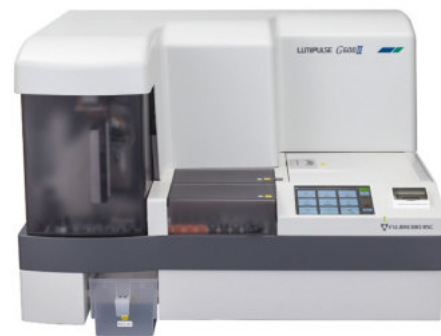
Fujirebio – LUMIPULSE G1200



Sample throughput: 120 tests/h
Time to first result: 30 min
Sample capacity: Up to 100 samples
Reagent capacity: 504 tests on board
Dimensions: 1,450 × 1,200 × 800 mm (h × w × d)

Highlights: A compact, robust and reliable fully automated chemiluminescent enzyme immunoassay analyzer. The LUMIPULSE G1200 offers optimized reagent and consumables handling, true random access, and a constant throughput regardless of the assay format or combination. The unique mono test cartridge eliminates open reagent bottle stability concerns. It comes with the broad menu of routine and unique Lumipulse G biomarkers and is fully compatible with laboratory automation systems (LIS).

Fujirebio – LUMIPULSE G600II



Sample throughput: 60 tests/h
Time to first result: 35 min
Sample capacity: Up to 36 samples (incl. 3 priority specimens)
Reagent capacity: 112 tests on board
Dimensions: 642 × 890 × 725 mm (h × w × d)

Highlights: A fully automated benchtop chemiluminescent enzyme immunoassay analyzer. The LUMIPULSE G600II offers optimized reagent and consumables handling, true random access, and a constant throughput regardless of the assay format or combination. The unique mono test cartridge eliminates open reagent bottle stability concerns. It comes with the broad menu of routine and unique Lumipulse G biomarkers.

IMMUNOCHEMISTRY

SARSTEDT – ELISA Plates / Micro test plates for immunoanalytics



Highlights: One of the analyses most commonly used is the Enzyme-Linked Immunosorbent Assay (ELISA). With this method, even the smallest concentrations of a range of substances (proteins, peptides, antibodies, hormones etc.) can be detected and quantified from complex solutions.

Siemens Healthineers – ADVIA Centaur XPT & CP Systems



Sample throughput: Up to 240 tests/h (XPT)
Up to 180 tests/h (CP)

Highlights: The ADVIA Centaur XPT Immunoassay System is engineered to provide timely, reliable results with continuous operation to meet the workloads of the most demanding laboratories. It is among the highest-throughput immunoassay systems available. The ADVIA Centaur CP Immunoassay System is a mid-volume, high-throughput bench top system. Both systems use advanced Acridinium Ester technology that can be tailored to meet different diagnostic needs.

*Product availability varies by country.

Siemens Healthineers – IMMULITE 2000 XPi System



Sample throughput: Up to 200 tests/h

Highlights: The IMMULITE 2000 XPi Immunoassay System combines allergy and specialty testing with routine immunoassay testing. It features a wide-ranging menu, 90-day onboard reagent stability, and advanced software and hardware to handle the many testing challenges that labs face. The IMMULITE 2000 XPi system is a continuous, random access analyzer with proven reliability and easy-to-use software that allows laboratories to improve their testing capacity.

*Product availability varies by country.

IMMUNOASSAYS

Mindray – CL-1200i Chemiluminescence Immunoassay System



Highlights:

- Up to 180 T/H, one of the fastest benchtop CLIA analyzers
- Onboard capacity of 25 reagents and 60 samples
- Non-stop refill of samples, reagents and consumables during testing
- Swing arm and touch screen for easy operation

Snibe – MAGLUMI 800



Sample throughput: 180 tests/h
Dimensions: 1,020 × 720 × 560 mm (h × w × d)

- Highlights:**
- On board capability: up to 40 samples
 - Reagent position: 9
 - Refrigerated sample and reagent area
 - Clot detection
 - Liquid level detection
 - Auto dilution for high concentration sample
 - Color touch screen
 - Bi-communication with LIS via ASTM protocol

Snibe – MAGLUMI 1000



Sample throughput: 120 tests/hour
Dimensions: 1,350 × 760 × 1,580 mm (h × w × d)

- Highlights:**
- On board capability: up to 144 samples
 - Reagent position: 15
 - Refrigerated reagent area
 - Clot detection
 - Liquid level detection
 - Auto dilution for high concentration sample
 - Color touch screen
 - Bi-communication with LIS via ASTM protocol

Snibe – MAGLUMI 2000



Sample throughput: 180 tests/h
Dimensions: 1,350 × 760 × 1,580 mm (h × w × d)

- Highlights:**
- On board capability: up to 144 samples
 - Reagent position: 15
 - Refrigerated reagent area
 - Clot detection
 - Liquid level detection
 - Auto dilution for high concentration sample
 - Color touch screen
 - Bi-communication with LIS via ASTM protocol

Snibe – MAGLUMI 2000 Plus



Sample throughput : 180 tests/h
Dimensions: 1,440 × 760 × 1,520 mm (h × w × d)

- Highlights:**
- On board capability: up to 144 samples
 - Reagent position: 25
 - Refrigerated sample and reagent area
 - Clot detection
 - Liquid level detection
 - Auto dilution for high concentration sample
 - Color touch screen
 - Bi-communication with LIS via ASTM protocol

IMMUNOASSAYS

Snibe – MAGLUMI 4000 Plus



- Sample throughput:** 280 tests/h
Dimensions: 1,380 × 890 × 1,600 mm (h × w × d)
- Highlights:**
- On board capability: up to 144 samples
 - Reagent position: 25
 - Refrigerated sample and reagent area
 - Clot detection
 - Liquid level detection
 - Auto dilution for high concentration sample
 - Color touch screen
 - Bi-communication with LIS via ASTM protocol

Wako – μTASWako i30



- Dimensions:** 520 × 550 × 600 mm (w × h × d)
Weight: 71 kg
Sample throughput: 25 tests/h
Assays: AFP/AFP-L3, DCP
- Highlights:**
- Electrokinetic Analyte Transport Assay (EATA)
 - High sensitive fluorescence detection
 - Assay precision less than 3% CV for AFP-L3
 - Increased sensitivity of liver cancer (HCC) detection by combined use of AFP, AFP-L3 and DCP
 - Unique system to calculate the GALAD score (Gender, Age, AFP-L3, AFP, DCP) for outstanding performance regarding early HCC recognition
 - Improved chance of detecting HCC early during surveillance of patients at risk

INTEGRATED SYSTEMS

Siemens Healthineers – Dimension EXL Chemistry Systems



- Sample throughput:** Up to 440 photometric chemistry tests/h and 187 electrolyte tests/h
 Up to 167 heterogeneous immunoassay tests/h
- Highlights:** Siemens Healthineers was the first company to integrate chemistry and immunoassay testing in one instrument, simultaneously processing tests from one sample tube to improve workflow efficiency. The Dimension EXL integrated system includes our patented LOCI homogeneous chemiluminescent technology, offering fast immunoassay reactions with high sensitivity and low sample volumes.
- *Product availability varies by country.

Siemens Healthineers – Dimension Vista Intelligent Lab Systems



- Sample throughput:** Up to 2,000 tests/h (Dimension Vista 1500)
 Up to 1,000 tests/h (Dimension Vista 500)
- Highlights:** Dimension Vista Systems integrate photometry, nephelometry, V-LYTE electrolyte detection, and LOCI homogenous chemiluminescence technologies in one smart workstation. Labs can simultaneously process tests for multiple disease states on a single platform from a single tube. The sample-centric design found on the Dimension Vista System incorporates lean principles for simplified and consolidated sample processing.
- *Product availability varies by country.

MASS SPECTROMETRY

Bruker Daltonics – Toxtyper



Highlights: Simplicity, Speed and confidence: First Time, Every Time

- Rapid Forensic Screening
- High-confidence drug identifications
- Comprehensive coverage
- Toxicology research
- Unprecedented easy-to-use

For research use only.
Not for use in diagnostic procedures.

Sciex – 4500MD series: Triple Quad or QTRAP LC-MS/MS



Dimensions: 790 × 590 × 790 mm (w × h × d)

Weight: 130 kg

Sample throughput: Up to 60 samples/h

Power consumption: 2.2 kW

No of channels: 1

Assays: Vitamin D and Immunosuppressant drugs

No of parallel samples: 0

- Highlights:**
- Enable your clinical laboratory to develop tests for the most demanding clinical applications
 - Keep assays in-house and increase lab capabilities with an affordable benchtop platform with unique performance and application versatility
 - Minimize downtime, improve lab productivity with robust performance and excellent ROI
 - Quantitate multiple low level compounds in a single analysis with high accuracy and sensitivity
 - Minimize training time and increase efficiency with powerful workflow-driven software

Shimadzu – LCMS-8045 CL



Dimensions: 1,180 × 540 × 610 mm (w × d × h)

Weight: 140 kg

Highlights: The LCMS-8045 offers the proven high sensitivity, high speed and robustness of Shimadzu's UFMS series to provide highly reliable data for applications that demand the sensitivity and speed of a mass spectrometer, such as for simultaneous analysis used in the clinical research field. Due to the heated-ESI probe and UFSweeper II collision cell, it offers the highest sensitivity in the middle-range class (UFsensitivity).

Shimadzu – LCMS-8050 CL



Dimensions: 1,180 × 540 × 610 mm (w × d × h)

Assays: 140 kg

Highlights: Triple Quadrupole Mass Spectrometry is the method of choice for quantification of trace-level analytes in complex samples for a variety of applications including clinical research, forensic, toxicology, pharmacokinetics. Combined with our world-leading UHPLC systems, and maintaining Shimadzu's proprietary ultrafast technologies (UFMS), which include high-speed MRM transitions, MS/MS acquisition, and ultra-high speed polarity switching, the LCMS-8050 can dramatically improve analytical throughput.

Highly flexible automated Sample Preparation Module for LC-MS / MS

While IA's (Immunoassay) has been the most used technic for clinical analysis, the shift to LC-MS/MS is constantly increasing for several type of analysis like immunosuppressant, vitamin D or steroids panel, but also for several new assays including anti-coagulants, antibiotics, plasma renin activity, etc. The change from Immunoassay to LC-MS/MS could have been faster if sample preparation was not a limiting factor among others: it is nowadays the bottleneck in the complete process using LC-MS/MS analysis.

Thanks to Shimadzu's UFMS (Ultra-Fast Mass Spectrometry) technologies including ultra-fast polarity switching (5 ms), short pause time (1 ms), multi MRM (555/s), and fast scanning possibilities (30,000 $u\text{m}/s$), combined to the well-known robustness of Shimadzu systems, LC-MS/MS has proven to be a powerful tool for clinical analysis and the cost per analysis was decreased significantly.

The bottleneck of sample preparation which is often tedious, subject to risk of errors, and is also increasing the risk of contamination

for people dealing with sample preparation, has been solved by the introduction of the fully automated sample preparation system CLAM-2000 (Clinical Laboratory Automation Module).

Based on many years of experience from SHIMADZU in producing clinical analyzers, the system automatizes the pre-treatment of blood or other biological samples before LC-MS/MS analysis. The CLAM-2000 (RUO) is designed for customers that handle biologics samples and that are seeking to introduce the use of LC-MS/MS in their analytical workflow to contribute to sample prep automation. Its graphical user interface with a touch panel screen greatly simplifies the use of the analytical system even by non-skilled user in mass spectrometry. It is also a tool for customers dealing with issues of variability in analytical results or infection risk.

Shimadzu has released this new and unique fully automated sample preparation module (RUO), connected online to LC-MS/MS all over Europe.



The system is widely opened and allows the use, either of home-brew methods or commercial reagent's kits, enabling the manual preparation steps to be adapted into the system.

Available pretreatment processes include:

- dispensing samples
- dispensing reagents
- stirring
- suction filtration
- incubation
- automatic transfer of sample vials to auto-sampler after pre-treatment

NB: all these steps can be freely selected for the process

The direct detection of analytes in blood, urine or any other biological samples, the measurement of trace concentration of drugs, and any other applications detection has been improved thanks to Mass Spectrometry: Using CLAM-2000 in front of your LC-MS/MS system, you will improve your sample preparation process and therefore your quality data. By simply placing blood collection tubes in the system, the CLAM-2000 performs all other processes through to LC-MS/MS analysis automatically. Unlike standard dispensing systems/robots, that are based on batch processing 96-well plates, the CLAM-2000 is completely automatic from pre-treatment to analysis and processes individual samples successively in parallel. Consequently, it results in uniform pre-treatment times between samples, without slowing processing speed, and improves data reproducibility and accuracy.

In addition, to keep a maximum degree of flexibility and to adapt to future needs, the CLAM-2000 is compatible with the full range of Shimadzu's LC-MS/MS:

- LCMS-8040
- LCMS-8045
- LCMS-8050
- LCMS-8060

Since its launch, the CLAM-2000 has demonstrated its capabilities for various type of analysis:

- Immunosuppressants
- Vitamin D2/D3
- Steroids panel
- Anticoagulants
- Antibiotics
- Antiepileptics
- Neuroleptics
- Benzodiazepines
- Micophenolic acid
- Antidepressants

Consequently, the CLAM-2000 is the first and unique system in the world able to perform all steps fully automated from pre-treatment of the sample to LC-MS/MS analysis for a large panel of compounds, requiring only the simple task of placing the blood, or biological fluids collection tubes, reagents, internal standards and specialized pre-treatment vials in the system. It also features excellent management functions that can provide a dramatically improved workflow with better safety for clinical research and higher reproducibility.



This product is intended for research use only (RUO). Not for use in diagnostic, therapeutic, and medication procedure.



MASS SPECTROMETRY

Shimadzu – LCMS-8060 CL



Dimensions: 1,180 × 540 × 610 mm (w × d × h)
Assays: 140 kg

Highlights: The LCMS-8060 delivers the highest sensitivity and fastest analysis speed of any LCMS on the market today. A newly developed UF-Qarray boosts ion intensity but suppresses noise. By improving the ion sampling device, the ion guide, and vacuum efficiency, Shimadzu has achieved an unprecedented sensitivity in quantitative analysis by LC/MS/MS while keeping high robustness for daily analysis.

ELECTROPHORESIS/CHROMATOGRAPHY

biostep – Chemiluminescence / Fluorescence Imager Calvin S



Dimensions: 420 × 240 × 360 mm (h × w × d)
Weight: 10 kg

Highlights:

- Smallest chemiluminescence imaging system, imaging area up to 14 × 14 cm
- Cooled CCD-camera
- Binning up to 6 × 6
- Four camera options from high resolution to high sensitivity
- Electromagnetic safety lock
- Acquisition of colorimetrically-stained markers possible
- GxP-compliant in Master and Serial Mode
- Image export as raw data for analysis or as optimized image for publication
- NEW: Fluorescence module incl. four excitation and emission wavelength settings each
- Already available from 9,950 €

Shimadzu – HPLC/UHPLC



Highlights: SHIMADZU is offering a wide range of solutions in liquid chromatography starting from standard HPLC systems to high end UHPLC systems including compact configurations. Available with several options for columns switching, pre-concentration, online SPE, etc, the systems are also well recognized for coupling with highly sensitive detectors like fluorescence, radio-activity, electrochemical, or mass spectrometry. To increase throughput with mass spectrometers, SHIMADZU offers the NEXERA-MX configuration.

PLASMA PROTEIN TESTING

Siemens Healthineers – BN II System



Weight: Analyzer: 150 kg (330 lbs.)
Sample throughput: Effective: Approx. 130 tests/h depending on the assay mix; Nominal: 225 tests/h
Assays: More than 60 programmed assay protocols for specialty plasma protein testing

Highlights: The BN II System is a fully automated protein analyzer that features high flexibility, continuous loading, and excellent instrument reliability.

- Optimal alignment of reagents and systems for more efficient determination of proteins
- Bar code identification of primary sample tubes, standards, controls, and reagents
- Comprehensive menu of over 64 assays for routine and specialty testing, including innovative assays such as CDT, FLC and BTP
- Average effective throughput of 130 tests/h

Siemens Healthineers – BN ProSpec System



- Weight:** Analyzer: 115.2 kg (254 lbs.)
- Sample throughput:** Effective: Approx. 65 tests/h depending on the assay mix; Nominal: 100 tests/h
- Assays:** More than 60 programmed assay protocols for specialty plasma protein testing
- Highlights:** The BN ProSpec System is a dedicated, compact platform that offers a consolidated menu of specialty and routine reagents for reliable plasma protein testing.
- Proven nephelometric technology and minimized sample preparation for increased confidence in results
 - Broad menu of over 64 assay protocols, including innovative markers such as CDT, FLC, and BTP
 - Average effective throughput of 65 tests / hour

INFECTIOUS DISEASE TESTING

Siemens Healthineers – Quadriga BeFree System



- Weight:** 3 configurations: ~730 kg ~970 kg ~1,210 kg
- Sample throughput:** 3 configurations:
 1 : 1 Up to 700 results per run in <4 hours;
 1 : 2 Up to 2,464 results per run in ~7.5 hours;
 1 : 3 Up to 3,000 results per run in ~8 hours
- Highlights:** The Quadriga BeFree System delivers the next generation in ELISA automation in a dedicated, fully automated blood screening analyzer.
- Full blood screening menu, including Enzygnost Anti-HCV 4.0 and Enzygnost HIV Integral 4 Assays
 - Primary tubes, sample processor, and robotic transport system for operator safety
 - Ability to connect up to three BEP III Systems for different volume needs
 - Up to 3,000 results in an 8-hour shift for maximized walkaway operation

DRUG TESTING

Siemens Healthineers – Viva-ProE System



- Weight:** Approx. 93 kg / 205 lbs (excl. monitor arm and panel PC)
- Sample throughput:** Up to 133 EMIT tests per hour with two reagents; Up to 65 EMIT tests per hour with three reagents
- Highlights:** A flexible, new approach to dedicated drug-testing analysis, the Viva-ProE System provides greater ease of use, workstation efficiency, and a full drug-testing menu, all in one powerful benchtop system that is supported by unrivaled Syva experts. The system offers peltier cooling for efficient reagent use, can run up to 133 Emit tests per hour and 12 Emit assays simultaneously; 120 tests can be programmed with 10 open test channels. Results available within 10 minutes of processing.

URINE SCREENING

Beckman Coulter – Iris iRICELL Series



- Sample throughput:** Up to 70 samples/h (microscopy), Up to 210 samples/h (chemistry)
- Highlights:** The Iris iRICELL2000, available from Beckman Coulter, integrates urine chemistry and microscopy into a fully automated walk-away solution to help increase efficiency and improve lab productivity. By focusing on one particle at a time, IRIS products isolate, identify and characterize particles, nearly eliminating the need for manual microscopic review. This leads to improved workflow, lower review rates and reduced urine cultures.

URINE SCREENING

Sysmex – UN-Series



Dimensions: 872 × 1,918 × 901 mm (h × w × d)
Weight: 269 kg

- Highlights:**
- Combines digital imaging, particle and chemistry analysis (UD-10/UF-5000/UC-3500)
 - Fully automated urinalysis workflow solution
 - User-friendly and easy handling
 - Multiply your throughput by connecting more than one UF together with one or more UD-10
 - Extend your possibilities by adding a UC-3500
 - Intelligent data management by U-WAM (Urinalysis Work Area Information Management System)

Sysmex – UC-3500



Sample throughput: Max. 276 samples/h
Dimensions: 829 × 638 × 709 mm (h × w × d)
Weight: 75 kg

- Highlights:**
- User friendly and easy handling
 - Fully automated urine chemistry analysis
 - Fast total turnaround time (TAT)
 - Combination with the UF-5000 and the UD-10 for an optimal, fully automated urinalysis workflow
 - 11 test strip parameters including microalbumin and creatinine, and five system parameters
 - Able to distinguish between RBC and haemoglobin thanks to the new CMOS sensor
 - High accuracy for specific gravity (refractometry measurement method) and cloudiness

Sysmex – UF-5000



Sample throughput: 105 (urine), 20 (body fluids) samples/h
Dimensions: 855 × 760 × 754 mm (h × w × d)
Weight: 90 kg

- Highlights:**
- Fully automated urine particle analysis
 - Modular concept: easy to combine with other members of the UN-Series for a fully automated urinalysis workflow
 - Integrated body fluid mode
 - Small sample volume needed
 - Exclude negative UTI samples in less than a minute
 - Blue laser for better detection of bacteria
 - New depolarised side scatter light to differentiate RBC and crystals
 - Differentiation of epithelial cells & casts
 - Reliable QC management by our SCNS network

RESEARCH USE ONLY (RUO)

Shimadzu – CLAM-2000



Dimensions: 670 × 700 × 1,190 mm (w × d × h)
Weight: 185 kg
Assays: Immunosuppressants, vitamin D, steroids

- Highlights:** CLAM-2000 provides users seamless integration of automated sample preparation with LC-MS/MS to improve data quality, sample throughput, laboratory efficiency and safety. Simple workflows allow users to go from blood collection tubes to results without any additional sample handling. Each sample is processed successively in parallel, to optimize instrument usage. Easy to access software for management of reagents, calibration curves, control samples and maintenance ensure reliability and quality of results.

Hematology

Blood Cell Counter
Integrated Hematology
Flow Cytometry
Histology Equipment
Coagulation



BLOOD CELL COUNTER

Beckman Coulter – UniCel DxH Connected Workcell Solution



Dimensions: 1,905 × 3,225 × 787 mm (h × w × d)
Weight: 1,016.6 kg
Sample throughput: 300 samples and 140 slides/h

Highlights: With the new UniCel DxH Series of connected hematology workcells, your lab can streamline workflow through smart workload balancing advanced analytics – providing relevant and thoughtful workflow efficiency while delivering accurate patient results. The UniCel DxH eliminates the need for pre-sort and offers workflow enhancements with bi-directional transport.

Diatron – Complete Blood Count Versatility with the Aquila

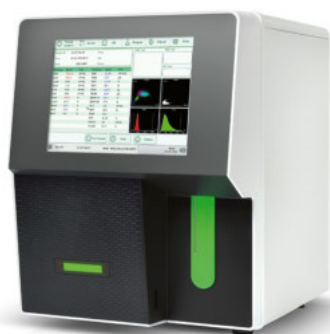


Sample throughput: 60 tests/h
Parameters: 22
Dimensions: 323 × 272 × 366 mm (h × w × d)
Weight: ~16 kg inc reagent pack

Highlights:

- Compact size and unique on-board reagent pack requires little storage and work space
- Three part diff hematology results requiring around 20 µl of blood
- Closed or open tube mode
- Portable with an optional battery pack

Genrui – 5-Part Auto Hematology Analyzer KT-6610



Sample throughput: 60 samples/h
Dimensions: 430 × 350 × 435 mm (w × h × d)
Weight: 28 kg

Highlights:

- Tri-angle laser scattering and sheath flow for WBC differentiation and counting
- Impedance for RBC and PLT counting
- No extra PC required, 10.4-inch touch screen
- Built-in barcode scanner, built-in thermal printer
- Sample volume: 20ul for whole blood mode, 20 µl for prediluted mode
- Three reagents for test, two lysates are placed in the analyzer
- One-click solution for basic trouble shooting
- Ideal to be your first 5-Part hematology analyzer

HORIBA Medical – Yumizen H2500 and Yumizen H1500



Samples throughput: 120 tests/h
Dimensions: 840 × 730 × 650 mm (w × h × d)
Weight: 112 kg
Power consumption: 100 v/50 hz to 240 v/60 hz

Highlights: HORIBA Medical has developed two new hematology systems combining both innovative and recognized technologies: the Yumizen H1500 and the Yumizen H2500. With a genuine throughput of 120 tests per hour for CBC-DIFF & NRBC including differential and nucleated RBCs, the Yumizen H2500 and Yumizen H1500 are able to absorb the workflow of laboratories with high activity. This solution includes our newest middleware, the Yumizen P8000, which allows laboratories to centralize data management.

A new generation Coagulation analysers is available



Successful realization and new definition in the manual / semi-automatic coagulation analytic.

The Company TECO Medical Instruments + Trading GmbH, Germany is working since 25 years intensive in development, production and sales of coagulation analysers, which are distributed and supported through the worldwide distributors into hospitals and Coagulation laboratories.

For a new generation of manual or semi-automatic coagulation analysers COATRON X it was important for TECO GmbH, to fulfil all the requirements from a Coagulation Laboratory with modern „State-of-Art“-Technology. The concept of the new instrument line based on one construction with new electronic, touch-display etc. and nearly identical user software, but with three different versions, one, two or four channel optic, as well selected sample and reagent positions. As result, we come out with a Coatron X Eco, Coatron X Pro und Coatron X Top.

The Innovation is the goal!

During development, it was very important to get a high level on precision and accuracy in founding and calculating of the clot detection (measurement) and as well to fulfil intended use.

To get reliable and reproduce able results, it was necessary to have a high-level knowledge in Coagulation diagnostic and mathematical calculation for the interpretation of possible and variables clotting curves. An additional feature was a high sensitive detection optic



CONTACT

TECO Medical Instruments
Dieselstraße 1 · 84088 Neufahrn, Germany
phone: +49 (0)87 73 707 80-0
info@teco-gmbh.com · www.teco-medical.com

system. The company TECO have generated the possibility to link the instrument via bluetooth to a smart-device (tablet or mobile) to create a direct connection to the TECO Cloud (servers). With this technical option, the instrument service status can be directly transmitted to the cloud.

Any mail function can get an immediate response or feed-back. The continuous automatic traceability of used reagents (lot and expiry) and the important certified consumables can be activated, too.

Quick response on daily routines

Another helpful built-in feature is the internal barcode reader for the scan of individual patient-identification on the primary tube before each measurement and combine it with the result. If the instrument is connected to LIS or TECAM Software, the patient-ID and the result will be directly transmitted to the LIS (Laboratory Information System). The Barcode reader could also read in reagent ID (Lot and Expiry) and consumable ID for verification and release.

The details make the difference

The remarkable details in every single component is achieved by selecting of premium suppliers. The performance of a high level instrument is strongly depending on the concept in general and the perfect usability to reach the requirements of a modern laboratory analyser. Priority No. 1 was the get a daily routine reliability and easy-to-use operation.

Software and connection possibilities

With the Coatron X product family starts a new time line in analysis management and service maintenance. Operation via intuitive, colored touchscreen, as well patient result management are perfectly optimized.

Coatron X Highlights

- Highest optical resolution, enlarged optic range, smallest sample and reagent volume 0,1 mOD – 3500 mOD, just with 75 µL sample and reagent volume
- Complete optical analysis. No further parts required, like balls, stirrers etc.
- Adaptation of the light level. Automatic light level adjustment of the optic channels to each sample
- Exclusion of disturbance. Stray light reduction, exact temperature control, all parameter are preset

BLOOD CELL COUNTER

Mindray – BC-5150 Auto Hematology Analyzer



Dimensions: 410 × 320 × 400 mm (h × w × d)
Weight: 24 kg
Sample throughput: 60 samples/h
Assays: 25 basic parameters + 4 research parameters, 3 histograms for WBC, RBC and PLT + 3 scattergrams for WBC differential

- Highlights:**
- Impedance method for RBC and PLT counting
 - Cyanide free reagent for hemoglobin test
 - Flow Cytometry (FCM) + Triangle laser scatter + chemical dye method for WBC 5-part differential analysis and WBC counting
 - Sample volumes are prediluted modes 20 µl, whole blood mode 15 µl, capillary whole blood mode 15 µl
 - Data Storage if possible up to 40,000 results including numeric and graphical information

Mindray – BC-5390 Auto Hematology Analyzer



- Highlights:**
- Semi-conductor laser combined with chemical dye method and flow cytometry
 - 31 parameters with complete 5-part differentiation (CBC+DIFF) on white blood cells
 - 40-tubes autoloader with random access
 - Closed tube for STAT samples
 - Only 33 µl sample volume for CBC + DIFF results
 - Up to 60 tests per hour
 - FDA approved
 - Supports whole blood mode for capillary sample
 - Supports bi-directional LIS connection

Siemens Healthineers – ADVIA 360, 560, and 560 AL Systems



Dimensions: 360 × 316 × 492 mm (h × w × d)
 520 × 410 × 490 mm (h × w × d)
Sample throughput: Approx. 60 tests/h
Parameters: 22 – 26 parameters;*
 3- or 5-part white cell differential

- Highlights:** The ADVIA 360, 560, and 560 AL Systems provide laboratories with intuitive, easy-to-use, and scalable hematology solutions designed to offer the right fit for every lab. Each system delivers fast, reliable, and accurate CBC and white cell differential testing with the performance and adaptability that low- and mid-volume labs need. The optional autoloader on the ADVIA 560 AL streamlines automatic sampling for even greater workflow efficiency.

*Not all parameters are available in the U.S.

Siemens Healthineers – ADVIA 2120i System



Dimensions: 860 × 1,410 × 680 mm (h × w × d)
Sample throughput: Up to 120 samples/h
Parameters: CBC incl. NRBC, 6-part white cell differential, reticulocytes, body fluids, and comprehensive morphology results

- Highlights:** Siemens' high-volume hematology analyzer, the ADVIA 2120i System with Autoslide streamlines workflow by eliminating the majority of manual steps commonly performed to maximize productivity. Its unique testing methodology optimizes results while offering the simplicity and flexibility you need for easy integration into your lab. With connectivity to Aptio Automation and Centralink Data Management System, it supports accurate, fast, sample processing with fully customizable, user-defined features.

Sysmex – XN-1500 (Count. Smear. Stain. All-in-one haematology)



Sample throughput: XN-module
CBC+DIFF: up to 100 slides/h,
up to 40 slides/h in BF mode

SP-50 module
SP-50: up to 30 slides/h in S mode,
up to 75 slides/h in H mode

Dimensions: 1,006 × 1,053 × 855 mm (w × h × d)

Weight: 211 kg

- Highlights:**
- Fully integrated slide maker & stainer SP-50
 - Flexible throughput depending on the workload
 - Automatic Reflex measurement in case of unreliable results
 - Reduced time for the preparation of the slides
 - Minimum need for manual tasks and less biohazard procedures
 - Small footprint
 - Optional integration of digital imaging module DI-60
 - Reduced sample volume (for the smear preparation)
 - Staining protocols (SP-50):
May Grünwald – Giemsa, Wright – Giemsa, Wright

Sysmex – XN-L Series



Sample throughput: CBC + DIFF up to 70 samples/h
with the optional Speed-up licence

Dimensions: 440 × 510 × 450 × 460 – 660 mm (h × w × d)
(depending on model)

Weight: 35 (XN-350, XN-450); 53 (XN-550 incl. sampler);
3 (XN-550 monitor)

- Highlights:**
- XN-350: Single sample analysis in open mode
 - XN-450: Single sample analysis in closed or open mode
 - XN-550: Automated sampler analysis for increased workflow productivity: Rerun & Reflex and continuous loading
 - Add reticulocyte and body fluid analysis as you need them
 - XN quality. Cost-effective. Plus full support.
 - Delivering specialist solutions for labs that need to offer niche diagnostics.
 - A perfect secondary analyser
 - Upgrade from 3-part diff to 5-part diff at a price you can afford



Coatron

Complete NEW range of Coagulation Analysis with the highest standard and reliability - Coatron X



Complete optical analysis
No further parts required, like balls, stirrers etc.

Adaptation of the light level
Automatic light level adjustment of the optic channels to each sample



Exclusion of disturbance
Stray light reduction, exact temperature control, all parameter are preset

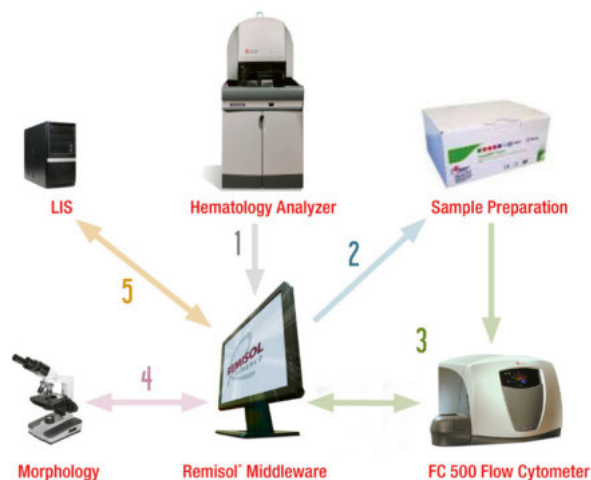


Downloads/Information:
www.teco-medical.com/coatron-x

TECO
Innovation in Coagulation

INTEGRATED HEMATOLOGY

Beckman Coulter – HematoFlow



Highlights: HematoFlow is a unique cellular analysis solution which brings automated flow cytometry testing into the routine, mid to large haematology laboratory. When used in the HematoFlow solution with automated gating software, CytoDiff, a 5 colour, 6 monoclonal antibody reagent cocktail, yields more extensive results with a 16-part flow differential. With the HematoFlow, labs save time by reducing manual slide reviews.

Sysmex – XN-3100 DI



Sample throughput: CBC+DIFF: up to 200 slides/h,
up to 40 slides/h in BF mode per module
SP-50: up to 30 slides/h in S mode,
up to 75 slides/h in H mode

Dimensions: 2,000 × 1,150 × 1,630 mm (w × d × h)

Weight: 1,020 kg

Highlights:

- Fully integrated slide maker & stainer
- Choose Advanced Clinical Parameters as needed
- Flexible throughput
- Automatic reflex measurement
- Integrated backup concept
- Digital Imaging (DI) module:
 - Seamless integrated morphology analysis of slides
 - Efficient, detailed review and validation for greater accuracy
 - Faster, improved workflow
 - Long-term storage and archiving of cell images
 - Consistency in analysis quality

Sysmex – XN-9100 Sorting & Archiving



Sample throughput: CBC+DIFF: from 200 slides/h,
from 40 slides/h in BF mode per module

Dimensions: depending on configuration

Weight: depending on configuration

Highlights:

- Scalable and modular haematology automation line
- Flexible configuration of XN analysis modules and rack entry and exit positions
- Discrete rack management
- Built-in auto reflex
- Uninhibited workflow from routine to specialised testing
- Automatic reflex measurement in case of unreliable results
- Choose Advanced Clinical Parameters as needed
- Optional pre-sorting, sorting and achieving module for discrete rack management with TS-10
- Optional integration of ESR and HbA1C analysis

FLOW CYTOMETRY

Streck – Cyto-Chex BCT



Dimensions:

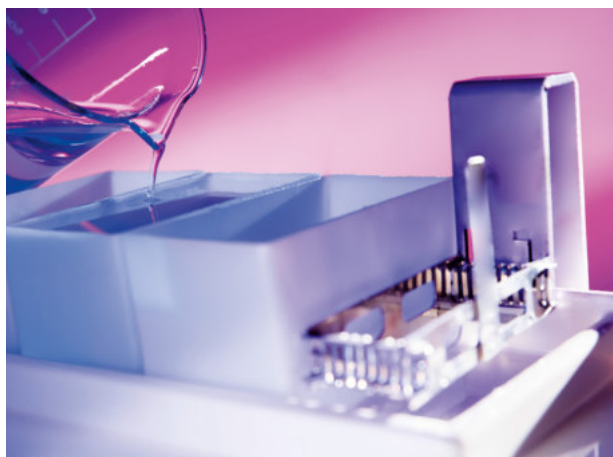
13 x 75 mm, 4.0 ml draw
10.25 x 64 mm, 2.0 ml draw

Highlights:

- A blood collection tube for the preservation of whole blood specimens for immunophenotyping by flow cytometry
- The preservative maintains the integrity of the white blood cell cluster of differentiation (CD) markers at room temperature for convenient transport and storage
- Preserves peripheral blood samples' qualitative and quantitative leukocyte subset characteristics and is FDA 510(k) cleared for consistent recovery of HIV associated lymphocyte
- Available in 4.0 ml or 2.0 ml sizes

HISTOLOGY EQUIPMENT

Biomed – Hemafix Dyeing Solution



- Highlights:**
- Hemafix quick-staining for hematology and cytology
 - Standardized ready-to-use staining solutions
 - Reproducible and consistent staining quality
 - Short dyeing time – only 30 seconds to two minutes
 - No filtration or sedimentation of unsolved colour particles
 - Complete standardization with the Hemomat-K 6 stainer
 - Clean and efficient way of working

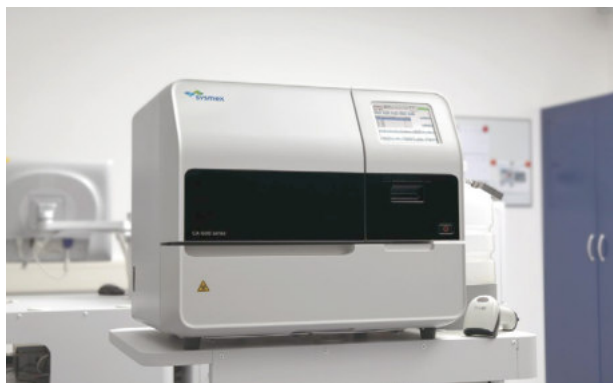
MEDITE – Rotary Microtome M530, semi-automatic



- Highlights:** This highly precise, semi-automatic Rotary Microtome M530 brings safe and easy sectioning to the laboratory. With a Memory Positioning option and user-oriented technology, it offers high performance and great flexibility. Clearly arranged controls and a smooth running handwheel create a comfortable user experience. The Microtome M530 is ergonomically designed and made in Germany by seasoned experts. It is part of a new generation of MEDITE Microtomes, setting a new GOLD STANDARD.

COAGULATION

Siemens Healthineers – Sysmex CA-600 Systems



- Dimensions:** Approx. 490 × 566 × 490 mm (h × w × d)
Sample throughput: Approx. 60 PT tests/h
Weight: Approx. 43 kg

- Highlights:** The Sysmex CA-600 Systems – with the smallest footprint in their class – are built on a history of proven reliability and provide scalable options for routine and specialty* coagulation testing.
- Features clotting, chromogenic,* and immunologic* measurements with true random access
 - Enables critical tests to be processed at any time via STAT sample processing
 - Offers the most frequently requested routine and specialty tests, including INNOVANCE D-Dimer*

*Sysmex CA-660 System only.

Siemens Healthineers – Sysmex CS-5100 System



- Dimensions:** Approx. 1,280 × 1,576 × 1,150 mm (h × w × d)
Sample throughput: Approx. 400 simultaneous PT/APTT tests/h
Weight: Approx. 362 kg

- Highlights:** The Sysmex CS-5100 System – now available in the U.S. – offers high-volume and multisite labs smartly designed PSI technology and automation connectivity for streamlined workflow and high-quality test results on the first run. Simultaneous, multiwavelength PSI technology helps labs to identify and manage unsuitable test specimens prior to analysis. The Sysmex CS-5100 System offers an expansive test menu of routine and specialty hemostasis assays (including several INNOVANCE assays).

COAGULATION

Siemens Healthineers – Sysmex CS-2500 System



Dimensions: Approx. 685 × 1,113 × 895 mm (h × w × d)
Sample throughput Approx. 180 simultaneous PT/APTT tests/h
Weight: Approx. 140 kg

Highlights: The Sysmex CS-2500 System– now available globally including the U.S. – offers mid-volume and multisite hemostasis labs smartly designed technologies for improved efficiency, exceptional accuracy, and reliable first-run results. Equipped with next-generation PSI technologies, the system takes hemostasis testing to the next level. The Sysmex CS-2500 System offers an expansive test menu of routine and specialty hemostasis assays (including several INNOVANCE assays), all on a single instrument.

Sysmex – CS-1600



Sample throughput: Up to 120 tests/h (PT)
Dimensions: 540 × 760 × 690 mm (h × w × d)
Weight: Approx. 85 kg
Assays: 20 simultaneously

Highlights:

- Minimal need for hands-on maintenance
- Perfect solution for medium-size labs with needs for specialty testing
- Proven, reliable technical performance with advanced CS-technology
- High-quality results based on advanced multi-wave-length technology
- Traceability for operation history and results

Sysmex – CS-2400/2500



Sample throughput: Up to 180 tests/h (PT)
Dimensions: 685 × 775 × 895 mm (h × w × d)
Weight: Approx. 110 kg
Assays: 60 simultaneously

Highlights:

- Advanced inhibitor testing with cross-mixing tests
- CS-2400: open tube model, CS-2500: cap-piercing model
- Rule-based rerun & reflex testing
- Gold standard in "light transmission aggregometry"
- Automated, high-accuracy platelet function testing by aggregometry
- High-quality results based on advanced multi-wave-length technology
- Pre-analytic sample checks for interferences and over-/underfilling
- Consolidates routine and specialised testing in a single analysis system

TECO – Coatron A6 Plus



Dimensions: 500 × 950 × 800 mm (w × h × d)
Power Consumption: 90 – 240 Vac, 50 – 60 Hz
Number Of Channels: 6
Weight: 52 kg

Highlights:

- Fully automated 6-channel Hemostasis Analyser for routine Coagulation tests
- Clotting, chromogenic, immunological
- Quarter test volume (75 µL)
- High speed testing
- Biphasic waveform analysis
- Inclusive multifunctional, reliable Management Software
- Preset for nine different profiles
- PT, APTT, TT, FIB, all major Standard Coagulation tests
- AT, PC special chromogenic Coagulation tests

TECO – Coatron X



Dimensions: 230 x 140 x 90 mm (w x h x d)
Power Consumption: 110 – 240 Vac, 50 – 60 Hz / 5 Vdc, 3.3 A
Number Of Channels: 1 – 4

- Highlights:**
- Highest optical resolution, enlarged optic range, smallest sample and reagent volume 0,1 mOD – 3,500 mOD, just with 75 µL sample and reagent volume
 - Complete optical analysis
 - No further parts required, like balls, stirrers etc.
 - Adaptation of the light level
 - Automatic light level adjustment of the optic channels to each sample
 - Exclusion of disturbance
 - Stray light reduction, exact temperature control, all parameter are preset

TECO – Hemostasis reagents



- Highlights:** A complete range of Hemostasis reagents for routine and for differentiated coagulation analysis (chromogenic and immun-turbidimetric tests). Our reagents comply with our high quality standards. Prothrombin Time (PT), Activated Partial Thromboplastin Time (aPTT), Fibrinogen (FIB), Thrombin Time (TT), Protein S (PS), Lupus Anticoagulant (LA), Factor V Leiden (PCA), Chromogenic Tests (AT), Protein C (PC), D-Dimer, Dimex D-Dimer, Red D-Dimer, Blue D-Dimer, Deficient Plasma, Reference Plasma, Control Plasma



Streck

This is not a tube.

It's trusted sample integrity, powered by:

FUSiON™

Find out more at streck.com/notatube
or call 402.333.1982

Pathology

MALDI-MSI
Scanner
Microscopy
Slide Preparation
Printer
Information Technology



HAMAMATSU
PHOTON IS OUR BUSINESS

KUGEL
medical
■ ■ ■ ■

MEDITE ■
Cancer Diagnostics

OLYMPUS
Your Vision, Our Future

PRIMERA
TECHNOLOGY EUROPE™

VISIOPHARM®
TRANSFORMING PATHOLOGY

MALDI-MSI

Bruker Daltonics – rapifleX MALDI Tissue typer



Highlights:

- Mass Spectrometry Imaging based on MALDI-TOF
- Direct imaging of proteins, peptides and lipids
- Available as TOF/TOF
- Unique ion source for robust day-to-day operation
- Fast acquisition speed of up to 50 true square pixel / second
- Laser repetition rate up to 10 kHz
- Pixel size <10 µm
- Comprehensive software

For research use only.
Not for use in diagnostic procedures.

SCANNER

Hamamatsu Photonics – NanoZoomer S360

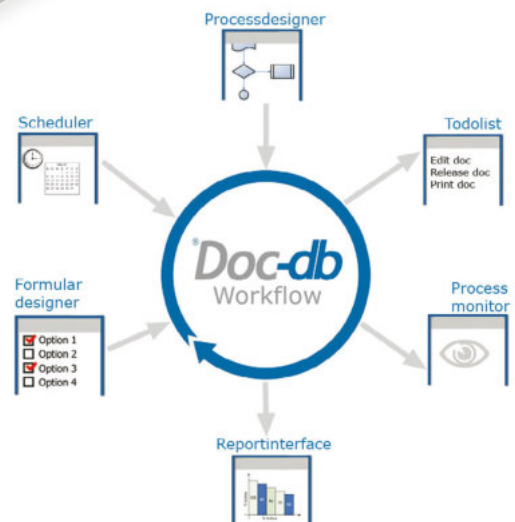


Highlights:

- Real high throughput: Greatly improved throughput (more than 80 slides/h at 40 × mode for 15 × 15 mm sample sizes) and slide capacity of 360 for high workload laboratories.
- Hassle free: Simple operation and hassle free scanning. New, powerful scan software for fast and easy operation
- Error free: Robust and stable scanning. Automatic system calibration.
- Blur free: Sharp focus on entire specimen. Dynamic Pre-Focusing (DPF) method and advanced focus scoring with automated rescan option for higher success rate.

Doc-db IS AN INNOVATIVE SOLUTION FOR YOUR QM DOCUMENTATION:

- Automatically controls the creation process of the documents
create » review » approve
- Publishes the documents
print, PDF, e-mail
- Maintains the archive and version history
- Supports user interaction by task lists
- Supports quality managers with highly sophisticated tools:
*Process designer
Process monitor
Report interface
Scheduler*



Zenon GmbH
Softwareentwicklung & Neue Medien

www.docdb.de

SCANNER

Hamamatsu Photonics – NanoZoomer S210



Highlights: With over a decade of experience in digital pathology, Hamamatsu introduces the NanoZoomer S210.

Features:

- 210 slide scanning capability
- Batch scanning or continuous loading of slides
- High performance
- Cost-effective
- Simple operation
- New sleek design and small footprint

Hamamatsu Photonics – NanoZoomer S60



Highlights: NanoZoomer S60: The most flexible slide scanner for any histology lab – The best of Hamamatsu's know-how, combining flexibility and outstanding image quality.

Features:

- High-speed and sensitivity in fluorescence
- Best image quality both in brightfield and fluorescence
- Double-size slides scan
- Ideal for all research and pathology laboratories

MICROSCOPY

Olympus – CX43



- Highlights:**
- Ergonomic Design
 - Ideal for versatile application
 - Long lifetime LED illumination

The CX43 microscope enable users to remain comfortable during long periods of microscopy observations. The microscope frame conforms to the user's hands and the location of the control knobs maximize ergonomics to improve work efficiency. Users can quickly set a specimen with one hand, while adjusting the focus and operating the stage with the other hand with minimal movement. The microscope features an optional camera port.

Olympus – UC90 4K Microscopy



- Highlights:**
- Up to 4K UHD image capturing
 - One Camera for Multiple Applications
 - 9-megapixel CCD camera

The 9-megapixel UC90 camera captures it all: brightfield images of superior quality, and up to 4K UHD imaging. Whatever your imaging needs are, expect no less than exceptional results in image quality, sensitivity, dynamic range, and color fidelity. The UC90 offers fluid sample navigation and focusing, making it effortless and convenient to locate regions of interest right on your screen. Excellent microscope imaging has never been as easy and versatile as with the UC90.

SLIDE PREPARATION

KUGEL medical – Formalin Mixing and Dispensing Station AFMDS-100



Dimensions: 600 x 1,320 x 700 mm (w x h x d)
Weight: 120 kg
Power consumption: 250 W / 230 Volt / 10 Amp / 50-60 Hz

- Highlights:**
- Contact-free delution of concentrated formaldehyde with variable quantities of water and a buffer solution
 - Integrated microprocessor allows you to save and recall your settings
 - Control through one single surface with LCD display
 - Transfer to multiple remote work stations for dispensing
 - Is to be connected to the water supply
 - No more tiresome dragging of heavy formaldehyde tanks
 - No direct contact with concentrated formaldehyde and subsequent reduction of formaldehyde contamination in pathologies

MEDITE – Rotary Microtome M530, semi-automatic



- Highlights:** This highly precise, semi-automatic Rotary Microtome M530 brings safe and easy sectioning to the laboratory. With a Memory Positioning option and user-oriented technology, it offers high performance and great flexibility. Clearly arranged controls and a smooth running handwheel create a comfortable user experience. The Microtome M530 is ergonomically designed and made in Germany by seasoned experts. It is part of a new generation of MEDITE Microtomes, setting a new GOLD STANDARD.

PRINTER

Primera Technology – Signature Cassette Printer



- Highlights:** Primera's Signature Cassette Printer is designed for use in pathology and histology labs to print high-resolution text, graphics and bar codes directly onto tissue cassettes helping to reduce the risk of misidentification of specimens. It is available in both a stand-alone manual printer and a fully automated complete system.
- On-demand or batch mode printing
 - Black or colour printing
 - Cost reduction by inventorying only white cassettes
 - Chemical-resistant ink – ensures reliable identification of cassettes
 - USB interface – ability to integrate with LIS
 - Two years warranty (After product registration within six months)

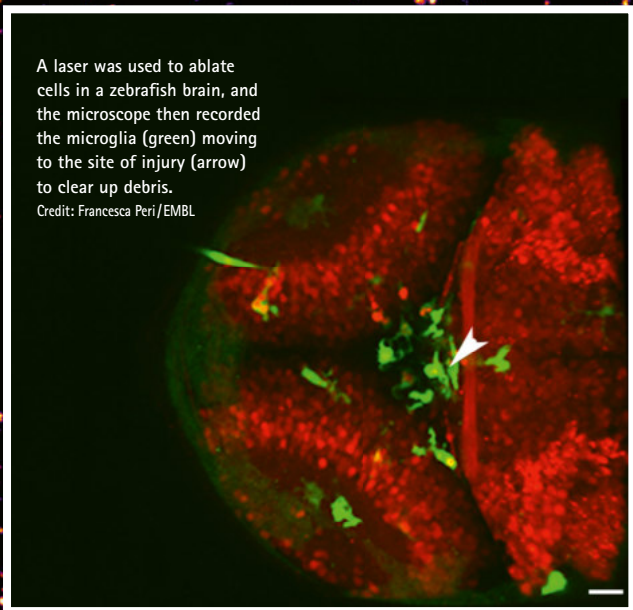
Primera Technology – Signature Slide Printer



- Highlights:** Primera's Signature Slide Printer can significantly increase the efficiency of labs while helping to reduce the risk of misidentification of specimens.
- On-demand, full-colour printing – prints only the number of slides needed
 - Prints directly onto slides – eliminates handwriting that is hard to read and labels that are hard to apply
 - Cost reduction by inventorying only white-frosted slides
 - Xylene-, alcohol-, heat- and chemical-resistant ink – ensures reliable identification of slides
 - PTSlide Software allows connection to LIS systems
 - Compact design
 - Two years warranty (After product registration within six months)

A laser was used to ablate cells in a zebrafish brain, and the microscope then recorded the microglia (green) moving to the site of injury (arrow) to clear up debris.

Credit: Francesca Peri/EMBL



An image is worth a thousand words

Light microscopy today offers a wealth of techniques that provide fascinating insights into life on subcellular level.

"In light microscopy these days there are so many new techniques that each of us can only handle a subset of them," says Christian Tischer, scientific officer in der Advanced Light Microscopy Facility of the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, and adds that "in light microscopy, just as in electron microscopy, every few years a new technology emerges." The expert presented some of these techniques during a field trip of the European Union of Science Journalists' Associations (EUSJA) to EMBL, where these techniques have become indispensable in basic research.

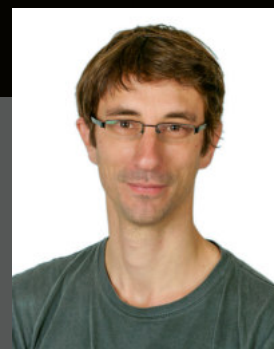
Take for example super-resolution microscopy which makes use of the specific physical features of fluorescent dyes to achieve resolution far below 200 nm, half the wavelength of light, and long believed to be an unsurmountable resolution limit. This discovery, which was awarded the Nobel Prize, allows the visualisation of the molecular structure of the nuclear pore, a protein complex in the membrane surrounding the cell nucleus that allows the transport of certain molecules in and out of the nucleus. Super-resolution fluorescent microscopy can show the exact structure of the nuclear pores on the level of the individual proteins.

Another fascinating technology is laser-based nanosurgery where cells are sliced with a nano-laser scalpel. At EMBL, this technique was used to examine the biophysical features of the cytoskeleton. It turned out that this 'cell skeleton', unlike a human one, cannot simply be cut in two. "These structures might be called skeletons but they are very different from ours," Tischer points out. In another experiment the researchers tried to find out

how so-called microglia – immune defense cells that identify and eliminate damaged and dead neurons – recognize their prey. The researchers used a nano-laser scalpel to cut the tendrils with which the cells grab and pull the neurons.

Light sheet microscopy is another technique that provides insight on the cellular level. Based on the so-called triangulation slice images of an object can be acquired and fused into a 3D image – or rather a 3D movie of live cells to be precise. One of the movies shows the fusion of an egg cell and a sperm cell and the subsequent first cell division of the new embryo. Light sheet microscopy is used here primarily because these cells are highly light sensitive and thus would not survive conventional light microscopy.

"It can be really boring to sit at the microscope and look for something specific," Tischer concedes. Therefore methods are being developed to automate the search. In automated feedback microscopy the software learns to detect and photograph interesting targets in a sample. This technique for example found the above-mentioned nuclei prior to mitosis. It is moreover an important tool in the Tara Oceans Project where over a period of three years the team aboard the French research schooner Tara collected water samples from all oceans on the globe. These were examined at EMBL for plankton – with sensational results: No less than 150,000 plankton species were discovered where previously the number of plankton species was estimated to be around 11,000. "For a human lab team this would have been a task for a lifetime," Tischer laughs. ■



PROFILE:

Christian Tischer, PhD, studied physics in Heidelberg and received his doctorate from the European Molecular Biology Laboratory (EMBL), also in Heidelberg. Following post-doc work in biophysics in Amsterdam, he is currently at EMBL's Advanced Light Microscopy Facility where he supports scientists with microscopy and image analysis.

Nuclear pores images in a super-resolution microscope. This technology enabled scientists to understand how different components of the nuclear pore are arranged.

Credit: A. Szymbońska & J. Ellenberg/EMBL

INFORMATION TECHNOLOGY

Hamamatsu Photonics – NDP.serve3 Image Server Software



Highlights: NDP.serve3 is the next generation of our established image server software. It is a power solution to share and manage whole slide images (WSI) across a network, either as a stand-alone solution or integrated with your LIS/LIMS software.

Key Benefits / Features:

- Secure database with enhanced security functionality
- Intuitive, simple to use graphical user interface
- Easy to share whole slide images
- Seamless integration with NDP.view2 – the fastest Mac and Windows WSI viewer on the market

Visiopharm – ONCOTOPIX



ONCOTOPIX®

- Highlights:**
- ONCOTOPIX Scan
 - Proven performance
 - Fast high quality slide scanner
 - ONCOTOPIX Dx
 - Validated Diagnostic Decision Support
 - Automated Workflows
 - ONCOTOPIX Discovery
 - Dedicated tools for cancer research

Scanners produced by Hamamatsu
Book a demo and opt in to win a Powerbank at <http://bit.ly/2qVregp>

Visiopharm – ONCOTOPIX Quantitative Image Analysis



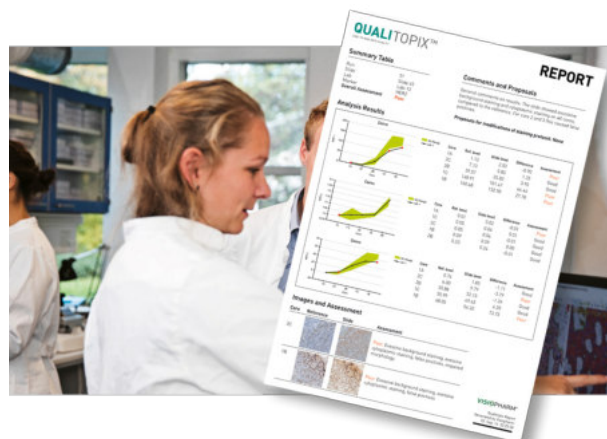
ONCOTOPIX Quantitative Image Analysis

- Highlights:** Leading IA solution for cancer diagnostics providing:
- Unprecedented high-precision alignment
 - Automated tumor cell detection
 - Enabling Multiplexing and co-localization analysis
 - For protein and ISH test results as well as H&E
 - Revealing information about Tumor Micro Environment

Book a demo and opt in to win a Powerbank at <http://bit.ly/2qVregp>

*Validated for in vitro diagnostic use (CE-IVD) in Europe in combination with the CE-IVD APPs from Visiopharm

Visiopharm – QUALITOPIX



QUALITOPIX™

END-TO-END DATA QUALITY

- Highlights:** Novel & patented technology for monitoring staining performance in between EQA evaluations

Coming Soon: A novel tool to measure and document your daily or weekly laboratory performance and ensure performance variations are kept at a minimum.

Book a demo and opt in to win a Powerbank at <http://bit.ly/2qVregp>



The Interdisciplinary Fascination



Screening tests: Can you diagnose cancer from blood?

Thrombosis prophylaxis without laboratory tests: How certain are the new anticoagulants?

New tissue from stem cells: Is this the future of therapy for diabetes and heart attacks?

Wave of refugees in Germany: Is there now a threat of new infections?

Current issues from medicine and research will be discussed at the MEDICA LABMED FORUM in Düsseldorf from 13 to 16 November 2017.

Under the guiding principle “**The Interdisciplinary Fascination**”, laboratory medicine, molecular pathology, microbiology, medical technology and life sciences present themselves as innovation drivers, which will provide new impulses for all areas of medicine.

Doctors and patients, health policymakers and healthcare providers, media representatives and all other visitors of the “world’s largest medical trade fair” are invited to four exciting theme days with top-class lectures and podium discussions.

The events take place each day from 11 a.m. to 4 p.m. and are free of charge for trade fair visitors. The conference language is English.

Four theme days

Monday, 13 November: **Cancer diseases**

Tuesday, 14 November: **Cardiovascular diseases**

Wednesday, 15 November: **Innovative diabetes diagnostics**

Thursday, 16 November: **Infection and migration**

Further information

Messe Düsseldorf GmbH, Project Management MEDICA

E-mail: GiesenH@messe-duesseldorf.de

Trillium GmbH Medizinischer Fachverlag

E-mail: georg.hoffmann@trillium.de

WORLD FORUM FOR MEDICINE



13 – 16 NOVEMBER 2017
DÜSSELDORF GERMANY

www.medica.de



Every year in November, the World Forum for Medicine, with approximately 5,000 exhibitors, is an outstanding meeting point for experts from all across the world. In addition to a comprehensive trade exhibition, an ambitious supporting programme also awaits you in Düsseldorf. Here, innovative solutions for medical laboratories as well as a versatile range of laboratory and diagnostics technology will be presented to you.

At MEDICA, you find the entire spectrum of medicine for your very specific thematic areas.

BE PART OF THE NO.1!



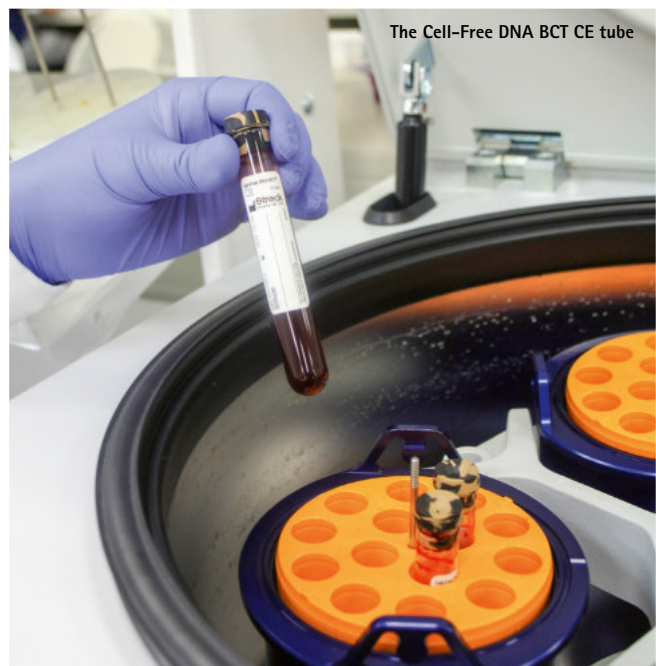


Streck headquarters in Omaha, USA

Scientists have discovered that dying tumor cells release small pieces of their DNA into the bloodstream. These pieces are called circulating tumor DNA (ctDNA) or circulating cell-free DNA (ccfDNA). The detection of cancer causing mutations in this ctDNA has emerged as a promising approach for non-invasive oncology testing and is being called a "liquid biopsy". However, white blood cell lysis and subsequent release of genomic DNA into these liquid biopsy samples mask the rare ctDNA and require that cumbersome pre-analytical steps be taken to ensure reliable and accurate test results.

Liquid biopsy samples must withstand stressors of pre-analytical variables such as storage, transportation, extraction and sample preparation. Streck offers a solution to prevent many of these pre-analytical variables from effecting valuable patient samples and skewing assay results.

Streck's Cell-Free DNA BCT CE is a blood collection device that is well documented to prevent the release of genomic DNA into plasma by stabilizing white blood cells, allowing convenient collection, storage, and transport of patient samples.



The Cell-Free DNA BCT CE tube

Streck's Cell-Free DNA BCT CE provide:

- A direct draw blood collection tube with a stabilizing reagent that preserves the separation of the cell-free and cellular DNA fractions
- Cell-Free DNA stability of 14-days at room temperature, CTC stability of 7-days at room temperature
- Easy sample collection at hospitals and medical practitioner's offices
- Room temperature shipping to the testing lab
- Ensures consistency of patient material and reliability of test results

Cell-Free DNA BCT CE is the trusted global leader in cell-free DNA sample stability. ■



CONTACT

Streck
7002 S 109th St · 68128 Omaha, USA
phone: +1 402 333 1982
international@streck.com · www.streck.com

DNA

Amplification
Integrated Systems
Amplification / Detection
Clinical Chemistry
Extraction
Liquid Biopsy
Service
Research Use Only

Agena
BIOSCIENCE

 **BIOMED**

 **BIORON**
diagnostica

eppendorf

Microsynth
THE SWISS DNA COMPANY


PerkinElmer
For the Better


ORION
DIAGNOSTICA

 **SARSTEDT**

SIEMENS
Healthineers 

Streck

AMPLIFICATION

BIORON Diagnostics – RealLine Pathogen Diagnostic Kits



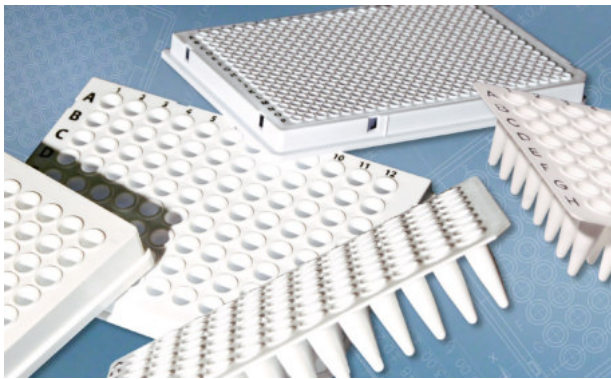
- Highlights:** RealLine Pathogen Diagnostic Kits from BIORON Diagnostics – with outstanding features:
- Lyophilized mastermixes
 - One handling procedure for all kits – simple & fast
 - Same PCR cycling conditions
 - Controls included
 - Multiplexing kits
- For a wide range of parameters:
- STIs: CT, NG, Mycoplasma ssp., Ureaplasma ssp., Gardnerella, Trichomonas
 - TORCH: Toxoplasma and Rubella
 - Herpes-viruses: CMV, HSV-1 and -2, EBV, VZV
 - Tick-borne infections: Borrelia and TBEV (FSME)
 - HPV: kits for HR and LR Human Papilloma Virus types

Orion Diagnostica Oy – Orion GenRead



- Assays:** C difficile, campylobacter
- Highlights:** Orion GenRead system is a small benchtop system for molecular pathogen detection, based on proprietary technology SIBA (Strand Invasion Based Amplification).
- Flexibility with 1 – 12 samples in one run
 - Fast test results are available in less than one hour
 - Ready to use kits contain all needed reagents
 - Bi-directional HIS/LIS connectivity
 - Portable and robust instrument suitable for various laboratory settings
 - CE marked test kits for C difficile and campylobacter. Next: RSV and Influenza A&B

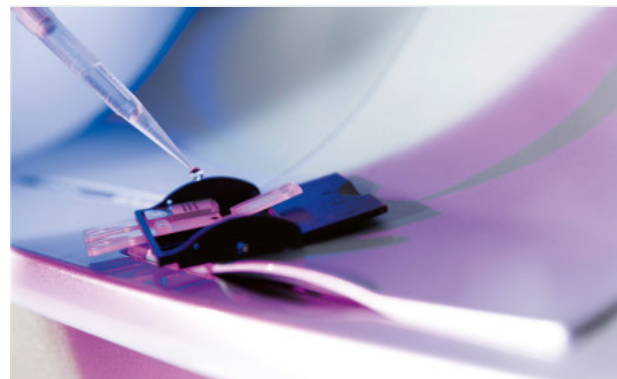
SARSTEDT – White Multiply PCR Plates



- Highlights:**
- White wells for improved fluorescence reflection
 - Thin-walled reaction tubes for quick temperature transfer
 - Free from DNA, DNase, RNase and PCR inhibitors
 - Barcode labeling on plates with half or full skirt is available on request

INTEGRATED SYSTEMS

Biomed – GenomEra CDX Instrument



- Dimensions:** 540 x 325 x 393 mm (w x h x d)
- Weight:** 32.7 kg
- Sample Throughput:** 4 samples/h
- Assays:** MRSA, C. difficile, Norovirus, GBS, S. pneumoniae
- No of parallel samples:** 4

- Highlights:**
- CE-certified, innovative PCR tests for pathogen detection
 - Menu of tests: MRSA, C. difficile, Norovirus, Group B Streptococci, S. pneumoniae
 - Direct Screening validated for multiple sampling sites
 - Diagnosis from culture plate and blood culture
 - Automatic result interpretation
 - Reliable measurement on the compact GenomEra CDX platform in 50 – 70 minutes

AMPLIFICATION/DETECTION

Agena Bioscience – MassARRAY Dx Analyzer 4

Technology:

Benchtop MALDI-TOF mass spectrometry to identify somatic mutations using single base extension with mass distinction of extended primers (using iPLEX chemistry and SpectroCHIP Array)

Time to results (from DNA):

<8 hours, incl. 1 h of hands-on-time

Capacity:

Two 96-well SpectroCHIP Arrays per run; up to 5 runs/day (up to 200 samples per day)

Automated software output:

Mass spectra, mutant and wild-type calls, report for each patient sample



Highlights: The MassARRAY Dx is a CE-IVD marked genetic analysis system for the reliable multiplexed analysis of up to hundreds of clinically relevant mutations in a single workflow. Powered by sensitive and accurate mass-based detection, it maximizes laboratory resources (sample-to-answer testing with minimal hands-on time in a single eight-hour work shift) and clinically actionable mutation reports. At present, two panels for colon and lung cancer enable cost-effective and accurate mutation screening.

Agena Bioscience – MassARRAY Colon Panel

Target:

>200 clinically actionable somatic mutations in four principal oncogenes (*KRAS, BRAF, NRAS, PIK3CA*)

of multiplexed PCR reactions: 8

Sample amount: 40ng DNA per sample

Sample throughput: Up to 10 patient samples and 2 controls per plate

Sensitivity: Detection and analysis of mutation frequencies as low as 5%

MASSARRAY DX COLON PANEL*: GENES AND MUTATIONS

GENE	COVERAGE	# OF MUTATIONS
<i>BRAF</i>	Codons 594, 600, and 601 of exon 15	27
<i>KRAS</i>	Codons 12, 13 of exon 2; Codons 59, 61 of exon 3 and Codons 117, 146 of exon 4	62
<i>NRAS</i>	Codons 12, 13, 18 of exon 2; Codons 59, 61 of exon 3; Codons 117, 146 of exon 4	55
<i>PIK3CA</i>	Codons 38, 81, 88, 93, 108 of exon 1; Codons 118 of exon 2; Codons 345 of exon 4; Codons 420 of exon 7; Codons 539, 542, 549, 545, 546 of exon 9; Codons 1021, 1025, 1043, 1047, and Codons 1049 of exon 20	67

*MassARRAY Dx Colon Panel is based upon recommendations made by ESMO clinical practice guidelines for diagnosis, treatment and follow-up for metastatic colorectal cancer. *Annals of Oncology 25 (Supplement 3): 2014*

Highlights: MassARRAY Dx Colon Panel is a CE-IVD approved set of clinically validated assays for cost-effective, accurate mutation screening to help you rapidly profile actionable somatic mutations in *KRAS, BRAF, NRAS, and PIK3CA* genes. The kit includes the required controls (wild-type and negative). The Panel is based upon clinical practice guidelines for diagnosis, treatment and follow-up for metastatic colorectal cancer recommended by ESMO.

Agena Bioscience – MassARRAY Dx Lung Panel

Target:

>300 somatic mutations in 10 principal genes (*EGFR, KRAS, BRAF, PIK3CA, NRAS, ALK, ERBB2, DDR2, MAP2K1, and RET*)

of multiplexed PCR reactions: 8

Sample amount: 40ng DNA per sample

Throughput: Up to 10 patient samples and 2 controls per plate

Sensitivity: Detection and analysis of mutation frequencies as low as 5%

MASSARRAY DX LUNG PANEL*: GENES AND MUTATIONS

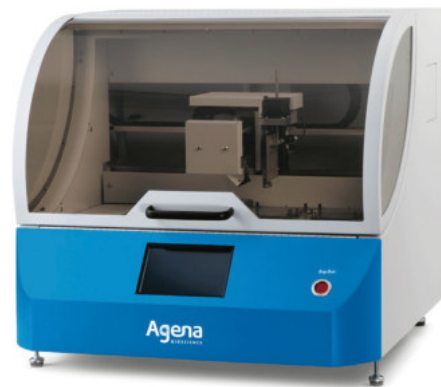
GENE	COVERAGE	# OF MUTATIONS
<i>ALK</i>	Codon 1196 of exon 22; codon 1196 of exon 23; and codon 1269 of exon 25	3
<i>BRAF</i>	Codons 466, 469 of exon 11 and codons 594, 591, 600 of exon 15	24
<i>DDR2</i>	Codon 239 of exon 9; codon 638 of exon 16 and codon 2304 of exon 18	4
<i>EGFR</i>	Substitutions, insertions, and deletions across exons 18, 19, 20, and 21. Includes key mutations such as L858R, L861Q, and T790M	181
<i>ERBB2</i>	Codons 775, 776 of exon 20	9
<i>KRAS</i>	Codons 12, 13 of exon 2 and codon 61 of exon 3	64
<i>MAP2K1</i>	Codons 56, 57, 67 of exon 2	3
<i>NRAS</i>	Codon 12 of exon 2 and codon 61 of exon 3	22
<i>PIK3CA</i>	Codons 542, 545 of exon 9 and codons 1043, 1047 of exon 20	13
<i>RET</i>	Codon 978 of exon 16	1

*MassARRAY Dx Lung Panel is based upon recommendations made by ESMO clinical practice guidelines for diagnosis, treatment and follow-up for metastatic non-small-cell lung cancer (NSCLC). *Annals of Oncology 25 (Supplement 3): 2014*

Highlights: The MassARRAY Dx Lung Panel is a CE-IVD approved set of clinically validated assays for cost-effective, accurate mutation screening to help you rapidly profile actionable somatic mutations in *ALK, BRAF, DDR2, EGFR, ERBB2, KRAS, MAP2K1, NRAS, PIK3CA, and RET* genes. The Panel kit includes the required controls (wild-type and negative). It is based upon clinical practice guidelines for diagnosis, treatment and follow-up for metastatic non-small-cell lung cancer (NSCLC) recommended by ESMO.

CLINICAL CHEMISTRY

Agena Bioscience – MassARRAY Dx Nanodispenser RS 1000



Purpose: Rapid sample transfer to Agena's SpectroCHIP arrays for further processing in MassARRAY Dx Analyzer 4

Processing time: < 15 minutes / 96-well microtiter plate

Highlights: The MassARRAY Dx Nanodispenser RS 1000 is a benchtop dispensing instrument employing advanced robotics for the rapid transfer of nanoliter sample volumes onto SpectroCHIP Arrays. Standard configuration is two microtiter plates at a time (can also be done with a single plate). Samples are transferred from the microtiter plate to the SpectroCHIP in less than 15 minutes. The spotted SpectroCHIP Arrays are then loaded into the MassARRAY Dx Analyzer 4.

Should we tweak human evolution?

Bioethical discussions expose powerful opinions

According to Darwin, humans will one day become extinct. Some don't think we need to accept this fate because gene editing may allow us to use our brains to take over the evolutionary story. 'Why, if we believe in evolution and the risk that one day humans will become extinct, should we not use our brains to take over our own evolutionary story,' philosopher Françoise Baylis will ask on 13 June, during her plenary session talk on 'Human gene editing: The dawn, the zenith, and the dusk' at the Clinical Chemistry and Laboratory Medicine annual congress, being held in Athens, Greece.

Professor Baylis, Chair in Bioethics and Philosophy at Dalhousie University in Halifax, Canada, and an acknowledged authority on the ethical issues of manipulating the human genome, was a member of the organising committee for the first-ever International Summit on Human Gene Editing. As she recently wrote, since its discovery the gene-editing system known as clustered regularly interspaced short palindromic repeats (CRISPR) has been used by scientists to make precise alterations in the DNA sequence of living cells. This offers the prospect of treating, and perhaps even eradicating debilitating genetic conditions, improving fertility treatments and fighting cancers. On the other hand, the professor stated, for some people CRISPR also raises the spectre of a bioethical nightmare that opens the door to large-scale bioterrorism or monstrous genetically altered human variants.



The ethical questions of whether we should use this technology, and for what purpose, remain unanswered. 'I wrote, more than ten years ago, and I still believe, that genetic enhancements are inevitable,' she said in an interview with *European Hospital*. 'Someone among us will do it. I could give the best ethical argument possible why we should not do it, and nevertheless some person will do it. And once that person does it, we all will be off to the races.'

'At the end of the day we are speaking about the biggest project imaginable, yet the current discussion of gene editing is not productive. This is because our debate tends to polar extremes either saying this is terrible, we should never do it, or this is great, we should go ahead,' Baylis said.

Before moving on to a discussion of good and bad, Baylis set the table for gene editing where the potential benefits and risks split into two parallel sets. The first set makes a clinical distinction between the types of cells being manipulated, whether they are somatic cells or germ cells. Simply put, somatic cells are cells in the body of the person being treated and once manipulated the resulting cells stay in the body of that person. Germ cells, on the other hand, are eggs and sperm, and early-stage embryos. The effects on these cells are passed on to any children created by the person who has undergone a treatment.

The second great divide in gene editing addresses the clinical intention. Is the manipulation of genes for a therapeutic effect, such as preventing, curing or correcting a disease, or is it for enhancement where human characteristics for everything from muscle mass to eyesight can potentially be manipulated. The ethical issues begin with a question of intention, she said. What are we trying to do? Are we treating? Or are we trying to make better humans? 'The field today is divided with respect to which of these categories of activities should be pursued. People are generally supportive of therapeutic interventions in somatic cells, though this is not risk-free. Things could go wrong. This is research, after all. But there is a broad agreement to go ahead,' she said.

'People are not in agreement with respect to enhancement, even in somatic cells,' said Baylis. 'Yet others are quite enthusiastic and do not see why we would not want to make ourselves a better species. But when we look at germ-line editing, there are people who say this is the Rubicon, it is a line we should not cross; we should never do anything in the germ-line whether for therapy or enhancement. The germ-line is off limits.'

Professor Françoise Baylis is an acknowledged bioethics expert with a special focus on genetic modification. Her aim is to "move the limits of mainstream bioethics and develop more effective ways to understand and tackle public policy challenges." She is a member of the Order of Canada and the Order of Nova Scotia, as well as a Fellow of the Royal Society of Canada and a Fellow of the Canadian Academy of Health Sciences.

The risk of one person going forward alone into germ-line editing is huge, she said. 'There are people who wish to be recognised as being the first, being the brightest. We live in a world that not only fosters but also rewards that kind of competition. 'And people rightfully worry about the societal effects of this kind of intervention. There are concerns about eugenics and discrimination resulting from the fact that some people will have access to these expensive technologies while other people will not. That some could benefit from something not available to others,' she said. 'I want us to accept the fact that some kind of gene editing is in our future, and to stop arguing about 'go' 'no-go'. Instead, we should focus on what we can do right now to assure that whatever is done will be done for the benefit of all of us and not just for a minority who are wealthy enough or powerful enough to do this,' said Baylis.

'I am interested in how we will negotiate – when we have never done so before – a broad societal consensus of how to use this technology for the benefit of all. We have time to learn. The science is not there, yet,' Baylis concluded. 'While scientists are doing that work, why shouldn't we figure out how to have a meaningful conversation, as one people across the planet, so that it's actually possible to be humane, and not just human?'



EXTRACTION

PerkinElmer – chemagic 360-D Nucleic Acid Extractor



Dimensions: 900 × 900 × 820 mm (h × w × d)
Weight: 140 kg
Sample throughput: 1 – 96 samples/h
No of parallel samples: 96
Power supply: 1,700 VA

- Highlights:**
- DNA isolation directly from human whole blood or plasma samples, no need for additional treatment on primary samples prior to extraction
 - Sample volumes from 10 µl – 10 ml
 - Ready to use DNA in high yields and purity
 - Fast processing times – 96 samples in < 60 min
 - Long DNA fragments – up to 200 kb suitable for NGS
 - High recovery rates
 - Autonomous system regarding downstream assays
 - For in vitro diagnostic use

Siemens Healthineers – VERSANT kPCR Molecular System



Dimensions: 924 × 1,254 × 1,043 mm (h × w × d)
Channels: Open-channel
Assays: Real-time PCR assays for infectious disease testing

- Highlights:**
- From increased efficiency and new industry standards in extraction to assay reliability and system flexibility, the VERSANT kPCR Molecular System with the MiPLX Software Solution* is a comprehensive molecular diagnostics solution. The open-channel concept and customizable MiPLX software set a new industry standard and further reduce the need for manual labor so that personnel can spend time on other value-added activities.

*Product availability varies by country.

LIQUID BIOPSY

Streck – Cell-Free DNA BCT CE



Dimensions:
 16 × 100 mm, 9.0 ml draw

- Highlights:**
- Unique direct draw blood collection tube which stabilizes nucleated blood cells
 - Prevents the release of genomic DNA, allowing isolation of high-quality cell-free DNA and CTCs for clinical research studies, drug discovery and diagnostic assay development
 - Cell-Free DNA is stable for up to 14 days and CTCs are stable for up to seven days, at room temperature, allowing convenient sample collection, transport and storage
 - Available in a unique hybrid plastic tube which protects valuable reagent and samples

Streck – Cell-Free RNA BCT



Dimensions:
 16 × 100 mm, 10.0 ml draw

- Highlights:**
- Unique direct draw blood collection tube, which stabilizes cell-free RNA in plasma and prevents the release of non-target background RNA from blood cells during sample processing and storage.
 - Cell-Free RNA is stable for up to seven days, at room temperature, allowing convenient sample collection, transport and storage
 - Unique hybrid plastic tube to protect valuable reagent and samples

Clostridium difficile

Routine diagnostics in the medical laboratory

*Interview with the physician Dr. Fabian Berger · Institute of Medical Microbiology and Hygiene · Saarland University Medical Center
National Advisory Laboratory for Clostridium difficile · Kirrbergerstraße Gebäude 43, 66421 Homburg/Saar*

As the contact person at the Reference Center for C. difficile, you are consulted every day with the problems of rapid diagnostics and elucidation of outbreaks by this pathogen.

What are the advantages of molecular biological procedures compared to conventional C. difficile diagnostics? How does the selected detection method affect the patient?

C. difficile diagnostic remains a challenge to this date. Current ESCMID guidelines recommend a screening test such as glutamate dehydrogenase (GDH) or PCR in combination with toxin testing methods e.g. using ELISA or toxigenic culture. Since toxin tests (ELISA) are often false negative due to toxin degradation in the sample and toxigenic culture might take some time rapid diagnostic tools are needed. PCR may serve as a primary tool to exclude toxigenic infection with high sensitivity. Some commercial PCR methods include the detection of strains of higher epidemiological importance such as the classical "hypervirulent" outbreak strain ribotype 027 (RT027) which has become epidemic in some areas showing global spreading. Since other ribotypes are also well known to cause outbreaks (e.g. RT001) the lack of this strain does not elucidate such an event. In these cases culture is needed to collate C. difficile isolates to their specific ribotype. In cases of an accumulation of one ribotype it is necessary to subtype the strains in order to show potential clonal transmission and the degree of relatedness. Whole Genome Sequencing (WGS) and multiple locus variable number of tandem repeats analysis (MLVA) are suitable tools for further molecular investigation.

What do you expect from manufacturers of diagnostic products?

Diagnostic tools should cover major virulence factors and if technically possible identify more virulent strains (e.g. RT027 and others).

Which role does the Robert Koch Institute (RKI) play, the parent institution of the National Advisory Laboratory?

The RKI plays a leading role in establishing measures to prevent C. difficile infection (CDI). In Great Britain for example active measures, such as national control policies, helped to significantly reduce CDI incidence.

Which strategies are used and developed against hospital infections to reduce the spread of multi-drug resistant pathogens?

Due to spore formation C. difficile is a challenge in hygiene. Since disinfectants used for hand and skin hygiene use alcohols that are not able to eliminate spores, hand washing is the only option. For disinfection of surfaces sporocidal disinfectants are needed that are not regularly used in hospitals. Training healthcare personnel in the correct execution of these measures including isolation of CDI patients and personal protective measures, may prove useful. If an outbreak is suspected it is mandatory to type the C. difficile isolates with molecular genetic methods to receive an epidemiological overview and to identify the

source of the outbreak. Rapid and effective countermeasures may be able to stop an outbreak in its tracks.

We would like to thank Dr. Fabian Berger for the interview and wish him all the best and a lot of success with his responsible work.



CONTACT

Biomed Labordiagnostik GmbH

Dr. Dagmar Michel · Consultant Clinical Diagnostics

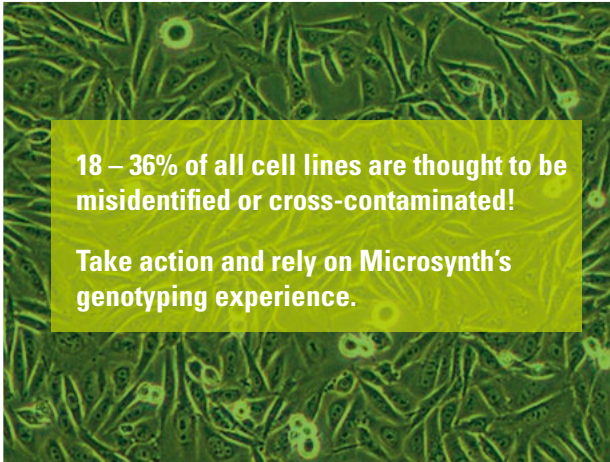
Bruckmannring 32 · 85764 Oberschleissheim

phone: +49 (0)89 315 700 23 · Fax: +49 (0)89 315 700 10

www.biomed.de

SERVICE

Microsynth – Easy-to-Use Cell Line Authentication Service



18 – 36% of all cell lines are thought to be misidentified or cross-contaminated!

Take action and rely on Microsynth's genotyping experience.

- Highlights:**
- Easy: sample preparation and shipment of cell lines at room temperature
 - Free: daily pickup service via Microsynth collection boxes in Austria, Germany and Switzerland.
 - Reliable: more than 10 years experience in genotyping
 - Multiple organisms: Human and Mouse (off-the-shelf)
 - On request we can develop high-quality STR markers for any organisms.
 - Related services: database comparison of DNA profile (e.g. ATCC), mycoplasma testing, GMP Sanger sequencing
 - Additional services: NGS, qPCR, contract research

RESEARCH USE ONLY (RUO)

Eppendorf – BioSpectrometer fluorescence



Dimensions: 50 × 295 × 400 mm (h × w × d)
Weight: 5.4 kg
Power consumption: 15 W (during operation),
 5 W (dimmed display)

- Highlights:**
- Absorbance measurement for one or more wavelengths, recording of wavelength scans
 - Sensitive nucleic acid and protein quantification via fluorescence intensity
 - Integrated application and results memory
 - Compatible with microliter measuring cells, such as the Eppendorf μ Cuvette G1.0, and standard cuvettes

Eppendorf – Mastercycler nexus X2



Dimensions: 321 × 250 × 412 mm (h × w × d)
Weight: 11 kg
No of parallel samples: 64 / 32 * 0.2ml PCR tubes, up to
 64 * 0.5ml PCR tubes
Temperature range: 4 – 99°C

- Highlights:**
- Large block for large assays – small block for small assays
 - Optional gradient for PCR optimization
 - E-mail notification
 - Flexlid concept allows use of all types of consumables with automatic height adjustment of the lid

Eppendorf – μ Cuvette G1.0



Dimensions: 48 × 12.5 × 12.5 mm (h × w × d)
Height of light beam: 8.5 mm
Volume: ≥ 1.5 μ L (dsDNA)

- Highlights:**
- Microvolume measuring cell for photometric measurements
 - Measurement of small sample volumes (1.5 – 10 μ L)
 - Measurement of high sample concentrations without prior dilution
 - Exclusively available for Eppendorf BioPhotometer and Eppendorf BioSpectrometer

Microbiology

Mass Spectrometry
Microscopy
Identification /
Susceptibility
Sample Collection



MetaSystems Indigo

OLYMPUS
Your Vision, Our Future



 **SHIMADZU**

MASS SPECTROMETRY

Bruker Daltonics – MBT smart



Highlights: MBT smart is the MALDI Biotyper High-End option with increased speed, equipped with Bruker's proprietary smartbeam laser technology. It is the first MALDI Biotyper system with lifetime laser: seven years warranty or 500 Mio shots (whatever comes first). The new high-performance vacuum system with increased pump capacity shortens Ready-to-Measure time significantly. Available as an IVD solution.

Shimadzu – iDplus Assurance



Dimensions: 700 × 1,920 × 850 mm (w × h × d)
Weight: 330 kg, excluding data system

Highlights: Axima Assurance – Flexibility and Quality: The Axima Assurance is designed with the general analytical and life science laboratory in mind. Incorporating a variable repetition rate 50 Hz N2 laser, the system provides high quality and high sensitivity rapid MALDI mass spectra and is particularly suited to identification in the microbiology field. Positive and negative ion modes are included as standard, allowing greater flexibility and extending the compound categories that may be analysed.

Shimadzu – iDplus Confidence



Dimensions: 700 × 1,920 × 850 mm (w × h × d)
Weight: 330 kg, excluding data system

Highlights: iDplus Confidence – Sensitivity and Flexibility:

- Rapid microbial identification for research use
- Identifies and classifies strains based on phenotype characteristics
- SuperSpectra reduce the incidence of false positives and ensure robustness and reproducibility
- Open system allows addition of new species / entries to the database or the creation of new databases
- Clustering allows molecular profiling and tracking of change or evolution
- High performance MS for large molecule analysis
- MS/M

Shimadzu – iDplus Performance

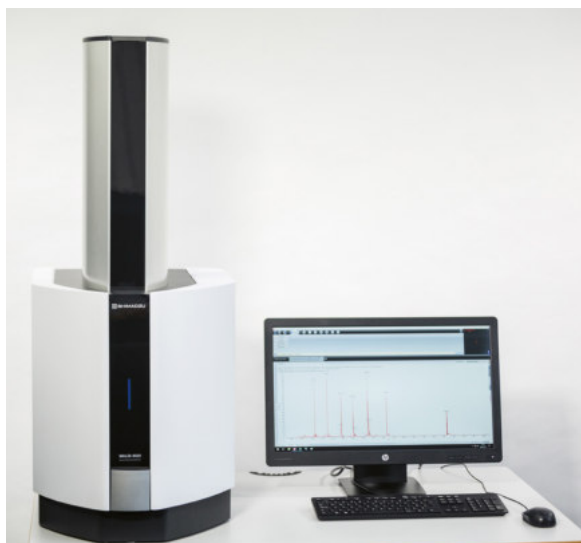


Dimensions: 700 × 1,920 × 850 mm (w × h × d)
Weight: 375 kg, excluding data system

Highlights: iDplus Performance – application-centric solutions:

- Rapid microbial identification for research use
- Identifies and classifies strains based on phenotype characteristics
- SuperSpectra reduce the incidence of false positives and ensure robustness and reproducibility
- Open system allows addition of new species / entries to the database or the creation of new databases
- Clustering allows molecular profiling and tracking of change or evolution
- High performance MS for large molecule analysis
- MS/MS

Shimadzu – MALDI-8020



Dimensions: 450 × 1,055 × 745 mm (w × h × d)
Weight: 86 kg

Highlights: The MALDI-8020 is a benchtop, linear-only MALDI-TOF mass spectrometer designed to meet the needs of laboratories requiring a cost-effective MALDI-TOF platform. This newly designed MALDI-TOF mass spectrometer is functionally simple but provides outstanding MS performance in a compact footprint.

MICROSCOPY

Olympus – BX46 Ergonomic Upright Microscope



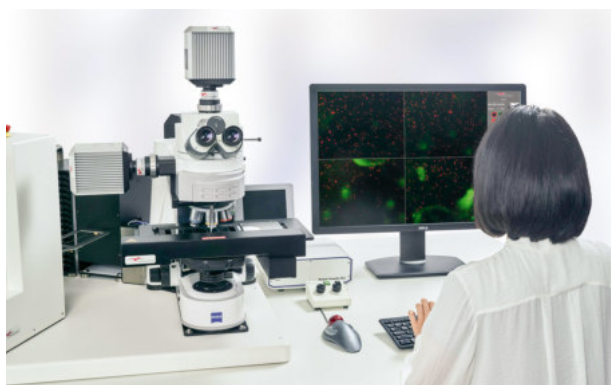
Highlights:

- Unrivalled ergonomic design
- World's first tilting, telescopic, lifting tube
- Ultra-low fixed stage

The BX46 is specifically designed to meet the demands of repetitive routine microscopy. This microscope is focused with a moveable objective nosepiece rather than by moving the stage. The stage is fixed in a very low position, allowing the user to rest their arm on the desk when moving specimens. Ideal user posture is further encouraged by the three-dimensional adjustability of the new observation tube, making the BX46 extremely comfortable for continuous daily use.

IDENTIFICATION/SUSCEPTIBILITY

MetaSystems – Indigo



Number of Parallel Samples: 800
Assays: Gram Imaging, Pathogen Identification by Direct Multiplex Imaging (DMI), Mycobacteria Detection and Quantification

Highlights: MetaSystems Indigo has focused on helping medical decision makers and laboratory professionals rapidly identify pathogens with DMI (Direct Multiplex Imaging), a high-throughput automated analysis system for the identification and differentiation of clinically relevant microorganisms. The system also scans, digitizes and archives Gram-stained or parasite samples enabling on-screen analysis with remote access. Furthermore, it automatically finds and quantifies mycobacteria such as *M. tuberculosis*.

SAMPLE COLLECTION

Miacom diagnostics – LIQUILIZER

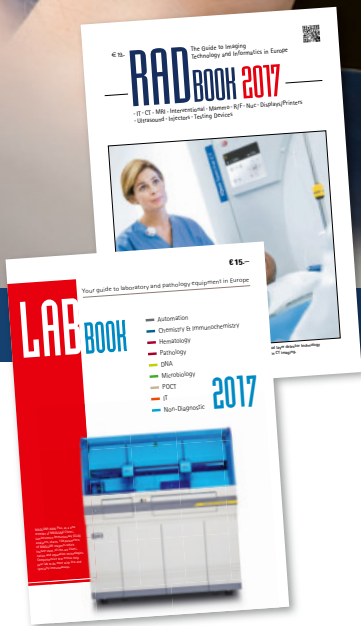
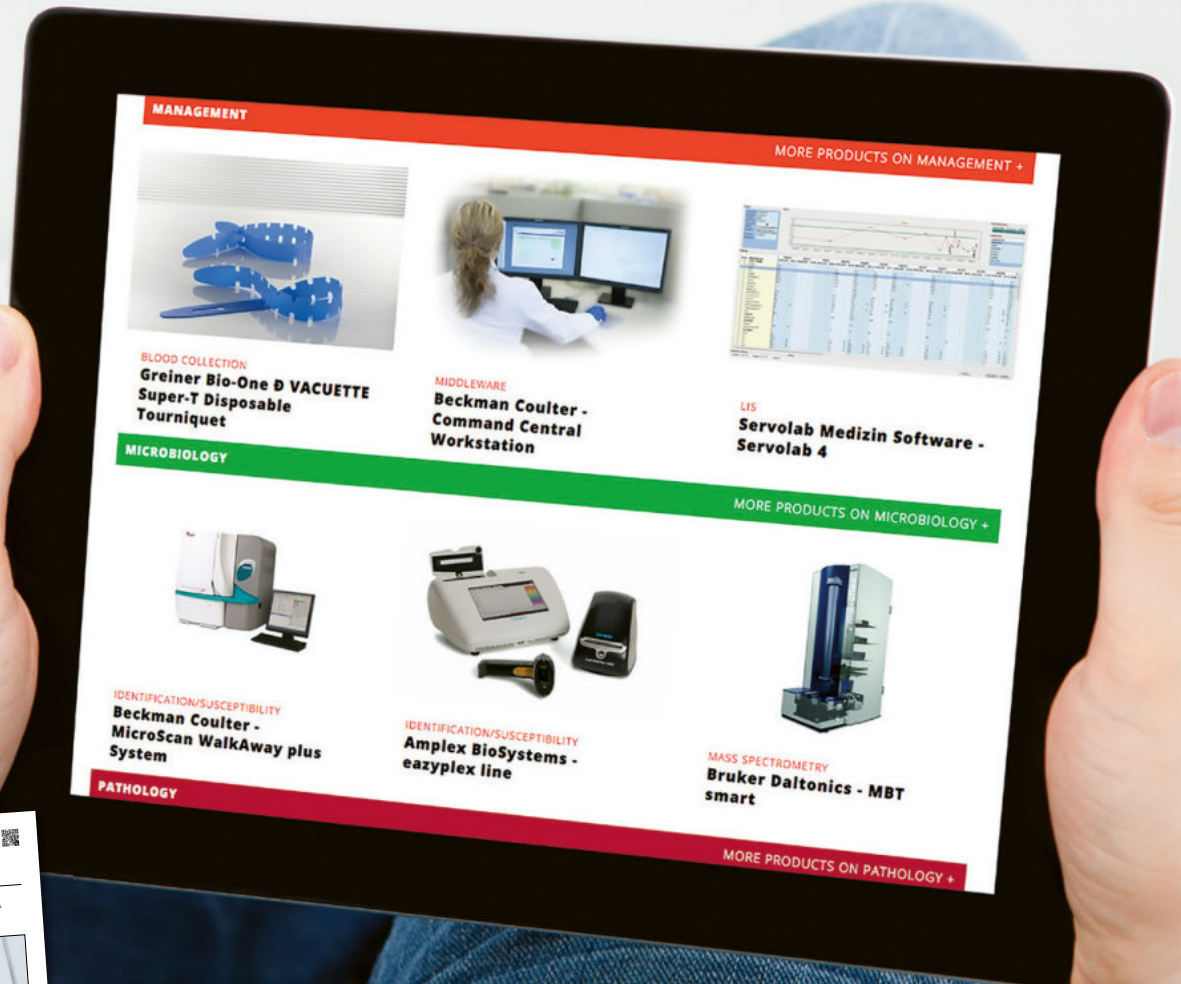


Assays: CE-Certified Sputum Liquefaction Reagent

Highlights:

- miacom's Liquillizer allows an immediate liquefaction of respiratory secretions such as sputa
- Ready-to-use, DDT free – therefore odourless, no need for preheating or sample prep
- No need to prepare fresh on a daily basis – stable at room temperature for up to four weeks after opening reduces validation and documentation work
- All standard diagnostic procedures are facilitated

Trends & innovations in healthcare.



Online Portal | Newspaper | Product Guides | Newsletter

Stay
tuned
on all
channels.

published by
EUROPEAN HOSPITAL

European Hospital Verlags GmbH | Theodor-Althoff-Straße 45 | 45133 Essen

follow us on | visit us on

www.healthcare-in-europe.com

POCT



Clinical Chemistry
Cardiology
Coagulation
Blood Gases,
Electrolytes, Oximetry
Infectious Diseases
Testing
Urinalysis
Information Technology
Other

CLINICAL CHEMISTRY

DiaSys Diagnostic Systems – InnovaStar



Highlights: InnovaStar – POC Testing with superior results in Lab Quality. A high precision system for the determination of HbA1c, CRP, Glucose and Hemoglobin

- NGSP / IFCC certified HbA1c test
- Determination of up to four parameters from one 10 µl whole blood sample
- Sample individual hematocrit correction to plasma values (CRP, Glucose)
- Pre-calibrated test
- Fully automated measurements; no manual steps required
- User-friendly
- Barcoded reagents
- Colored touch-screen

Orion Diagnostica Oy – QuikRead go



Dimensions: 155 × 270 × 145 mm (w × h × d)
Weight: 1.7 kg
Assays: CRP, CRP+Hb, Strep A, iFOBT

Highlights: QuikRead go test system brings reliable, easy and fast testing of CRP, CRP+Hb, Strep A and iFOBT in point of care and other near patient settings. QuikRead go tests are CE marked and in use by thousands of healthcare professionals worldwide. QuikRead go CRP is also FDA cleared for use in clinical laboratories.

- QuikRead go system provides:
- laboratory-level results in minutes
 - ready-to-use test kits
 - ease of use with fully automatic measurement
 - connectivity to LIS/HIS

CARDIOLOGY

Siemens Healthineers – Stratus CS 200 Acute Care System



Highlights: The Stratus CS 200 Acute Care Diagnostic System* delivers lab-quality results at the point of care with the speed needed for cardiac patients. Its broad test menu – which includes guideline acceptable troponin I – helps physicians make faster clinical decisions for better patient care.

* Not available for sale in the U.S. Product availability varies by country.

COAGULATION

Siemens Healthineers – Xprecia Stride Coagulation Analyzer



Highlights: Primary care, urgent care, and hospitals demand fast, reliable PT/INR testing for oral anticoagulation therapy (OAT). That's why Siemens developed the Xprecia Stride Coagulation Analyzer*, a truly handheld device that tests PT/INR with lab accuracy. With the Xprecia Stride Analyzer, healthcare professionals can feel confident that they are getting the safety, efficiency, and accuracy they need.

* Under FDA review. Not available for sale in the U.S. Product availability varies by country.

BLOOD GASES, ELECTROLYTES, OXIMETRY

Siemens Healthineers – RAPIDPoint 500 Blood Gas System



Highlights: The RAPIDPoint 500 Blood Gas System delivers fast, accurate and comprehensive test results for whole blood samples in approximately 60 seconds. It's flexible, easy to use, and can also perform pleural fluid pH testing and measure dialysate fluid*.

* Not available for sale in the U.S. Product availability varies by country.

INFECTIOUS DISEASES TESTING

Atlas Genetics – Atlas Genetics io system



Dimensions: 268 × 260 × 384 mm (h × w × d)
Weight: 10 kg
Assays: Sexually Transmitted & Hospital Acquired Infections

Highlights: The Atlas Genetics io system is a rapid diagnostic platform designed for use in decentralised laboratories, point-of-care and other near-patient settings, providing a laboratory-accurate test result in 30 minutes. The io system, comprising a small, low cost, easy-to-use instrument and a test-specific disposable cartridge, delivers a 'test and treat' solution for Sexually Transmitted Infections (STI) and Hospital Acquired Infections (HAI), where a rapid, actionable test result, delivered on-demand, can reduce costs and improve patient outcomes.

URINALYSIS

Analyticon Biotechnologies – Urlyzer 500 Pro



Sample throughput: Up to 500 tests/h
Assays: Glucose, Blood, Ketones, Nitrite, Protein, Leucocytes, Bilirubin, Urobilinogen, pH-value, Specific Gravity, Ascorbic Acid

Highlights:

- Quality control management with reminder function, lot number and expiration date check
- Operator management with multiple authorization levels and operation settings
- Touch screen, autostart function, microscopy flag (sediment recommendation), continuous loading system
- Data management with advanced data entry and flexible, customized testing and reporting options
- Memory of 5,000 patient tests and 1,000 QC tests

Siemens Healthineers – CLINITEK Novus Urine Analyzer



Highlights: The CLINITEK Novus Automated Urine Chemistry Analyzer combines proven dry-pad urine chemistry technology with an easy-to-use cassette test format to help ensure standardized testing and maximum productivity in busy laboratories.

INFORMATION TECHNOLOGY

Siemens Healthineers – RAPIDComm 6.0 Data Management



Highlights: RAPIDComm Data Management System gives you freedom to control your environment and gives you confidence and control over all of the parts of your POC Ecosystem solution. RAPIDComm system enables centralized management of point-of-care testing through a single, customizable interface. It helps streamline workflow, reduce costs, and improve patient care.

OTHER

INPECO SA – PROTUBE



Dimensions: 275 x 170 x 320 mm (w x h x d)
Weight: 2.6 kg

Highlights: ProTube is the ideal solution to avoid pre-lab errors, it ensures full traceability of the biological sample collection process. ProTube allows the correct match of right patient with the right tubes, applies the right label and associate the right data for full sample traceability. An intuitive graphical interface guides phlebotomists through the sample collection process. A powerful business intelligence tool for workflow and workload statistics increases the efficiency of the whole process.

JADAK – HS-1R Handheld HF RFID Reader



Dimensions: 33.4 x 51.3 x 108.2 mm (h x w x d)
Weight: 98 grams
Handheld/Stationary: Handheld 1D & 2D barcode scanner with HF RFID reading & writing functionality

Highlights: The flexpoint HS-1R from JADAK integrates 1D & 2D barcode scanning with HF RFID reading & writing functionality. Sure to be an integral part of many medical and clinical applications, the HS-1R enables patient ID via wristband scanning, clinician security login via badge scanning, pharmaceutical applications incl. drug inventory tracking & digital signature capture using built in camera modes, and much more. JADAK products can be tailored to meet specific customer requirements.

SARSTEDT – Minivette POCT / Capillary Blood Collection



Highlights:

- Collection devices for Point-of-Care tests
- Easy sample recovery
- Precise and dispensing of small whole blood volumes
- Prevents spillage during transfer
- Volume range: 10µl – 200µl
- Preparations: Neutral, Heparin and EDTA

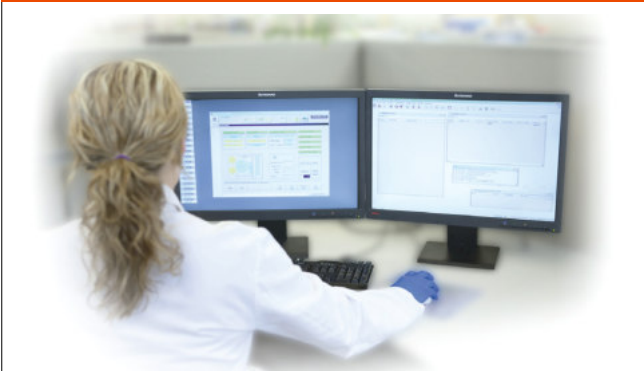
Information Technology

LIS, Middleware, POCT
Specialties



LIS, MIDDLEWARE, POCT

Beckman Coulter – Command Central Workstation



Highlights:

Beckman Coulter's Command Central instrument management system helps manage lab workflow and improve decision-making steps. Connecting up to 18 instruments or automation systems, and up to five networked Command Central workstations within a single laboratory, this increase in flexibility allows the operator to place Command Central workstations in prime locations for optimum laboratory management. Command Central provides lab technicians with a real-time view of laboratory systems from a single point of control to maximize workflow efficiencies. Command Central works with data managers such as REMISOL Advance to achieve workflow efficiencies, or can serve as a stand-alone product for users to monitor automation and/or multiple analyzers and quickly respond to any instrument issues. In addition to serving labs that don't utilize data management software, Command Central provides an opportunity to apply other Beckman Coulter information systems and workflow solutions all while keeping an eye on what is going on in the lab.

Beckman Coulter – PROService



Highlights:

PROService is Beckman Coulter's secure remote management and diagnostics system that enables the transfer and analysis of performance data from connected Beckman Coulter systems in the customer laboratory to the customer support staff. This information is channeled into the PROService system's suite of features and tools, enabling the service and support teams to review, diagnose and help resolve system issues quickly and efficiently. PROService Remote Management System can help labs maximize uptime, enhance efficiency, and improve productivity.

Beckman Coulter – REMISOL Advance



Highlights:

REMISOL Advance is an enterprise data management solution that can help manage lab workflow, improve the efficiency of labs and standardize operations across multiple sites. It is a unique software product that consolidates patient test information from multiple instruments in the lab or from multiple labs in the hospital network. REMISOL Advance features virtualization capability to help reduce failure points, increase uptime, and enhance patient data security. It offers an integrated visual management system to track and trace transported samples from the draw site to the lab enabling your lab to become ISO 15189 compliant. Not available in all geographies.

i-SOLUTIONS Health – LabCentre



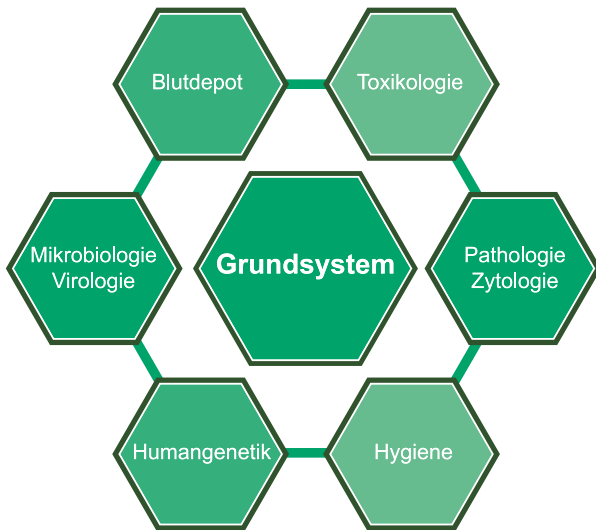
Highlights:

LabCentre is a market-leading laboratory and pathology information management system. It helps doctors, scientists, technologists and management staff to track samples and testing processes, communicate results to other health professionals, and monitor costs and reporting.

LabCentre supports the following disciplines:

- Blood Sciences
- Microbiology
- Transfusion Medicine
- Pathology
- Billing

Medat – Laboratory Information System



Highlights:

- Flexible, private company with 50 employees.
- Complete solution from order entry to billing.
- Tailor-made modules for microbiology, virology, environmental hygiene, cytopathology, histopathology and blood banking.
- Single, integrated system for all divisions and sites.
- Reliable operation in some of Europe's biggest laboratories.

Siemens Healthineers – CentralLink Data Management System



Highlights:

CentralLink Data Management System consolidates and standardizes decision making across lab testing, diagnostic systems, automation, and IT to improve accuracy, optimize workflows and streamline operations. Improve patient care with fast, accurate, autovalidated results based on intelligent algorithms and customizable rules that facilitate minimal human intervention. Speed and simplify operations and centralize control of your lab with real-time visibility of sample and result processing metrics.

Mehr Qualität
und Effizienz
in Labor und
Pathologie

Auf Erfolg programmiert.

Wir bringen Sie im Bereich der Healthcare-IT auf die Gewinnerstraße. Profitieren Sie von unserer erstklassigen Software für den deutschsprachigen Gesundheitsmarkt und von ganzheitlichen Lösungen für Klinik, Labor und Radiologie aus der Hand eines Mittelständlers. **agil – intelligent – kundenorientiert – effizient**

Erfahren Sie mehr auf www.i-solutions.de

LIS, MIDDLEWARE, POCT

Siemens Healthineers – syngo Lab Inventory Manager (sLIM)



Highlights: sLIM is a real-time inventory-management system that employs cloud-based technology and wireless radio frequency identification (RFID) to master laboratory inventory management. Incoming inventory is checked into your laboratory's sLIM website. sLIM automatically detects inventory usage, eliminating manual counting, and recording. Automated order proposals are generated based on your laboratory's usage. sLIM takes the burden out of managing inventory.

*Product availability varies by country.

SPECIALTIES

COMED – RMS /SHS/e-Commerce (B2B)

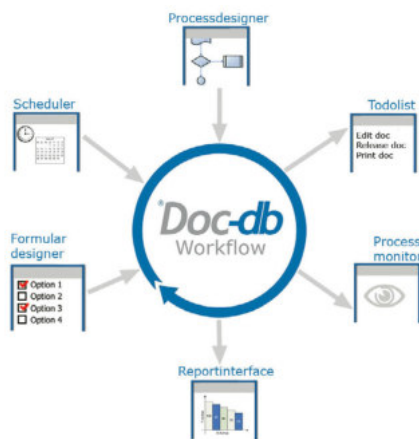


Highlights:

- RMS – Reagent Management System is the leading inventory management, supply chain, laboratory controlling and e-commerce solution.
- DIMS "Scan & Go" Barcode-Scanner-Solution for laboratories and clinic wards.
- Universal & independent B2B-e-commerce for orders, delivery notes and lot control: COMED-customer remains „DATA OWNER“

COMED was founded in 1986 and evolved to an international solution provider for material management and lab controlling. COMEDs' unique fusion of IT, consulting and extensive industry know-how and a broad personal network, nowadays serves > 21,000 physicians, > 500 hospitals and > 370 laboratories in 18 countries worldwide with one goal: Enable laboratories, hospitals and rehab clinics to focus on their core business and gain their value-added chain.

Zenon – Doc-db QM Suite



Highlights:

- Doc-db is a fully featured document management system. The integrated, freely configurable workflow server makes it easy to adapt to your specific governance processes.
- The creation of documents, read confirmations, reminders, paper copies and many other processes can be comfortably managed, monitored and documented through the system.
- Handling of all file formats enables easy migration of your existing documents into professional document control with Doc-db.
- This will ensure that you are fit for the requirements needed for the ISO 15189 or ISO 17025 accreditation.

Zenon – Doc-db Forms & Records

Datum	Temp. (°C)	Abw.	KZ	Bemerkung
1	5,7			
2	5,7			
3	5,7			
4	5,7			
5	5,7			
6	5,7			
7	5,4			
8	5,5			
9	5,6			
10	5,6			
11	5,5			
12	5,5			
13	5,4			
14	5,7			
15	5,6			
16	5,6			
17	5,5			

Highlights:

The new Doc-db module forms and records does all the work. It makes forms that were not previously in the document management system to records that, using the software, can be created, checked, shared, and after manual editing digital archived.

- Automated creation of recurring forms and records
- Automatic reminder and check for completeness
- Direct distribution as a print job to the employees responsible
- General and individual design of the workflows for each form/record



LabCentre helps scientists, technicians and management staff to track samples and testing processes, communicate results to other health professionals, and monitor costs and reporting.

LabCentre – agility and accuracy for all laboratory disciplines

Laboratories are an essential part of effective modern healthcare. They provide clinicians with vital information that helps them make life-saving decisions, diagnose conditions and monitor patient treatment.

With such a critical role in healthcare delivery, laboratory scientists and support staff depend on the very latest technologies to help them carry out their jobs. They need software solutions that work the way they work, that integrate with the devices and technologies they use, and that speed up the analysis they do every day. LabCentre is designed with the needs of those professionals in mind. It is a comprehensive laboratory information management system that helps scientists, technicians and management staff to track samples and testing processes, communicate results to other health professionals, and monitor costs and reporting. Compatible with the most widely used information standards and protocols in the industry, it helps to connect laboratory employees with people throughout the healthcare ecosystem. LabCentre includes dedicated functionality for every laboratory discipline including pathology, and each

module of the software has been designed to allow users to create intelligent workflows, helping them to complete laboratory tasks in the most efficient way.

One important factor behind this widespread uptake is the flexibility of the software. Managers can customize the product to function exactly as their organizations require, while individual users can modify specific functions to suit the processes within a particular laboratory environment. LabCentre has a modular construction so organizations can choose to roll out the product in stages. Many laboratories prefer to deploy one module at a time, ensuring a smooth transition process from legacy systems.

All laboratory organizations understand that healthcare technology ultimately has a single purpose: to improve patient care. By increasing the speed and efficiency of laboratories, LabCentre helps institutions to do just that.

Non-Diagnostic

Blood Collection
Compressors
Specialties

BANDELIN
Ultraschall seit 1955

 **DÜRR
TECHNIK**

 **SARSTEDT**

 **ibidi**
cells in focus

BLOOD COLLECTION

SARSTEDT – S-Monovette – Venous Blood Collection



- Highlights:**
- S-Monovette – The Revolution in Blood Collection. A blood collection system that combines two blood collection techniques – the aspiration technique and the vacuum technique.
 - The S-Monovette is suitable for all vein conditions and achieves an optimal sample quality, thereby producing the best results.
 - The aspiration technique is a gentle technique for routine blood collection. Using the vacuum technique, a “fresh” vacuum is always available.
 - Suitable for all ages, from young to old, the S-Monovette is as individual as your patients.

SARSTEDT – Microvette – Capillary Blood Collection



- Highlights:**
- Flexible capillary blood collection systems such as the Microvette – tailor-made to the individual needs of each patient group.
 - Different patient groups and collection techniques require different collection systems.
 - With a nominal volume range from 100 – 500 µl, the capillary blood collection systems product range is one of the most extensive in the entire market.
 - Depending on the requirements, our portfolio includes Microvettes with conical or round bottom inner tubes and the option for various different collection techniques, end-to-end or with a collection rim.

COMPRESSORS

Dürr Technik – SICOLAB – compressor stations



- Air flow:** up to 145 l/min at 5 bar
Compressed air quality: up to 1:3:1 (according to ISO 8573-1)

- Highlights:**
- Oilfree compressed air for many applications
 - Silent – thanks to excellent soundproofing (48 – 54 db [A])
 - Compact – fits under the laboratory bench
 - Mobile – with wheels or handling grips
 - Wide variety of versions
 - Membrane dryer and filters as options

SPECIALTIES

BANDELIN – SONOCOOL – the only ultrasonic bath with cooling



- Highlights:** Using SONOCOOL, the catalytic effect of ultrasound can now be used on heat sensitive samples in analysis laboratories. The cooling function means that exothermic reactions can be controlled and the processes are carried out faster and more effectively. The results are available in a shorter time.

SPECIALTIES

BANDELIN – SONOREX SUPER, SONOREX DIGITEC, SONOPULS



- Highlights:** Ultrasonic baths and homogenisers for:
- Cleaning of technical glassware like burettes, pipettes, petri dishes and laboratory flasks
 - Cleaning and disinfection of medical instruments
 - Mixing of plasma and sera
 - Preparation of liposomes in cosmetics and pharmacy
 - Preparation of samples for analysis of THC-content in cannabis or analysis of hair

BANDELIN – Ultrasonic bath BactoSonic – gentle removing of biofilm



- Highlights:** The successful treatment of implant infections depends on an accurate microbiological diagnosis. Micro-organisms form biofilms on implant surfaces, what makes them difficult to detect by conventional methods. BactoSonic gently removes biofilms from implant surfaces without killing the bacteria, a quantitative assessment is possible. The sonicated liquid is cultured and the quantity of bacteria can be determined. Compared to standard methods up to 10,000 times more bacteria can be detected.

ibidi – Cell Culture & Imaging Chambers



- Highlights:** Choose from the wide variety of ibidi imaging chambers.
- Innovative labware solutions for live cell imaging and cell-based assays
 - Excellent cell culture conditions on the unique ibidi Polymer Coverslip
 - Supreme optical-grade imaging chambers for high-end microscopy
 - Available in various open formats or channel slides
 - Test with a free sample!
 - Buy four boxes of μ -Slides, μ -Dishes or μ -Plates and receive one additional box for FREE.

SARSTEDT – Cell Culture Products



- Highlights:** For over 20 years Sarstedt has produced a wide range of high quality cell culture products which are distributed worldwide. These many years of experience and knowledge of the needs of users have allowed us to optimise and continually expand the product range.

Page Index















	Automation	Sample Processing	Chemistry / Immunochemistry	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	Information Technology	Non-Diagnostic
Agena Bioscience GmbH Mendelssohnstraße 15D 22761 Hamburg, Germany phone: +49 40 899676-0 support-europe@AgenaBio.com www.agenabio.com							47				
Analyticon Biotechnologies AG Am Mühlenberg 10 35104 Lichtenfels, Germany phone: +49 6454 7991-0 · fax: +49 6454 7991-30 info@analyticon-diagnostics.com www.analyticon-diagnostics.com									59		
ASP Lab Automation AG Rugenranzel 4 25373 Ellerhoop, Germany phone: +49 4120 70679-27 info@asplabauto.com www.asplabauto.com		4									
Atlas Genetics Ltd White Horse Business Park, Derby Court, Epsom Square Trowbridge BA14 0XG, UK phone: +44 (0) 1225 71930 info@atlasgenetics.com www.atlasgenetics.com									59		
BANDELIN electronic GmbH & Co. KG Heinrichstraße 3-4 12207 Berlin, Germany phone: +49 30 76880-0 info@bandelin.com www.bandelin.com											67 68
Beckman Coulter, Inc. 250 S. Kramer Boulevard Brea, CA 92822, USA phone: +1 714 9935321 cvillarreal@beckman.com www.beckmancoulter.com	8	4	12 16 17 25		28 32					62	
Biomed Labordiagnostik GmbH Bruckmannring 32 85764 Oberschleißheim, Germany phone: +49 89 315700-0 info@biomed.de www.biomed.de			12		33		46				
BIORON Diagnostics GmbH Rheinhorststraße 18 67071 Ludwigshafen, Germany phone: +49 621 545900-70 info@bioron.de www.bioron.de							46				
biostep GmbH Innere Gewerbestraße 7 09235 Burkhardtsdorf, Germany phone: +49 3721 3905-0 info@biostep.de www.biostep.de · www.biostep.org				24							
Bruker Daltonik GmbH Fahrenheitstraße 4 28359 Bremen, Germany phone: +49 421 2205-0 · fax: +49 421 2205-305 ms.sales.bdal@bruker.com www.bruker.com				21		37		54			
COMED Computerorganisation in der Medizin GmbH Köttersweg 11 59494 Soest, Germany phone: +49 2921 9630-0 comed@comed-com.de www.comed-com.de										64	
DiaSys Diagnostic Systems GmbH Alte Straße 9 65558 Holzheim, Germany phone: +49 6432 9146-0 info@diasys.de www.diasys-diagnostics.com			12 13						58		
Diatron MI Zrt. Táblás u. 39 1097 Budapest, Hungary phone: +36 1 436 9800 marketing@diatron.com www.diatron.com			13		28						
DRG Instruments GmbH Frauenbergstraße 18 35039 Marburg, Germany phone: +49 6421 1700-0 raeder@drg-diagnostics.de www.drg-diagnostics.de			17								

Companies / Suppliers

Page Index

	Automation	Sample Processing	Chemistry/Immunochemistry	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	Information Technology	Non-Diagnostic
<p>Dürr Technik GmbH & Co. KG Pleideisheimer Straße 30 74321 Bietigheim-Bissingen, Germany phone: +49 7142 9022-0 · fax: +49 7142 9022-99 office@duerr-technik.de www.duerr-technik.com</p> 											67
<p>Eppendorf AG Barkhausenweg 1 22339 Hamburg, Germany phone: +49 40 53801-0 · fax: +49 40 53801-556 eppendorf@eppendorf.de www.eppendorf.de</p> 							52				
<p>Fujirebio Europe NV Technologiepark 6 B-9052 Gent, Belgium phone: +32 9 329 1329 www.fujirebio-europe.com</p> 			17								
<p>Genrui Biotech Inc. 6F, Shanshui Building B, Nanshan Yungu Innovation Industrial Park, 1183 Liuxian Blvd, Nanshan District, 518055, Shenzhen, China phone: +86 755 26 83 55 60-1 (-2) international@genrui-bio.com · www.genrui-bio.com</p> 			14		28						
<p>Hamamatsu Photonics Deutschland GmbH Arzbergerstraße 10 82211 Herrsching, Germany phone: +49 8152 375-203 dialog@hamamatsu.de www.nanozoomer.com</p> 						37 38 42					
<p>HORIBA Medical Parc Euromédecine 34184 Montpellier, France phone: +33 467 141516 webmaster.med@horiba.com www.horiba.com/medical</p> 					28						
<p>ibidi GmbH Am Klopferspitz 19 82152 Martinsried, Germany phone: +49 89 5204617-0 info@ibidi.de www.ibidi.com</p> 											68
<p>INPECO SA Via San Gottardo 10 6900 Lugano, Switzerland phone: +41 91 9118200 marketing@inpeco.com www.inpeco.com</p> 	8								60		
<p>i-SOLUTIONS Health GmbH Am Exerzierplatz 14 68167 Mannheim, Germany phone: +49 621 3928-0 · fax: +49 621 3928-527 info@i-solutions.de www.i-solutions.de</p> 										62	
<p>JADAK Europe Emmastraat 16 4811 AG Breda, The Netherlands phone: +31 76 522 5588 info@jadak.eu www.jadak.eu</p> 									60		
<p>KUGEL medical GmbH & Co. KG Hermann-Köhl-Straße 2 A 93049 Regensburg, Germany phone: +49 941 208648-0 info@kugel-medical.de www.kugel-medical.de</p> 						39					
<p>Medat Computersysteme GmbH Albrechtstraße 14 80636 München, Germany phone: +49 89 126808-0 info@medat.de www.medat.de</p> 										63	
<p>MEDITE GmbH Wollenweberstraße 12 31303 Burgdorf, Germany phone: +49 5136 8884-0 sales@medite.de www.medite-group.com</p> 					33	39					
<p>MetaSystems Hard & Software GmbH Robert-Bosch-Straße 6 68804 Altlußheim, Germany phone: +49 6205 39610 info@metasystems-international.com www.metasystems-indigo.com</p> 											55

Page Index

	Automation	Sample Processing	Chemistry/Immunochemistry	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	Information Technology	Non-Diagnostic
<p>miacom diagnostics GmbH Merowingerplatz 1a 40225 Düsseldorf, Germany phone: +49 211 30155795 info@miacom-diagnostics.com www.miacom-diagnostics.com</p> 								55			
<p>Microsynth Schützenstraße 7 9436 Balgach, Switzerland phone: +41 71 722 8333 info@microsynth.ch www.microsynth.ch</p> 							52				
<p>SHENZHEN MINDRAY Bio-Medical Electronics Co., LTD. Mindray Building, Keji 12th Road South, Nanshan 518057 Shenzhen, China phone: +86 755 81 888 998 intl-market@mindray.com - www.mindray.com</p> 	9		14 18		30						
<p>Olympus Europa SE & Co KG Wendenstraße 14-18 20097 Hamburg, Germany phone: +49 40 23773-0 ScientificSolutions@olympus-europa.com www.olympus-lifescience.com</p> 						38		55			
<p>Orion Diagnostica Oy Koivu-Mankkaantie 6 B 02200 Espoo, Finland phone: +358 10 4261 orion.diagnostics@oriondiagnostica.fi www.oriondiagnostica.com</p> 							46		58		
<p>PerkinElmer chemagen Technologie GmbH Arnold-Sommerfeld-Ring 2 52499 Baesweiler, Germany phone: +49 2401 805500 support.chemagen@perkinelmer.com www.chemagen.com</p> 							50				
<p>Primerica Technology Europe Mainzer Str. 131 65187 Wiesbaden, Germany phone: +49 611 92777-0 sales@primera.eu www.primera-healthcare.eu</p> 						39					
<p>SARSTEDT AG & Co. Sarstedtstraße 1 51588 Nümbrecht, Germany phone: +49 2293 305-0 / fax: +49 2293 305-122 info@sarstedt.com www.sarstedt.com</p> 		4 5	18				46		60		67 68
<p>SCIEX Diagnostics 500 Old Connecticut Path Framingham, MA 01701, USA phone: +1 508 383 7700 www.sciexdiagnostics.com/contact-us www.sciexdiagnostics.com</p> 				21							
<p>SHIMADZU Europa GmbH Albert Hahn Straße 6-10 47269 Duisburg, Germany phone: +49 203 7687-0 shimadzu@shimadzu.eu www.shimadzu.eu</p> 				21 24 26				54 55			
<p>Siemens Healthineers Laboratory Diagnostics 511 Benedict Avenue 10591 Tarrytown, NY, USA phone: +1 914 631 8000 www.healthcare.siemens.com</p> 	9	5	15 18 20 24 25		30 33 34		50		58 59 60	63 64	
<p>Shenzhen New Industries Biomedical Engineering Co., Ltd. 21st Floor, Block A, Building 1, Shenzhen Software Industry Base, No. 1008, Keyuan Road, Nanshan District 518000 Shenzhen, China phone: +86 755 26501514 sales@snibe.com - www.snibe.com</p> 	9		19 20								
<p>Streck 7002 S 109th St 68128 Omaha, USA phone: +1 402 333 1982 international@streck.com www.streck.com</p> 					32		50				
<p>Sysmex Europe GmbH Bornbarch 1 22848 Norderstedt, Germany phone: +49 40 527-260 info@sysmex-europe.com www.sysmex-europe.com</p> 			15 26		31 32 34						

Companies / Suppliers

Page Index

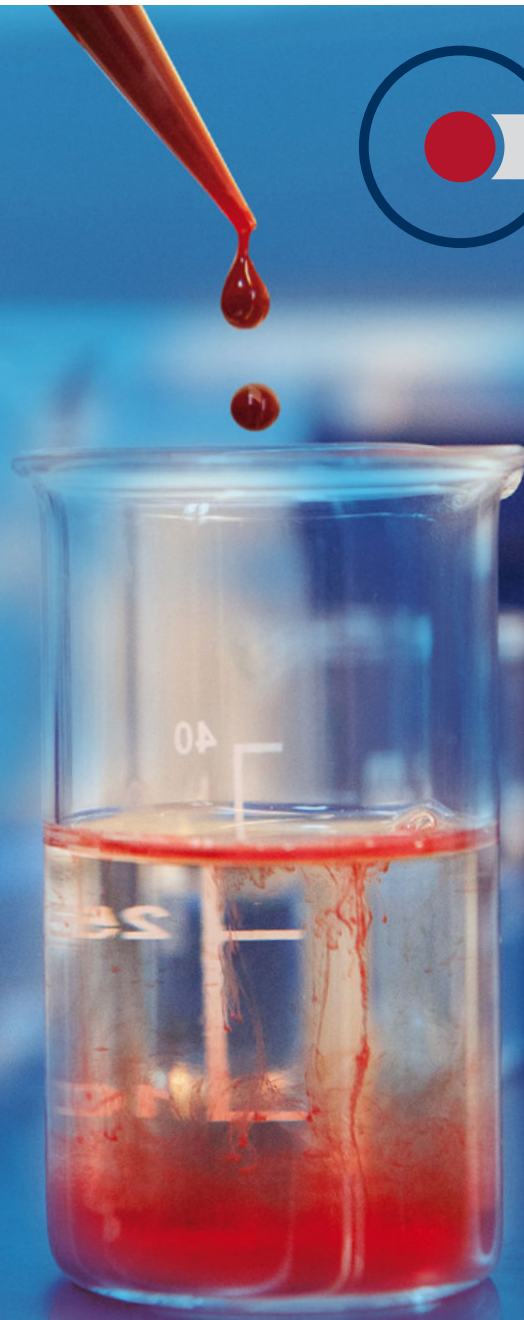
	Automation	Sample Processing	Chemistry/Immunochemistry	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	Information Technology	Non-Diagnostic
<p>TECO Medical Instruments Dieselstraße 1 84088 Neufahrn, Germany phone: +49 8773 70780-0 info@teco-gmbh.com www.teco-medical.com</p> 					34 35						
<p>Visiopharm A/S Agern Allé 24 2970 Hørsholm, Denmark phone: +45 88 202088 marketing@visiopharm.com www.visiopharm.com</p> 						42					
<p>Wako Chemicals GmbH Fuggerstraße 12 41468 Neuss, Germany phone: +49 2131 311-163 kueper@wako-chemicals.de www.wako-chemicals.de</p> 			20								
<p>Zenon GmbH Hüttenstraße 3 44795 Bochum, Germany phone: +49 234 9430535 · fax: +49 234 9430536 info@zenon-net.de www.docdb.de</p> 										64	

Notes

The Reference Institute for Bioanalytics

External quality control at the highest level

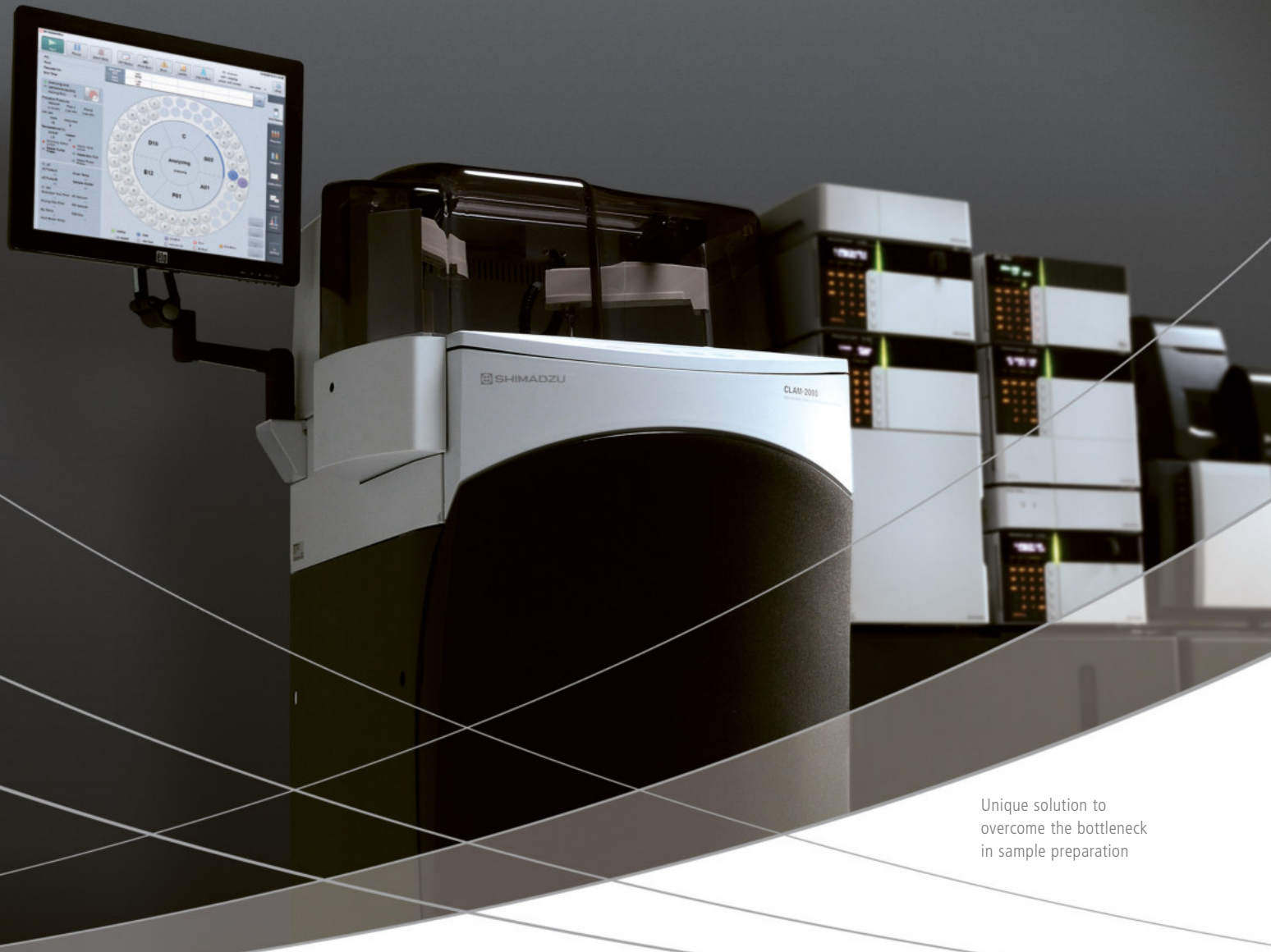
www.rfb.bio



OUR MISSION is the performance of proficiency tests in accordance with the guidelines of the German Medical Association for quality assurance of laboratory medical investigation

KEY FACTS

- RfB is accredited in accordance with DIN ISO 17043 and DIN ISO 17025
- Proficiency tests for all parts of the RiliBÄK (B1-B5)
- Development of more than 30 reference methods
- 30 years experience with EQAs
- More than 110.000 participations in 2014
- Customers from 76 countries



Unique solution to overcome the bottleneck in sample preparation

Whole in one

CLAM-2000* – the world's first fully automated sample preparation module for LC-MS

The new CLAM-2000 is the world's first system able to perform all steps fully automated from pretreatment of the sample to LC-MS analysis. The CLAM-2000 provides a "whole in one solution" in the areas of clinical, pharmaceutical and pathological research, biological and immunological analysis, or medical laboratories.

Dramatically improved workflow
with better safety and higher reproducibility for clinical research

Large choice to adapt to sensitivity needs
through compatibility with the LCMS-8040, -8045, -8050 and -8060 systems

Uniform pretreatment times between samples
improving analysis accuracy

Integrated and easy to use
online sample pretreatment and LC-MS controlled by a GUI on a touch panel