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Your guide to laboratory and pathology equipment in Europe

LAB BOOK

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

2015



The UniCel DxH Connected Workcell Solution enables laboratories to connect up to three DxH 800 analyzers to a DxH Slidemaker Stainer to create a customized, scalable workflow solution. With its unique automated sample routing, increased data management capabilities and proven analytical capabilities, the DxH Connected Workcell provides low review rates and first past accuracy in results' reporting all driven by Beckman Coulter's exclusive Automated Intelligent Morphology (AIM), a multidimensional, high-definition flow cytometric technology. *Please see page 29*

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Dear reader,

we are proud to present the second edition of the Labbook, a European buyers' guide for laboratory and pathology. We took on the challenge to describe laboratory medicine in Europe from a technical point of view. Thus, in this compendium you will find commercially available test systems, software and supplies for any lab – independent of discipline, size or organisational structure.

Categorized by sub-specialty, every product is presented with a brief description, including specifications and highlights. For more information on a product, please check our database at www.labbook.eu or www.healthcare-in-europe.com where you will also find the e-paper containing a link to the manufacturer's website. While politically, the idea of a unified Europe might have come under fire, for us "Europe" is as alive as ever. Therefore, the publication of this guide coincides with EuroMedLab in Paris, keeping a firm focus on the European target audience. As of this year, a separate chapter is dedicated to pathology, in particular digital pathology. No longer subsumed under the heading of haematology, the exciting innovations on the interface of laboratory medicine and imaging are now presented in a special booklet.

In addition to devices and techniques, quality, quality assurance and management are crucial factors in laboratory medicine. Beyond the standards ISO 15189, 22870 and 17025, which describe the requirements labs have to fulfil in terms of quality and competence, every country sets its own quality and performance criteria for domestic clinical labs. For the first time, the German criteria, defined by the German Medical Association, are available in an English translation to contribute to the international discussion.

Once again, it was a pleasure to cooperate with our partners from science and industry in order to be able to present you, dear readers, this snapshot of European laboratories.

Enjoy reading and browsing – and see you next year.

Daniela Zimmermann

Markus Neumann



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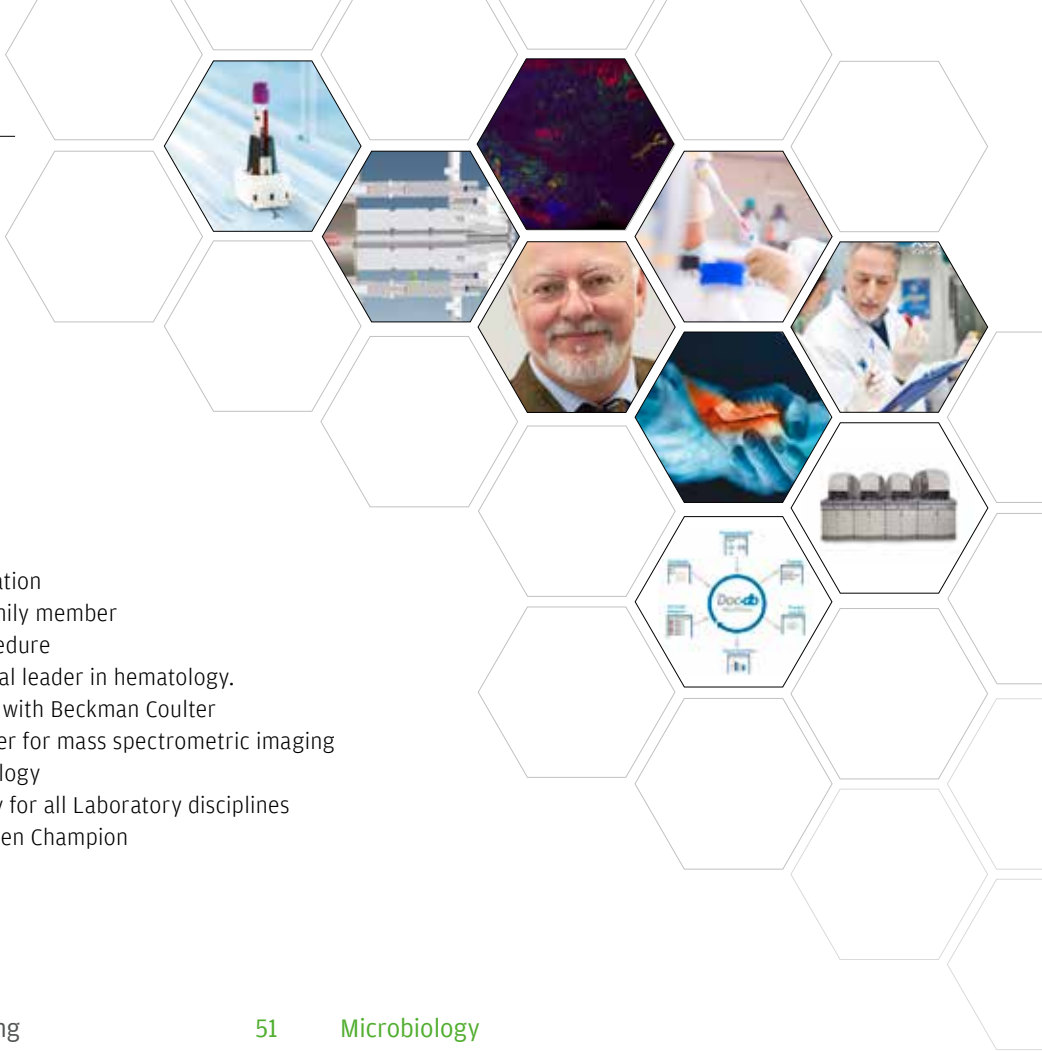
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Changing Perspectives

The new XN-L Series – XN quality is now within your reach

XN-350

Single sample analysis
in open mode

XN-450

Single sample analysis
in closed or open mode

XN-550

Increased workflow productivity
with automated sampler analysis

- Rerun & Reflex functionality
- Continuous loading



Our XN-Series changed the world of haematology for the better in terms of modularity, scalability and clinical relevance around the world. We hope you are enjoying the new opportunities.

But not everybody needs such a large-scale solution. Now we want to change your perspective, again, by making XN available for all.

We are proud to introduce three new analysers in our new XN-L Series. Same Sysmex support. Same flexible APP approach. Same Sysmex quality.

They're just smaller.

Get in touch and we guarantee we can offer you new opportunities and a change of perspective.



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We are devoted to helping labs deliver better patient care by giving clinical professionals the accurate diagnostic information they need, when they need it.

The combination of our scalable diagnostic systems and tests, along with our clinical business intelligence tools can help laboratories achieve standardization, physician and patient satisfaction and meet critical key performance metrics throughout an entire laboratory network.

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Automation & Sample Processing

Sample Processing
Automation

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ASP  **Lab Automation**
Automated Sample Processing

SAMPLE PROCESSING

ASP Lab Automation – Bench-top Decapper Pluggo RH



Dimensions: 360 x 560 x 610 mm (h x w x 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: 1,133 x 1,100 x 600 mm for 6 sorting bins
 (h x w x d) +200 mm for each 2 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.

Function:

- Early specimen identification and registration
- Fast presorting of specimen

Benefits:

- Automates accessioning
- Find problematic specimens (missing requests, bad barcode, etc.) at the start of the process chain
- Improve utilization of existing sample processors
- Minimize errors in pre-analytics
- Improve workflow and decrease TAT

Features:

- Small and fast instrument, robust and reliable
- Bulk input and bulk output of specimens
- Freely configure number of sort bins

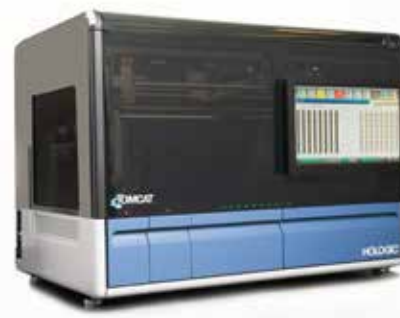
Beckman Coulter – AutoMate 1250/2550



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 (1250/2550)
Dimensions: 1625 x 2560 x 1115 mm (without recapper)
 (h x w x d) 1625 x 2560 x 1415 mm (with recapper)

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.

Hologic – Tomcat Instrument



Dimensions: 762 x 1092 x 711 mm (h x w x d)
Weight: 136 kg
Sample throughput: 300 samples per 8 h shift
Power supply: 100-240 V, 50-60 Hz, 600 W

Highlights:

- Fully automated general purpose instrument
- Automated, walkaway pre-analytical sample processing
- Improved lab workflow by freeing skilled labour for other tasks
- Increased confidence with positive sample ID and chain of custody
- Reduced risk of cross-contamination
- Standardized aliquoting process
- Lower risk of repetitive motion injuries
- Multiple sample types

SARSTEDT – Bulk Loader BL 1200 ID



Sample throughput: up to 1,200 tubes

- 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

AUTOMATION

Beckman Coulter – Power Express

Dynamic inlet:	1200 tubes/h
Centrifuges:	300 tubes/h (1), 600 tubes/h (2), 900 tubes/h (3), 1200/h (4)
Decapper:	1200 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 DxI 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

Mindray – CAL-8000 Cellular Analysis Modular System



- Highlights:**
- Smarter workstation, simpler workflow: Fully automatic flow line system
 - Flexibly consist of up to 4 units of BC-6800 Hematology Analyzers & 2 units of SC-120 Auto Slide Makers & Stainers
 - Sample loading up to 200 primary tubes at one time
 - Total throughput up to: 500 tests/hour, 240 slides/hour
 - One touch screen & one powerful operation software for whole system
 - One button "START" for whole running system
 - Specific STAT channel for priority analysis

DGKL goes quality and standardisation

Prof. Dr. Michael Neumaier



The DGKL publishes a Translation of the Quality Standards for Medical Laboratories of the German Chamber of Physicians (RiLiBÄK)

The guidelines promulgated by the German Chamber of Physicians entitled "Quality Standards of Laboratory Medical Examinations (RiLiBÄK)" is the foundation for a uniform and high quality standard in Germany for laboratory medicine. In 1972, the first version of the guideline was established in order to create a standard for quantitative laboratory analysis. This framework of quality standards was designed to foster commutability and traceability through standardization of the analytical process.

During the definition and implementation of reference methods and the standardization of routine laboratory tests in the field of clinical chemistry, the German scientific society for Clinical Chemistry and Laboratory Medicine (DGKL) and her precursor organization DGKC have played a key role.

Recently, the German Chamber of Physicians and the DGKL have initiated a joint effort with other scientific societies to expand the scope of the RiLiBÄK to include quality management of "qualitative laboratory examinations". Thus, this comprehensive new version covers all aspects of laboratory medical analysis comprising a general part A together with the special sections B1 to B5. This current version of the RiLiBÄK was published in the Deutsche

Ärzteblatt (German Medical Journal) in September 2014.

Being a German document originally, there have been a number of requests and a strong interest over the years calling for an English translation of the RiLiBÄK guidelines of analytical quality control in medical laboratories. The final version of the translation was approved by the German Chamber of Physicians and was subsequently published in a special edition of the DGKL's scientific journal "Laboratoriumsmedizin" (LabMed).

For the first time, this translation allows RiLiBÄK to be compared with other quality control systems on an international level. We are convinced that this document illustrates the excellent quality standards operational in laboratory medicine in Germany. By publishing an English version of these standards, the DGKL strives to strengthen the high quality of analytics and support laboratory diagnostics in medicine at home and abroad. ■



Prof. Dr. Michael Neumaier

*President German scientific society for
Clinical Chemistry and Laboratory Medicine (DGKL)*

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SARSTEDT

CLINICAL CHEMISTRY

Beckman Coulter – AU5800 Series



Dimensions: 1260 x 2600 x 1580 mm (h x w x d)
Weight: 1070 kg
Sample throughput: 2000 - 9800/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.

Cecil Instruments for Reliable Clinical Chemistry Analyses



Since 1968, Cecil Instruments have developed many analytical instruments, which may be used for clinical chemistry analyses.

The Aquarius and Super Aurius spectrophotometers are often used for metabolite testing such as creatinine, bilirubin, urea and many enzymes, and for xanthochromia in CSF. The BioQuest and BioAquarius ranges of spectrophotometers, are pre-programmed with molecular biology tests.

Cecil Instruments also offer very comprehensive ranges of modular and flexible liquid chromatography systems. These Adept HPLC, Q-Adept HPLC, Merit HPLC and IonQuest Ion Chromatography systems, may be used for haemoglobin screening and drug testing.

For more details, please contact:

Cecil Instruments Limited,
 Milton Technical Centre,
 Cambridge CB24 6AZ
 United Kingdom

www.cecilinstruments.com
info@cecilinstruments.com
 ☎ +44 (0) 1223 420821

Mindray – BS-480 Clinical Chemistry Analyzer



Highlights:

- Discrete, random access, fully automated
- Constant throughput with 400 photometric tests 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

Nova Biomedical – Nova 16 Electrolyte/Chemistry Analyzer



Dimensions: 521 x 488 x 526 mm (h x w x d)
Weight: 41 kg
Sample throughput: 475 tests/h
Assays: Na⁺, K⁺, Cl⁻, TCO₂, BUN, Glucose, Creatinine, Hct

Highlights: Nova Electrolyte/Chemistry Analyzers provide a whole blood analysis for stat testing; serum and plasma samples for routine testing; CSF and dialysate samples for specialty testing; and urine samples without pre-dilution, recalibration, or reprogramming.

CLINICAL CHEMISTRY

Randox Laboratories – Adiponectin



Highlights: Randox Adiponectin offers a biochemistry test for measurement of Adiponectin. Adiponectin is an adipokine secreted by adipocytes. Its abundance has been linked with several pathologies including metabolic syndrome, cancer and cardiovascular disease.

Features:

- Methodology-Immunturbidimetric
- Sample type-Serum or plasma
- Format-Liquid ready-to-use
- On-board stability-28 days at approx. 10°C
- Complementary controls and calibrators available
- Applications for a wide range of biochemistry analysers

Randox Laboratories – RX daytona+



Sample throughput: 270 photometric tests/h,
450 tests/h with ISE

Dimensions: 625 x 670 x 870 mm (h x w x d)

Weight: 120 kg

Highlights: The RX daytona+ is a bench-top, fully automated, random access clinical chemistry analyser capable of performing routine & specialised testing and emergency STAT sampling. The most versatile analyser in its class, the RX daytona+ combines robust hardware and intuitive software with the world leading RX series test menu including routine chemistries, specific proteins, lipids, therapeutic drugs, drugs of abuse, antioxidants and diabetes.

Randox Laboratories – RX imola



Sample throughput: 400 photometric tests/h,
560 tests/h with ISE

Dimensions: 690 x 582 x 970 mm (h x w x d)

Weight: 150 kg

Highlights: The RX imola is capable of 560 tests per hour including ISE and combines superior quality, intuitive software and minimal maintenance for increased productivity and reduced downtime. Combining robust hardware and intuitive software with the world leading RX series test menu, including routine chemistries, specific proteins, lipids, therapeutic drugs, drugs of abuse, antioxidants and diabetes, the RX imola chemistry analyser guarantees unrivalled precision, reliability and accuracy for results you can trust.

Randox Laboratories – TxBCardio



Highlights: Randox TxBCardio is an automated latex-enhanced immunoturbidimetric assay for urinary evaluation of aspirin (ASA) response. Randox TxBCardio measures 11dhTxB2 ensuring accurate results, and is suitable for use on numerous clinical chemistry analysers.

Features:

- Methodology-Latex-enhanced immunoturbidimetric
- Sample type-Urine
- Format-Liquid ready-to-use
- Assay range-400-6000 pg/ml
- Complementary controls and calibrators available
- Applications for a wide range of biochemistry analysers

Tokyo Boeki Machinery – BIOLIS24i Premium



Sample throughput: 240 tests/h without ISE, 400 tests/hour with ISE
Power consumption: 600 W
Dimensions: 520 x 800 x 670 mm (h x w x d)
Weight: 95 kg

Highlights:

- An open system, random access chemistry analyzer
- Original "Air pressure mixing system" avoids carry-over
- More than 5,500 units are sold in 73 countries
- Water consumption is only 3.5 L /hour at the maximum
- Individual probes are used for R1 and R2

Tokyo Boeki Machinery – BIOLIS50i Superior



Sample throughput: 480 tests/h without ISE, 580 tests/h with ISE
Power consumption: 1200 W
Dimensions: 1145 x 1050 x 750 mm (h x w x d)
Weight: 300 kg

Highlights:

- An open system, random access chemistry analyzer
- Hemolysis of whole blood sample for HbA1c is available automatically
- Clot detector for the sample enhances the accuracy of the test results
- Less water and power consumption (13L/hour, 1.2KVA)

IMMUNOCHEMISTRY

Beckman Coulter – UniCel Dxl 800 Access Immunoassay System



Dimensions: 1700 x 1710 x 970 mm (h x w x 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 immunoassay system allows laboratories to decrease process steps and improve turnaround time – with ease of use.

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.

IMMUNOCHEMISTRY

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 – 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).

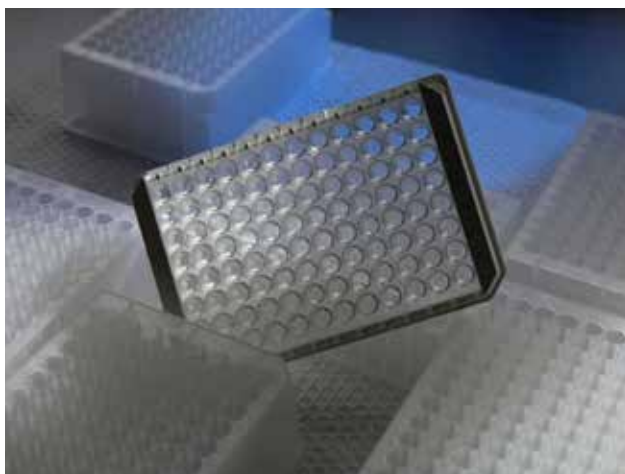
DIAsource – 25OH Vitamin D Total ELISA Assay (KAP1971)



Highlights: The DIAsource 25OH Vitamin D Total ELISA is a competitive ELISA assay, based on patented monoclonal antibodies, with a novel pre-treatment step performed inside the ELISA microtiter plate:

- The most user-friendly 25OH Vitamin D Total ELISA assay with breakable wells
- The only 25OH Vitamin D ELISA fully automatable
- FDA approved

DIAsource – ELISA EBV Early IgM kit (KAPDEAM)



Highlights:

- CE mark
- Small sample volume required
- High diagnostic Specificity for accurate detection of acute infection
- High diagnostic Sensitivity to reduce the number of false positive cases
- Color coded kit reagents for easy recognition in a manual setting
- Common protocol → Easily adaptable to most common automated ELISA platforms e.g. Stratec Gemini

DIAsource – RIA kit 17a-HydroxyProgesterone (KIP1409)



Highlights:

- The 17-OHP test is mainly used to check for the most common form of congenital adrenal hyperplasia in newborns/ children and for the assessment of Polycystic Ovary Syndrome:
- Coated tube assay: direct assay
 - Highly specific antibody: minimal cross-reactivity with other steroids
 - Validated extraction protocol for pre-treatment of serum pediatric samples

Randox Laboratories – Acusera Liquid Immunoassay



Highlights:

Combining more than 50 analytes in a single vial our Liquid Immunoassay Premium Plus Control is designed to significantly reduce the number of individual controls required whilst remaining easy and convenient to use. This liquid stable control demonstrates excellent commutability and an open vial stability of 7 days, ensuring the control behaves as a patient sample and lot to lot shifts are minimised.

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.

IMMUNOCHEMISTRY

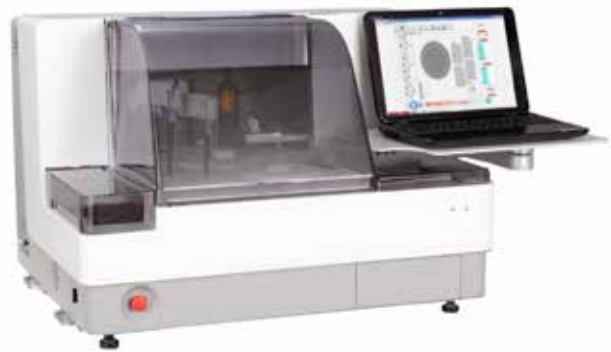
Snibe – Maglumi 800



Sample throughput: 180 tests/h
Dimensions: 1200 x 720 x 560 mm (h x w x 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

Tokyo Boeki Machinery – Allergy-Specific IgE Analyzer



Sample throughput: 90 tests/39minutes
Power consumption: 900 W
Dimensions: 610 x 850 x 665 mm (h x w x d)
Weight: 100 kg

- Highlights:**
- Speedy: First result available after 12 minutes from analysis start
 - Easy to use: Automatic supply and disposal of reaction materials
 - Flexible: Continuous sample loading, 60 allergens stored on board

INTEGRATED SYSTEMS

Mindray – SAL-8000 Modular System



- Highlights:**
- Flexible scalability connection: Consist of clinical chemistry analyzer BS-800M & BS-2000M, chemiluminescence immunoassay analyzer CL-2000i
 - Large capacity: Rack system with Sample Delivery Module (SDM), up to 300 onboard samples with 30 racks, continuous loading support
 - Easy operation: Intuitive interface for ONE integrated system operation software, real-time indication of cuvettes, real-time QC status monitoring, waste and wash buffer status, reflex and re-run function, step-by-step maintenance guide, etc.

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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 x 590 x 790 mm (w x h x d)
Weight:	130 kg
Sample throughput:	up to 60 samples/hour
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

SCIEX – IVD-MS Immunosuppressants kit



Assays: 1200 test included

- Highlights:**
- A new standard for routine therapeutic drug monitoring in transplant patients using LC-MS/MS
 - Ensure optimized, individual patient dosage prescriptions even in low concentrations
 - Simultaneously quantitate levels of sirolimus, everolimus, tacrolimus and cyclosporine
 - Eliminate hidden cost associated with re-runs and dilutions which may result from interferences in the sample- found in traditional immunoassays
 - Complete single-vendor solution
 - Only available in Europe at this time, but not in every EU country

SCIEX – IVD-MS Kit for 25-OH-Vitamin D3/D2 in Serum/Plasma



Assays: 1000 test included

- Highlights:**
- Designed to accurately identify 25-OH-Vitamin D2 and D3 and their concentrations
 - Quantitate both 25-OH-Vitamin D2 and 25-OH-Vitamin D3 simultaneously in a single run
 - Exceptional accuracy and sensitivity even at low levels considered as deficient
 - Eliminate hidden costs associated with re-runs and dilutions which may result from interferences in the sample- found in traditional immunoassay testing
 - Complete single-vendor solution
 - Only available in Europe at this time, but not in every EU country



CHANGES **EVERYTHING**

Shimadzu's new LCMS-8060 makes a real difference to working better and faster. The LCMS-triple-quadrupole combines all UF technologies and pushes the limits of LC-MS/MS quantitation for applications requiring highest sensitivity and robustness.

World's highest sensitivity
based on the new UF Qarray technology, delivering new limits of MRM sensitivity and impacting full-scan sensitivity

Unmatched speed
due to data acquisition with scan speed of 30,000 u/sec and polarity switching time of 5 msec

Outstanding durability
achieving peak area response RSD of 3.5%*, thus showing high robustness

UFMS
ULTRA FAST MASS SPECTROMETRY

www.shimadzu.eu

*2,400 samples of femtogram levels of alprazolam spiked into protein-precipitated human plasma extracts over a 6 day period (over 400 samples were injected each day).



Changes Everything...

The new family member

The fastest triple-quadrupole LCMS-8060 system extends LCMS product portfolio



Figure 1 The LCMS-8060 combines the highest speed with the world's best sensitivity.

With its previous LCMS-8030, LCMS-8040 and LCMS-8050 triple-quadrupole systems, Shimadzu has set leading standards in terms of speed, sensitivity and functional design. With the introduction of the new LCMS-8060 (**Figure 1**), the success story of the LCMS-triple-quadrupole family reaches another milestone.

In addition to its heated ESI source, the youngest member of the UFMS (ultra fast mass spectrometry) family combines all UF technologies. These include the UFsweeper III, a collision cell filled with argon gas that, due to its high-speed technology, enables dwell times of 0.8 ms per MRM. Furthermore, the UF scan rate of 30000 Da/s and the UF polarity switching time of 5 ms is maintained. These properties were already outstanding in the LCMS-8050. Sensitivity was also increased through the new UF Qarray (**Figure 2**). With the powerful vacuum system of the LCMS-8060 and the

optimized ion inlet consisting of a desolvation line (DL) and orifice, it has been possible to introduce an increased number of ions into the mass spectrometer.

World's best sensitivity meets highest speed

Using electrical fields, the new UF Qarray, based on quadrupole technology, minimizes ion scattering that occurs during transfer from the DL into the first vacuum chamber. The design of the advanced UF Qarray is similar to that of its predecessor and also retains the low susceptibility to contamination. Due to the novel design of the UF Qarray, ion focusing and entry of ions into the next ion chamber is optimized, ensuring an efficient ion beam. This effective ion focusing, together with an improved background noise reduction, leads to a significantly improved signal-to-noise ratio and thus to higher sensitivity (**Figure 3**).

With the new UF Qarray, Shimadzu has achieved a technological breakthrough that combines high, apparently contradictory, demands such as increased sensitivity and robustness of LCMS systems. New applications become conceivable and feasible when the world's best sensitivity is combined with high-speed parameters in the LCMS-8060.

The smallest sample amounts in complex matrices - or any low sample concentrations that need to be further diluted to decrease matrix effects - are now detectable. As an example, (d6)-norepinephrine is discussed here, of which just 5 ppt can be extracted from plasma and still be detected (**Figure 4**).

Uniform software for all triple-quadrupole models

The increasing demands for quantification at trace levels in clinical research, food analysis and in other market segments, place high demands on instrument technology as well as on users. The LCMS-8060 offers not only technological advancements at the highest level, but also continuous adaption of the instrument software to changing user needs.

The LCMS-8060, as well as all other triple-quadrupole models and Shimadzu's HPLC/UHPLC systems, is controlled using the LabSolutions LCMS-software. A uniform user interface enables overview and control of the hardware as well as simultaneous processing of initial analysis results.

Additional functions

The excellent speed parameters of the LCMS systems and the advanced software enable the implementation of helpful additional functions such as the so-called Synchronized Survey Scan (SSS). This additional MS/MS experiment is triggered when a predefined intensity in the associated experiment is exceeded. As an example, it is possible with this function to carry out an MRM and the corresponding qualitative production scan almost simultaneously within one analysis run, without compromising the accuracy of the quantitative analysis. For example, extracted whole blood samples spiked with flunitrazepam (**Figure 5**) demonstrate impressively that, despite the simultaneously measured SSS, the peak reproducibility attained is very good. This is only possible with the help of high UF scan speeds that assure generation of a sufficient number of data points, necessary to describe the peak accurately. In addition to the quantitative results, high-quality mass spectra are obtained that correlate well with library spectra, even at low concentration. This enables unequivocal peak characterization.

Workload reduction due to fully automated MRM optimization

The improved, fully automated MRM optimization enables a real reduction in workload. While it was still necessary with earlier versions to determine and enter the parent ion manually, it is now sufficient to indicate the molecular weight. The software then calculates the protonated or deprotonated ions as well as all possible adducts and takes these into consideration during optimization.

With the LCMS-8060, Shimadzu has further advanced the MS technologies of its predecessor models. Particular attention has been paid to robustness and straightforward operation. Outstanding performance of the instrument is thus guaranteed over a long period of time. ■

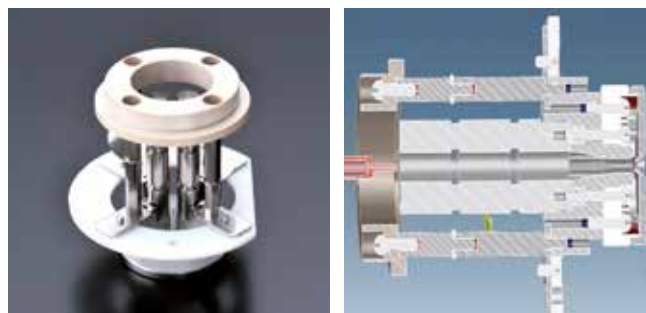


Figure 2 The Qarray is the key to higher sensitivity.

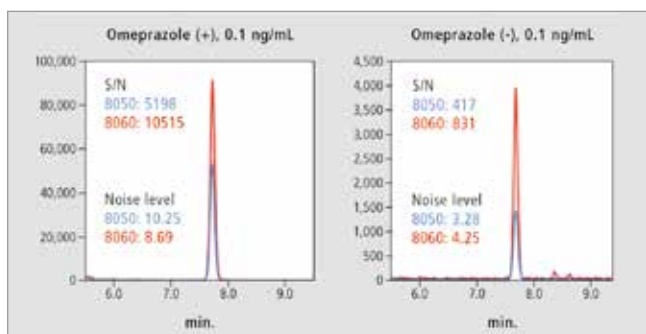


Figure 3 Comparison of the signal-to-noise ratio of omeprazole.

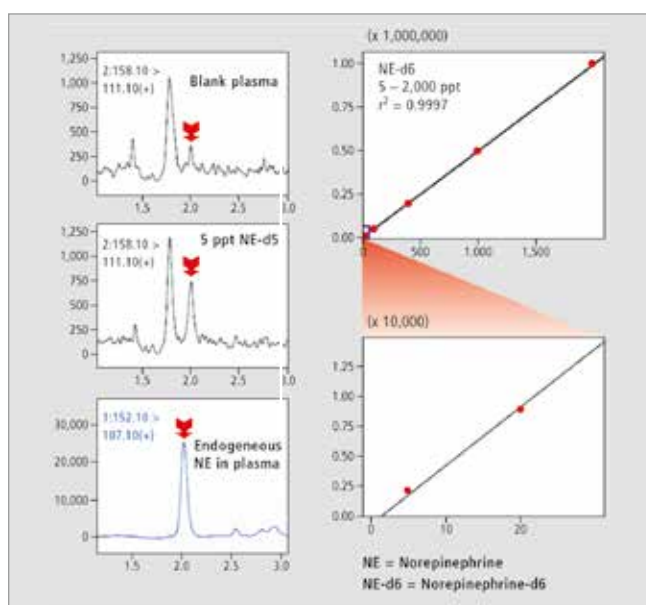


Figure 4 5 ppt norepinephrine-d6 in plasma, calibration curve 5 - 2000 ppt.

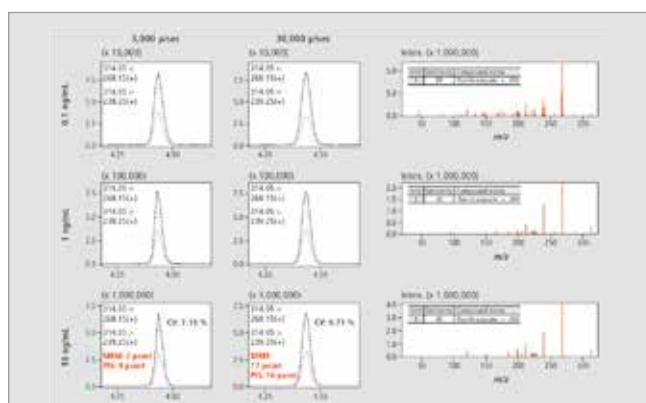


Figure 5 Flunitrazepam in whole blood.

MASS SPECTROMETRY

Shimadzu – iMScope TRIO



Highlights: Imaging mass spectrometry is a revolutionary new technology. The instrument is a combination of an optical microscope which allows the observation of high resolution morphological images, with a mass spectrometer which identifies and visualizes the distribution of specific molecules. Superimposing the two images obtained based on these very different principles, has created a significant new research tool, the imaging mass microscope. The accurate and high resolution mass images from the iMScope will drive your research to the next level. At long last, we have entered the age of imaging mass spectrometry

Shimadzu – LCMS-8040



Sensitivity: 1 pg reserpine, S/N > 10,000:1 (RMS)
No of channels: MRM (max. 1,000 events x 32 channels)
Scan speed: max. 15,000 u/s
 (0.1 u step: 150,000 data points/s)
Polarity switching time: 15 msec
MRM transition speed: max. 555 channels/s

Highlights: The LCMS-8040, first mass spectrometer on the market with a fast scanning speed (15000 u/s) and a fast polarity switching is well suited for immunosuppressants and NBS analysis.

Shimadzu – LCMS-8050



Sensitivity: 1 pg reserpine, S/N > 60,000:1 (RMS)
No of channels: MRM (max. 1,000 events x 32 channels)
Scan speed: max. 30,000 u/s
 (0.1 u step: 300,000 data points/s)
Polarity switching time: 5 msec
MRM transition speed: max. 555 channels/s

Highlights: With a heated ESI and a polarity switching 3 times higher than 8040, the LCMS-8050 is the right tool for analysis of a broad range of molecules including vitamin D and steroids.

Shimadzu – LCMS-8060



Sensitivity: 1 pg reserpine, S/N > 180,000:1 (RMS)
No of channels: MRM (Max. 1,000 events x 32 channels)
Scan speed: Max 30,000 u/sec (in all modes of scanning)
 (0.1 u step: 300,000 data points/sec)
Polarity switching time: 5 msec
MRM transition speed: 555 MRM/s

Highlights: Built on the proven platform of the LCMS-8050, the new patented ion guides developed for the LCMS-8060 greatly improves sensitivity. It brings a meaningful impact to quantitative detection while maintaining high robustness.

ELECTROPHORESIS / CHROMATOGRAPHY

Shimadzu – i-series



Max. operating pressure:	66 MPa
Detectors:	UV, MWD, DAD/PDA, Fluorescence, RID
Sample capacity:	336 (1ml vials) or 216 (1.5 ml vials) or 112 (4ml vials) or 4 x 384-well MTP or DWP
Injection speed:	14 seconds
Dimensions:	605 x 410 x 500 mm (h x w x d)
Weight:	63 kg
Applicable LC flow rate:	0.0001-3.0 ml/min (66 MPa); 3.0001-5.0 ml/min (44 MPa); 5.0001-10.0 ml/min (22 MPa)

Highlights: High speed and outstanding performance, maintainability and efficiency – the new i-series with the compact Prominence-i (HPLC) and Nexera-i (UHPLC) versions meets the needs of large as well as small laboratories. The letter i stands for innovation, intelligence and intuitive operation, all of which are combined in the i-series concept.

Shimadzu – Nexera X2



Max. operating pressure:	130 MPa
Detectors:	UV, MWD, DAD/PDA, Fluorescence, RID, ELSD, CDD, SQ MS, TQ MS, IT-TOF MS
Sample capacity:	115 (1.5 ml sample vials), optional rack changer with capacity up to 658 (1.5 ml sample vials) or 12 x 384-well MTP or DWP
Injection speed:	14 seconds
Flow rate range:	0.0001-3.0 ml/min (to 130 MPa); 3.0001-5.0 ml/min (to 80 MPa); 5.0001-10.0 ml/min (to 22 MPa)
Dimensions:	flexible, standard configuration 630 x 520 x 500 mm (h x w x d)
Weight:	flexible, standard configuration 80 kg
Power Supply:	AC 110 V, 230 V, 150 VA, 50/60 Hz

Highlights: The Nexera X2 system is an all-round LC system that supports conventional as well as ultra-high pressure applications. Apart from standard configurations the Nexera X2 is a modular UHPLC system with the advantage of high flexibility and extended functionality including sample pre-treatment and overlapping injection.

Shimadzu – Nexera UC



Detectors:	UV, MWD, DAD/PDA, ELSD, SQ MS, TQ MS
Sample capacity:	SFC / HPLC: 115 (1.5 ml vials), SFE: 4 (48 with optional rack changer)
Injection speed:	14 seconds
Flow rate range:	0.0001 to 5.000 ml/min (CO2 pump)
Dimensions:	flexible, standard configuration: 630 x 1040 x 500 (h x w x d)
Weight:	flexible, standard configuration: 160 kg
Power supply:	AC 110 V, 230 V, 150 VA, 50/60 Hz

Highlights: Unified and fully automated system that combines supercritical fluidic extraction (SFE) with supercritical fluid chromatography (SFC). An optional rack-changer for the supercritical fluid extraction unit, enables up to 48 samples to be continuously and automatically processed. The low volume backpressure regulator allows for splitless injection into every detector for ultra-high sensitivity.

Thermo Scientific – Prelude MD HPLC



Highlights:

- Dual HPLC channels are intelligently optimized to run identical or different tests in parallel, maximizing utilization of the mass spectrometer and improving turnaround time and productivity
- TurboFlow technology removes matrix interferences and captures analytes of interest, minimizing ion suppression and improving subsequent mass spectrometry results
- For in vitro diagnostic use only
- Not available in all countries

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.

SARSTEDT – Urine V-Monovette, Monovette, tubes & containers



Highlights:

- The diverse, user-friendly products for urine collection offer pre-analytical and post-analytical solutions thanks to their simple, hygienic use. Our range of conical urine tubes is ideally suited for sediment recovery and subsequent microscopic analysis.
- Urine-Monovette: For hygienic urine collection, transport and analysis.
- V-Monovette Urine: For enclosed urine transfer. Optimal hygienic and convenient handling.

Sysmex – UF-1000i



Sample throughput: normal mode: up to 100 samples/hour;
special (high-precision bacteria) mode:
up to 80 samples/hour

Dimensions: 615 x 580 x 710 (main unit with sampler);
(h x w x d) 100 x 338 x 350 (IPU: information-processing unit)

Weight: 75.5 kg (main unit with sampler);
8 kg (IPU: information-processing unit)

Highlights:

- Fully automated urine particle analyser
- Detects potential urinary tract infections within a minute, not hours
- Detects all three UTI indicators in one go, at up to 100 samples/h
- Distinguishes between inflammation, bacterial and mycotic infections
- Bacteria morphology information for samples with suspected urinary tract infections
- High-quality cell counts out of special body fluids
- Unattended walk-away for improved productivity
- Easy to operate via interactive menus

Sysmex – UX-2000



Sample throughput: approx. 150 samples/hour
(with 50% particle analyses)

Dimensions: 710 x 800 x 720 mm (h x w x d)
Weight: approx. 120 kg (with sampler)

Highlights:

- Fully automated integrated urine analyser that uses test strips (CHM) and fluorescence flow cytometry (FCM) to detect dissolved substances, urinary cells and particles in human urine
- Comprehensive list of parameters with all the results in one screen
- Works at the push of a button
- Standardised, efficient workflow management and automation
- Up to 150 samples/hour
- Many possible workflows following the internal reflex test and cross check rules.

RAPID TESTING

Nova Biomedical – StatStrip Hospital Glucose Monitoring System



Dimensions: 147 x 79 x 30 mm (h x w x d)
Weight: 0,22 kg
Assays: Glucose

Highlights: Validated in over 110 published studies throughout the world, lab-accurate StatStrip Glucose corrects for hematocrit, Maltose, and other interferences that can cause erroneous results on other glucose meters. StatStrip – no known interferences.

Nova Biomedical – Stat Profile Prime CCS Comprehensive



Dimensions: 391 x 305 x 366 mm (h x w x d)
Weight: 8,2 kg
Sample throughput: 45 samples/h
Assays: pH, pCO₂, pO₂, Hct, Na⁺, K⁺, Cl⁻, Ca⁺⁺, Glu, Lac

Stat Profile Prime makes critical care testing easy and affordable.

Highlights:

- 10-test critical care menu
- Results in 60 seconds
- Fast throughput
- ZERØ maintenance
- 24-hour readiness
- True liquid QC
- Low cost

Nova Biomedical – Stat Profile pHox Ultra



Dimensions: 457 x 559 x 432 mm (h x w x d)
Sample throughput: 23 samples/h
Assays: pH, pCO₂, pO₂, SO₂%, Na⁺, K⁺, Ca⁺⁺, Mg⁺⁺, Cl⁻, Glucose, BUN/Urea, Creatinine, Lactate, Hct, Hb, O₂Hb, HHb, COHb, MetHb, tBil

Highlights: No other blood gas analyzer can match the clinical value of pHox Ultra. It provides up to 20 critical care tests from one small, 210 microliter sample in only 2 minutes. Other partial test panels are available in less than one minute.

SARSTEDT – Blood gas capillary tubes



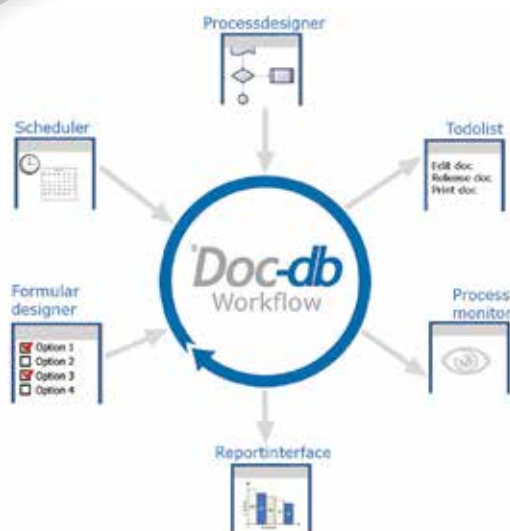
Highlights:

- Blood gas collection systems for arterial, venous and capillary sampling with the smallest sample volumes and Ca²⁺ balanced heparin.
- The liquid Ca²⁺ balanced heparin enables rapid and optimal mixing of blood and anticoagulants. The Blood Gas Monovette is available in 1 and 2 ml options and has been designed for venous and arterial blood collection. The blood gas capillaries offer a nominal volume range of 100–175 µl.

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*Process designer
Process monitor
Report interface
Scheduler*



Zenon GmbH
Softwareentwicklung & Neue Medien

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FOR RESEARCH ONLY

Eppendorf – BioPhotometer D30



Dimensions: 150 x 295 x 400 mm (h x w x d)
Weight: 5.4 kg
Power consumption: 15 W (during operation),
 5 W (dimmed display)

- Highlights:**
- Fixed wavelengths at 230 nm, 260 nm, 280 nm, 320 nm, 340 nm, 405 nm, 490 nm, 562 nm, 595 nm and 600 nm
 - Display of purity scan for specific applications
 - Guided software process to minimize errors
 - Xenon flash lamp with very long life time

Eppendorf – BioSpectrometer



Dimensions: 150 x 295 x 400 mm (h x w x d)
Weight: 5.4 kg
Power consumption: 15 W (during operation),
 5 W (dimmed display)

- Highlights:**
- UV/Vis spectral range 200 nm to 830 nm
 - Freely selectable wavelengths across the entire UV/Vis spectral range (increment: 1 nm)
 - Temperature controlled cuvette shaft in the BioSpectrometer kinetic (20 °C to 42 °C in 0.1 °C increments)
 - Fluorescence intensity measurements across a range of 0.5 nM to 2,000 nM fluorescein with the BioSpectrometer fluorescence

Designing an appropriate QC procedure

Quality Control (QC)

is a vital process for laboratories to monitor the accuracy and precision of patient sample testing. Without QC, laboratory errors could go undetected, potentially resulting in misdiagnosis and inappropriate or delayed treatment, all of which could be life threatening for the patient.

It is easy to get caught up in an abundance of QC statistics and forget the fundamental reason why QC exists. The essence of QC is detecting errors to ensure that the results you produce are accurate and reliable as all QC procedures should focus on reducing the risk of harm to the patient. With 70% of all medical decisions based on laboratory results, it's of the utmost importance to remember that we are not examining statistics; we are examining patient results, with real implications for the patient, highlighting the importance of having a well-designed QC procedure in the laboratory.

These processes incorporate:

1. Identifying the quality specifications for the test

Not every test in the laboratory performs the same way.

Not every test needs to perform the same, and give poor-performers and high risk tests more QC attention.

2. Choosing good QC material

The effectiveness of any QC procedure is underpinned by the quality of the control materials that you choose to use. ISO 15189 recommends that the "laboratory shall use quality control materials that react to the examining system in a manner as close as possible to patient samples".

3. QC evaluation at the beginning and end of patient testing

Patient samples should be tested in "batches" ideally you should start and end patient sampling with a QC evaluation. Running QC at the end of the day assures a lab that that day's results are not affected, saving a lot of time and money!

4. Characteristics of good QC results

In order to recognise a "bad" result, it is important to be able to recognise the qualities of a "good" set of QC results.

5. Recognising and troubleshooting an out-of-control result

The most effective way to recognise errors is to use QC multi-rules. Additionally, participation in an ISO 17043 accredited EQA scheme will help recognise errors.



Randox Laboratories Ltd provides a unique range of multi-analyte, third party QC solutions to meet the needs of any laboratory. At Randox there has been a significant drive to develop products and services to help laboratories streamline their QC procedures, manage and interpret results as well as troubleshoot problems to improve overall laboratory performance. Utilising these services to design a QC procedure will enhance laboratory processes overall, increasing accuracy and confidence, with the added bonus of significant cost savings as a result. ■



To find out more about creating a well-designed QC process, download this free educational paper from Randox:

<http://bitly.com/QCprocedures>

Hematology

Blood Cell Counter
Integrated Hematology
Coagulation

mindray



RANDOX

BLOOD CELL COUNTER

Beckman Coulter – UniCel DxH Connected Workcell Solution



Dimensions: 1905 x 3225 x 787 mm (h x w x d)
Weight: 1016.6 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.

Mindray – BC-5150 Auto Hematology Analyzer



Dimensions: 410 x 320 x 400 mm (h x w x d)
Weight: 24 kg
Sample throughput: 60/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) + Tri-angle 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-6800 Auto Hematology Analyzer



Sample throughput: 125 (CBC+DIFF), 90 (CBC+DIFF+RET), 40/h (body fluid)
No of parallel samples: 100

Highlights:

- SF cube cell analysis technology (3D scattergram) for WBC, 5-Part DIFF, NRBC, RET and PLT-Optical
- Cyanide free hemoglobin measurement
- Reportable parameters: 37 (whole blood), 7 (body fluid), research parameters: 17 (whole blood), 7 (body fluid)
- 2 histograms for RBC & PLT; 3 scattergrams (3D) for DIFF, NRBC, RET; 6 scattergrams (2D) for DIFF, BASO, NRBC, RET, RET-EXT, PLT-Optical
- Data storage capacity: up to 100,000 patient results including all numeric and graphical information

Mindray – BC-5800 Auto Hematology Analyzer



Sample throughput: 90/h
No of parallel samples: 100
Assays: 25 basic parameters + 4 Research parameters (LIC%, LIC#, ALY%, ALY#), 2 Histograms for RBC and PLT, 2 Scatter grams: 4-differential scatter gram, Basophil scatter gram Cyanide free hemoglobin measurement

Highlights:

- Sample volume: Prediluted 40 µL, manual mode (open vial) 120 µL, auto loader/manual mode (closed tube) 180 µL
- LIS Communication: LAN port supports HL7 and 15ID protocol, support uni- or bi-directional LIS

The **Sysmex Corporation**

The global leader in
hematology.



Breaking new ground in haemostasis, urinalysis, cancer management, essential healthcare, life sciences, near patient testing and automation.

Founded in 1968, The Sysmex Corporation has challenged its way past far larger companies to become one of the leading healthcare companies around the world. How? By focusing constantly on one objective: maximising the strength of our people, knowledge and resourcefulness to live up to our mission statement: Shaping the Advancement of Healthcare.

Healthier and more enjoyable

Nobody within Sysmex will claim that we have or will have the answer to all of healthcare's problems. You will hear us say, however, that we deliver true solutions to real problems. And that, by focusing our knowledge on the issues you face as our customers - on what you need and not just on what we can do - we make your working lives more effective, more efficient, and therefore hopefully more rewarding. If it falls in our domain of expertise, you can count on us to try and solve your challenge. Just ask.

Focus focus focus – for you

We are quite simply very good at what we do. From the start our focus has been on hematology. And here we are the global leaders. With the introduction of our XN-Series in 2011, we set new

benchmarks in the industry, and we have by no means yet exhausted the clinical potential of these remarkable analysers. Their accuracy, associated services and consultancy, and their ease of use remain unmatched. We are excited about what is yet to come. Importantly, we have very recently expanded the XN family to include three new analysers for labs with less large-scale needs – the XN-L series. Now the quality and clinical significance available on the larger XN is within reach of almost all labs. But Business 101 tells you that once you have achieved significant market penetration, growth potential is limited. In addition to our two other core areas – haemostasis and urinalysis – we therefore started expanding our areas of expertise some time ago. We have already developed important solutions in life sciences, cancer management and near patient testing and are now entering new areas where we know we will make a difference for you. Two acquisitions, and the exclusive distributorship of a revolutionary Intelligent Lab Automation solution are opening new doors.

Sysmex Partec – flow cytometry pioneers

Partec brought to market the first fluorescence-based and commercial flow cytometer (FCM). By combining the latest scientific and



XN-L Series:
Setting new standards in hematology

biotechnological knowledge into clever and cost-effective solutions, they have since used their technology and intense scientific knowhow to become a key global player for precise and rapid cell analysis in a broad spectrum of industries:

- ↳ Cost-reduced routine immunophenotyping
- ↳ Cell culture analysis with low laboratory requirements
- ↳ Decentralised research applications
- ↳ High-speed plant and animal ploidy analysis
- ↳ High-speed online microbiological process control
- ↳ Sterile cell sorting
- ↳ Essential Healthcare for HIV/AIDS, TB and Malaria

Our companies are proving a perfect match – both in terms of culture and mission – and there are now very exciting times ahead for Sysmex Partec. By focusing on your needs and cleverly combining our technologies, network and services, we expect to deliver new solutions unknown in the market today. Our focus will be on dedicated instruments for human healthcare, microbiology, industrial applications, food quality control, plant and animal research, etc.

Sysmex Inostics – a revolution in the fight against cancer

Sysmex Inostics is a molecular diagnostics company that is a pioneer in blood-based cell-free tumor DNA oncology testing. Our highly sensitive OncoBEAM assays detect gene mutations in late stage cancer allowing for more targeted therapies and monitoring of disease response and recurrence.

Our assays provide a faster and easier approach for determining the mutation status of tumors requiring a simple blood draw rather than an invasive tissue biopsy procedure. Results of a tumor's mutation status are available within days, which can help rapidly guide treatment decisions. In addition, a blood-based biopsy becomes the method of choice where a tissue biopsy is difficult to obtain.

With BEAMing being one of the most sensitive technologies available today for the detection of tumor specific somatic mutations in blood samples, Sysmex Inostics' OncoBEAM services are readily available to support clinical trials and research in oncology. Furthermore, Sysmex Inostics companion diagnostics (CDx) team offers services for the development of IVD tests supported by a growing network of partners to cover the entire development process.

For routine clinical analysis, OncoBEAM tests are available through our rapidly expanding global Centers of Excellence program and through a CLIA-certified laboratory located in the United States. The molecular diagnostic testing services offered by Sysmex Inostics will help bring personalized medicine to clinicians who can direct their patients to the most effective cancer therapies for treating their disease.

GLP – intelligent lab automation

We are the world's exclusive distributors for GLP Systems – and we are turning the world of lab automation on its head. By truly addressing your challenges in the lab we can now offer lab automation that is reliable and easy to operate and lets you make your automation decisions on your own terms. Truly.

GLP systems has three core values - simplicity, freedom and excellence – and these values permeate every inch of the solution.

- ↳ You can define the setup, even across multiple floors in the lab. No longer bound by tube racks, your samples receive the individual treatment they need.
- ↳ You are free from long-term analyser contracts so you can define which analysers you wish to use to suit your diagnostic profile. At any stage – so you can always have a best-in-class lab.
- ↳ And because we use only the best materials and the best technology, you can count on the most important feature of your lab. It's going to work.

Automation doesn't have to be difficult. Not when you understand the essentials. Not when you care about delivering solutions that really work. We'll be delighted to organise a demonstration or to talk about how we can make your life in the lab easier, more efficient, and more effective. *We know you'll be amazed.* ■



GLP systems: Changing the game in lab automation

We're here for you

Sysmex is unique. We don't claim to offer a solution for everything. We don't claim to have all the answers. But we do offer you genuine market-leading solutions that truly address your needs.

Hematology, haemostasis, urinalysis, cancer management, essential healthcare, life sciences, near patient testing and automation. If there is anything you need in these areas, get in touch. We will do our best to help you.

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www.sysmex-europe.com
info@sysmex-europe.com

Hematology

BLOOD CELL COUNTER

Randox Laboratories – Acusera Hematology Control



Highlights: Our new liquid stable Haematology control combines 45 parameters, covering the full blood profile in a single control. The Haematology control is a true third party solution for Sysmex haematology analysers with 5-part differential technology. As a result the control guarantees an unbiased, independent assessment of analytical performance. With barcoded labels for easy sample recognition and an open vial stability of 14 days our control will help you save time and money in your laboratory.

Sysmex – XP-300



Sample throughput: approx. 60/h
Dimensions: 480 x 420 x 355 mm (h x w x d)
Weight: 30 kg

Highlights:

- Robust and reliable 3-part differential analyser
- Neutrophil count for greater diagnostic value
- 20 parameters at the push of a button
- Unique barcode and reagent management simplifies laboratory work
- Easy connectivity and user support through SNCS and IQAS Online QC

Sysmex – XN-L Series



Sample throughput: up to 60 in Whole Blood mode; up to 70 with the optional Speed-up licence

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

Weight: 35 kg (XN-350, XN-450); 53 kg (XN-550 incl. sampler); 3 kg (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 functionality and continuous loading
- Add clinical and productivity values as you need them
- XN quality. Cost-effective. Plus full Sysmex 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

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-3000 DI



Sample throughput: CBC+DIFF 200; with RET approx. 170;
Body fluid analysis 50; SP-10 80 smears/h;
DI-60 30 analyses/h

Dimensions: 1150 x 3000 x 1630 mm (h x w x d)

Weight: 970 kg

- Highlights:**
- Fully integrated slide maker & stainer
 - For labs with a steady, medium workload and relatively high smear rate
 - Choose Clinical Value APPs as needed
 - Integrated backup concept
 - Short turnaround times
 - 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-9000 Sorting & Archiving



Sample throughput: max. 900/h

Dimensions: depending on configuration

Weight: depending on configuration

- Highlights:**
- Haematology automation line, best suited to labs with a high routine workload with relatively standardised sample profiles, and with archiving needs
 - Flexible configuration of XN analysis modules
 - Discrete rack management
 - Built-in auto reflex
 - Flexible rack entry and exit positions, also possible as single point of entry/exit
 - Comprises XN analysis modules, barcode terminal, SP-10 for smear-making/staining, DI-60 for digital image slide analysis (optional), tube sorter TS-10 or TS-10 Up, *Extended* IPU



Integrated solution management for your laboratory

IT in a laboratory should never be the problem, but always the solution.

labcore is much more than conventional IT strategic advice. We provide highly specialized service modules for medical laboratories:

- Drawing up specifications
- Support of supplier selection processes (tenders)
- Orchestration of existing IT solutions/processes
- Implementation of QM specifications
- IT project management
- Modelling data and material flows in laboratory networks
- Use of in-house IT solutions (e.g. Doc-db for document and quality management)

dr. neumann&kindler

www.labcore.de

Confidence in
Hematology
Results with
Beckman Coulter



The UniCel DxH 800

Wallace Coulter, one of the founders of Beckman Coulter, was motivated by a belief that science should serve humanity. This was the inspiration behind the principle he invented that became the basis for all blood counting solutions. This same drive to keep the science of hematology moving forward is behind Beckman Coulter's new 'Automated Intelligent Morphology' (AIM), a multidimensional, high-definition flow cytometric technology that improves analysis of abnormal specimens. AIM is the only technology currently available that relies solely upon morphologic features to recognize cells.

All labs can benefit from Beckman Coulter's AIM technology, which delivers performance, low review rates and first past accuracy in results reporting. Delivering greater sensitivity through advanced technology improves the detection of abnormalities, saving time, speeding results and streamlining workflow.

Standardised results

The new technology is incorporated into all Beckman Coulter's cellular analysis systems - the Beckman Coulter UniCel DxH 800 and 600 Coulter Cellular Analysis Systems, as well as the new DxH 500 analyser – with results standardised and consistent across a range of facilities.

The instruments use only five reagents for all analyses, including NRBC and reticulocytes, saving costs by reducing inventory management.

The introduction of the new UniCel DxH Series of connected hematology workcells* further streamlines workflow. With connectivity, samples are loaded at one or more entry point allowing workloads to be more evenly distributed among the modules. This boosts uptime over the life of the analysers.

Each workcell can comprise up to three DxH 800 modules and one Slidemaker Slidestainer (the UniCel DxH 2401) to form scalable and customised workflow solutions. At peak performance, the UniCel DxH 2401 configuration can analyse up to 300 samples and 140 slides per hour.



The UniCel DxH 2401 analyses up to 300 samples and 140 slides per hour

Workflow automation

In addition, the DxH Workcell's unique bi-directional sample transport system automatically distributes samples between the analysers, reducing potential delays in sample testing and the reporting of results. Critical STAT samples or body fluids can be added while the system is running, without the need to interrupt routine sample testing. Additionally, the Single Aspiration Pathway on the DxH 800, DxH 600 and the DxH Slidemaker Stainer (SMS) eliminates time consuming mode-to-mode calibration issues.

User-defined decision rules for auto-rerun and reflex testing further improve workflow and reduce turnaround time (TAT).

The latest DxH data information management system consolidates order entries, and is able to manage sample review data for up to 90,000 results. For Quality Control management, it provides storage capacity for 30 control files, each with 150 runs per instrument.

Detecting and counting abnormal cells, particularly if they occur in low frequency, depends on the quality of the blood films produced. The inclusion of the automated Beckman Coulter DxH Slidemaker Stainer (SMS) in the workcell enables user defined decision rules drive automated slide preparation and staining, without the need for manual intervention. This delivers a more reliable and consistent smear quality regardless of the blood consistency.

The SMS incorporates LEAN design principles, is easy to configure and requires minimal maintenance. It is simple to make and stain smears from:

- ↳ Capped whole blood sample tubes (via automatic cassette or single-tube mode)
- ↳ Open-top tubes (single-tube mode)
- ↳ Paediatric whole blood sample tubes (via automatic cassette or single-tube mode)

Innovative solutions in addition to traditional cellular analysis provide labs with the option of handling the white blood count (WBC) differential through Beckman Coulter's exclusive HematoFlow technology.* This uses multi-colour monoclonal antibody technology coupled with flow cytometric analysis to accurately count cells that cannot be identified by conventional hematology analysers or even morphological examination.

Beckman Coulter's hematology solutions empower labs to:

- ↳ Increase workflow efficiency
- ↳ Improve first pass review
- ↳ Reduce manual differentials and slide reviews
- ↳ Reduce turnaround time
- ↳ Improve sample handling
- ↳ Save time with electronic QC submission
- ↳ Free up highly skilled staff to focus on more essential tasks
- ↳ Accommodate multiple tube sizes
- ↳ Deliver high quality results
- ↳ Reduce overall costs

Over the last 60 years, the company's scientific leadership and legacy of advancing hematology innovation has empowered laboratories of all sizes. Beckman Coulter solutions deliver technology that lowers manual review rates, provides true standardisation, optimises end-to-end workflow and increases efficiency. These solutions aid faster and better diagnostics, providing clinicians with the information they need to make treatment decisions earlier and with more confidence – to the overall benefit of the patient. ■

*The UniCel DxH Connected Workcell and HematoFlow are not available in all geographies.

Beckman Coulter, the stylized logo, Coulter, DxH and UniCel are trademarks of Beckman Coulter, Inc., and are registered with the USPTO. HematoFlow is a trademark of Beckman Coulter, Inc.

COAGULATION

SARSTEDT – S-Monovette ThromboExact



Highlights: The blood collection tube S-Monovette Thrombo-Exact has been developed especially for anticoagulant-induced pseudothrombocytopenia. Generally, pseudothrombocytopenia is caused by thrombocyte aggregation. Early detection avoids the consequences of a thrombocytopenia misdiagnosis.

This blood collection tube is validated internally by Sarstedt and externally at the University Hospital Rostock, Germany.

SARSTEDT – S-Monovette Hirudin - Thrombocyte function



Highlights: This blood collection tube is developed to measure thrombocyte activity on the Multiplate analyser (multiple platelet function analyser). In 2008 Sarstedt AG & Co in cooperation with Dynabyte / Verum Diagnostica (now Roche) was the first manufacturer to produce and launch a blood collection system with Hirudin as anticoagulant agent. During validation the S-Monovette Hirudin was compared to the Hirudin tube of Dynabyte. This was done internally by Sarstedt as well as externally by two independent institutions (Munich University Hospital, Westpfalz-Klinikum, Medical Clinic III).

Sysmex – CS-1600



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

Highlights:

- Great routine analyser with a broad portfolio of specialty testing
- Proven, reliable technical performance with advanced CS-technology
- High-quality results based on advanced multi-wavelength technology
- Minimal need for hands-on maintenance
- Traceability for operation history and results

Sysmex – CS-2400/2500



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

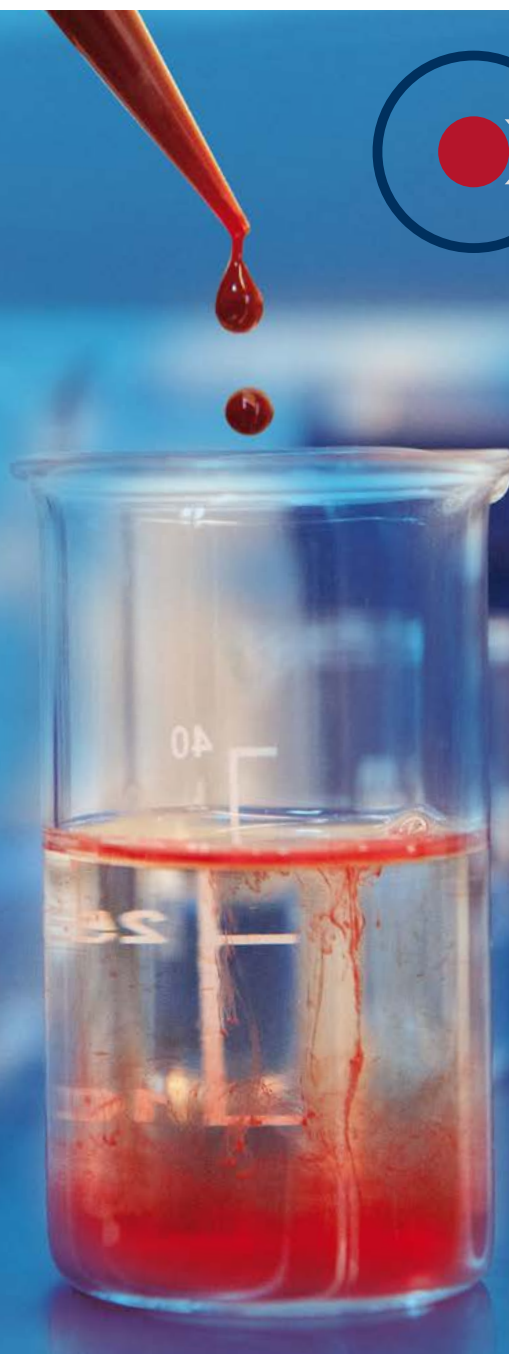
Highlights:

- Consolidates routine and specialised testing in a single analysis system
- Pre-analytic sample checks for interferences and over-/underfilling
- High-quality results based on advanced multi-wavelength technology
- Automated, high-accuracy platelet function testing by aggregometry
- Rule-based rerun & reflex testing
- Advanced inhibitor testing with cross-mixing tests
- Recognise and identify clotting disorders through clot waveform analysis
- CS-2400: open tube model, CS-2500: cap-piercing model

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

Pathology

SECTRA

OLYMPUS

Your Vision, Our Future

HOLOGIC®
CLARITY OF VISION



MALDI-MSI
Virtual slide
microscopes
Slide preparation
Optical microscopes
IT

LABBOOK 2015

Digital Pathology

*from idea
to implementation*

In order for digital pathology to be able to benefit from IT advancements such as electronic image analysis, archiving, virtualization and workflow documentation, it has to master major challenges.

Firstly, there are technological challenges such as the management of huge data volumes created by gigapixel virtual slides, or hardware issues surrounding the speed of scanners and the quality of screens.

Secondly there is integration: how will digital pathology be integrated in the overall processes covering pathology, lab and information systems?

Mastering these challenges requires implementation of – and blanket compliance with – suitable standards. The race is on! *Read more ...*



The new

rapifleX MALDI Tissuetyper

for

**mass spectrometric
imaging**

In mass spectrometric imaging molecules such as proteins, peptides lipids and metabolites are directly measured from tissue sections without the need for molecular probes or labels. Hundreds of thousands of compounds can be measured simultaneously. While different ionization techniques can be used, MALDI (matrix-assisted laser-desorption/ionization) is by far most commonly used. Both frozen and FFPE material can be analyzed.

In recent years, the technique has been increasingly used in histopathology and oncology research. Because no label is needed, this technique allows to detect new biomarkers and leads to new insights into tumor heterogeneity. The molecular phenotypes detected by the MALDI technique can be correlated with histology and often allow to distinguish tissue features that look morphologically identical.

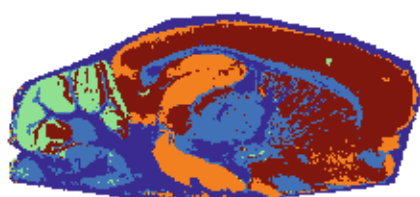
The rapifleX MALDI Tissuetyper - unprecedented speed and robustness

The rapifleX MALDI tissuetyper is a novel MALDI-time of flight instrument that was specifically designed for the challenges of MALDI imaging. It features the novel smartbeam 3D laser with a repetition rate of 10 kHz and a focus diameter of less than 5µm. In combination with moving mirrors that allow a precise positioning of the laser focus on the tissue it can scan up to 50 true non-overlapping pixels per second. This is considerably faster than the previous state-of-the-art system and makes it possible to either scan much larger images or many more samples than before. The scanning laser allows to systematically scan each complete pixel which increases the quality of the images. The rapifleX MALDI Tissuetyper is for research use only.



*Proteins in gastric Cancer at 30µm pixel size.
The microscopic image can be overlaid and seamlessly cross-faded to assign molecular signals to histological features.*

*Sagittal rat brain section at 30µm pixel size.
Highly localized ion distributions show delicate structures such as the hippocampal pyramid layer and the ependyma in the overlay with the microscopic image.*



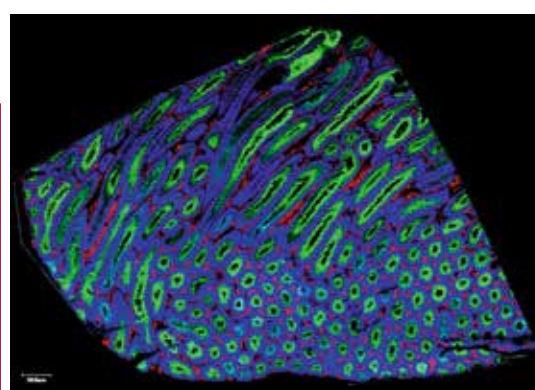
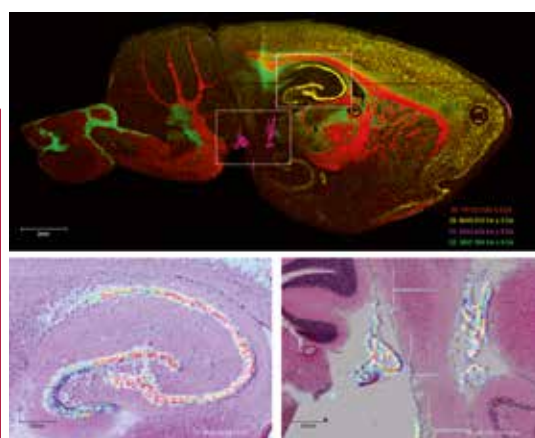
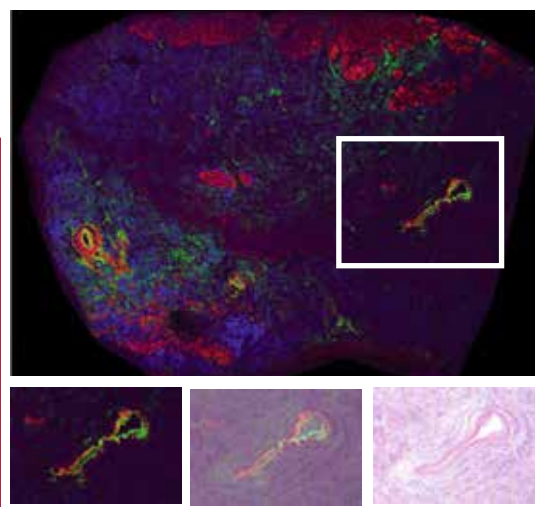
Spatial segmentation based on similarity of molecular phenotypes shows functional regions in a sagittal rat brain section.

Adding a molecular dimension to histology

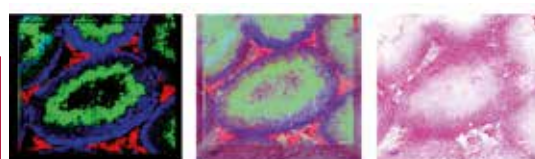
The meaningful analysis of mass spectrometric imaging datasets requires a comparison with conventional histology based on the microscopic analysis of a stained tissue section. The soft smartbeam 3D laser of the rapiflex leaves the tissue intact after the MALDI Tissue typer analysis. The section can then be stained. Bruker's leading software allows to superimpose the high-resolution histological image acquired from a digital slide scanner with the molecular MALDI data. Seamless cross-fading between the microscopic and mass spectrometric modality truly adds a molecular dimension to histology. Detailed analysis is possible by either defining regions of interest (ROI) based on the microscopic data or by interactive spatial segmentation of the mass spectrometric datasets.

Leading software

MALDI Tissue typer datasets can be very large and require powerful software tools. SCiLS lab software allows the analysis of very large datasets and entire research studies for statistical analysis. Data for individual biomarkers, ROC-analysis and univariate hypothesis tests can be analyzed. Multivariate component analysis shows the relevant information in a set of meaningful images and spatial segmentation allows to create regions with similar molecular phenotypes. A particularly powerful feature is the supervised tissue typing: It allows to train classifiers for specific tissue states and to classify new samples in search of new biomarkers for pathology. The 3D-option makes it easy to reconstruct 3-dimensional volumes from consecutive sections. With the unprecedented speed of the rapiflex MALDI Tissue typer 3D-imaging becomes more readily accessible. ■



Distribution of different lipids in rat testis at 10µm pixel size



*Lipids in rat testis at 5µm pixel size.
The tissue stays intact and can be histologically stained*

MALDI-MSI

Bruker Daltonics – rapiflex MALDI Tissue typer



Highlights:

- MALDI time-of-flight system for mass spectrometric imaging
- Direct imaging of proteins, peptides and lipids
- New ion source for robust day-to-day operation
- Fast acquisition of up to 50 true square pixel/second
- Laser repetition rate 10 kHz
- Pixel size < 10µm
- Comprehensive software

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

VIRTUAL SLIDE MICROSCOPES

Hologic – ThinPrep Imager/Imager Duo



Dimensions: (h x w x d)	584 x 813 x 635 mm 558 x 635 x 825 mm (Duo)
Weight:	59 kg / 77 kg (Duo)
Power supply:	100 - 240 V, 50-60 Hz, max. 400 W
Sample throughput:	3 min/slide; 1.5 min/slide (Duo)
Sample capacity:	25 slides/cassette 250 slides/full batch

- Highlights:**
- The ThinPrep imaging system provides Dual Review that ensures that every ThinPrep Pap test gets two different reviews: one full review by the ThinPrep imager and another by an experienced cytotechnologist
 - Significant increase in ASCUS+ sensitivity of 6.4% [95% CI: 2.6-10.0]
 - Significant increase in HSIL+ specificity of 0.2% [95% CI: 0.06-0.4]
 - 42% increase in HSIL detection and a 37% increase in LSIL detection, compared to manually reviewed ThinPrep Pap test slides

Olympus – VS120-L100 Virtual Slide Microscopy



Dimensions:	638 x 720 x 587 mm (h x w x d)
Weight:	100 kg
Power consumption:	1030 W

- Highlights:** The VS120 slide scanner is engineered for research and pathology environments. Two racks offer users reliable slide handling, fully automated scanning of up to 100 slides. The integrated barcode scanner reads all common 1D and 2D code formats.

SLIDE PREPARATION

Hologic – ThinPrep 2000 system



Dimensions:	430 x 150 x 150 mm (h x w x d)
Weight:	19 kg
Power supply:	100/120 V, 220/240 V, 47-63 Hz, 200 W
Sample throughput:	25/h

- Highlights:**
- ThinPrep 2000 processor is an automated slide preparation system for use with the ThinPrep Pap test
 - Utilizes mechanical, pneumatic and fluidic principles for cell dispersion, collection and transfer
 - With a series of negative pressure pulses, fluid is drawn through the filter to collect a thin and even layer of diagnostic cellular material
 - The cellular material is transferred to a glass slide and ejected into a cell fixative bath, ready for staining and evaluation

Hologic – ThinPrep 5000 Autoloader



Dimensions: 1450 x 1370 x 710 mm (h x w x d)
Weight: 368 kg
Power supply: 100/130 V, 220/240 V, 47-63 Hz, max. 720 W
Sample throughput: batch of 20 samples processed in 45 min.

- Highlights:**
- Fully automated processing of 160 gyn, general or UroCyte samples, up to 160 can be loaded at once, no minimum
 - Up to 4 racks with 40 vials, 3 cassettes with 100 filters, 3 cassettes with 100 slides
 - Integrated laser engraving sample ID on slides
 - Recharging consumables during run
 - Run unattended, ability to run batch of up to 160 samples unattended, including overnight
 - Robot arm in Autoloader feeds consumables into the carousel in benchtop
 - Urgent samples run at any time by pausing batch processing

OPTICAL MICROSCOPES

Hologic – ThinPrep Review scope/Review Scope Manual Plus



Dimensions: 533 x 304 x 584 mm (Review Scope)
 89 x 140 x 7 mm (Console for Review Scope)
 460 x 559 x 680 mm (Review Scope Manual Plus, Controller, Computer ...)
Weight: 17 kg (Review Scope)
 0,4 kg (Console for Review Scope)
 31 kg (Review Scope Manual Plus, Controller, Computer ...)
Objectives: 10X, 40X (Review Scope), 4X, 10X, 40X + additional objective position (Review Scope Manual Plus)
Power supply: 100 - 240 V, 50/60 Hz, 200 W (Review Scope), < 150 W (Review Scope Manual Plus without Computer)

Olympus – CX23



Dimensions: 384 x 198 x 258 mm (h x w x d)
Weight: Approx. 5.9 kg

Highlights: Comfortable, compact, clever – The Olympus CX23 microscope

The CX23 upright microscope boasts high-quality optics, superior frame stability and outstanding ease-of-use and portability making it the reliable choice of microscope for routine observation in educational, routine or in-the-field environments.

IT

Sectra – Digital Pathology Solution



- Highlights:**
- Sectra offers a complete solution to optimize the pathologist's workflow, including a high-end diagnostic viewer, unified integrations as well as proven archiving and image handling protocols.
- **Digital pathology integration** to scanners, LIS, EMRs, macro cameras, other PACS and digital pathology system
 - **Digital pathology workstation** including image viewer, patient information and reporting interfaces.
 - **Digital pathology archive** and storage as well as mechanisms for information lifecycle management



Take the

Next Step *in* Digital Pathology

Digitizing pathology is not just a transformation of technology, the major change and benefits lies in the change to a more efficient workflow – enabled by the new technology.

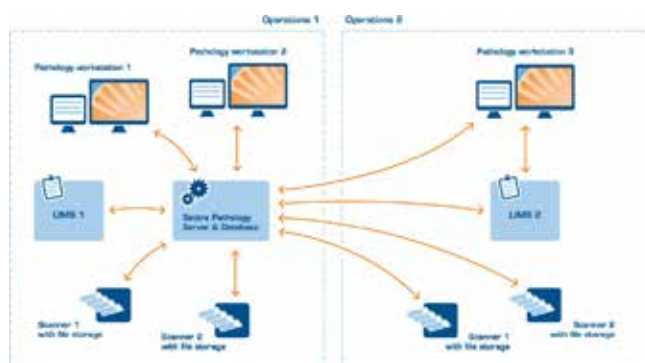
The aim of digitizing is to use the pathologist's time more efficiently by allowing him or her to perform advanced diagnostic work while the computer performs time-consuming tasks that require data processing, such as cell counting or organizing samples. Sectra provides a complete solution developed in close cooperation with leading practitioners to bring pathology into the digital age. With 20 years' experience in the medical IT field – and having been a pioneer in the digitization of radiology – we are ready to support pathology in its journey from analog to digital.

Full case overview and rapid review

Sectra provides a solution with a full case overview including integration with other image systems, enabling access to for example radiology or dermatology data and images in the same workstation. Information Lifecycle Management supports pathologists in efficient use of data storage – providing a type of intelligence not available in an isolated workstation.

The Sectra's high-end review workstation provides pathologists with the right environment to perform their work in a unified

digital system and to reduce their pain-points associated with time consuming and labor intensive manual workflow. Digital review facilitates the interpretation of a section by allowing pathologists to view several images side-by-side – sections with different staining techniques, for example. Current images can also be compared with stored images from the same patient without any need to fetch the physical samples. Furthermore, digital review permits the pathologist to interact with the image through tools such as measuring areas and distances and making annotations, further facilitating diagnostics.



Efficient image sharing

Sectra's digital pathology solutions are designed to allow seamless sharing of digital slides and patient data in multi-hospital environments. Borderless workflows are supported by the ability to set up worklists to cover one or several units in a single, consolidated view. Image display is instant – regardless of where the pathologist is located, including off-site. This means pathologists can access cases throughout the enterprise – at any time and location in the network – thus providing digital images for the members of the tumor conference. ■

Amplification/
Detection
Amplification
Detection
Extraction
For Research
Only



AMPLIFICATION/DETECTION

Beckman Coulter – DxN VERIS Molecular Diagnostics System



Highlights: DxN VERIS enhances laboratory productivity through a simplified flexible LEAN workflow and true single sample random access. It simplifies lab workflow, enhances testing flexibility, and empowers customers to have confidence in results with a routine molecular diagnostics clinical menu. DxN VERIS integrates sample introduction, nucleic acid extraction, reaction setup, real-time PCR amplification and detection, and results interpretation into one system – saving space, time and cost. Fast testing turn-around times with true single sample random access. All consumables/reagents are refrigerated on-board so there is not lengthy set up, providing verified sample-to-result answers in minutes.

Hologic – Panther system



Dimensions: 1750 x 1220 x 815 mm (h x w x d)
Weight: 363 kg
Power supply: 100-230 V, 50-60 Hz, 1400 W (peak)
Assays: HIV-1 Quant Dx Assay, Combo 2 (for CT/NG), CT, GC, Trichomonas Vaginalis, HPV, HPV 16 18/45 genotype assay

Sample throughput: Up to 275 tests results reported per 8 h shift, up to 750 tests results reported in 16 h
Sample capacity: 120 sample tubes in 8 racks with continuous access, racks can be replaced every 15 mins

Highlights:

- Random access enables to load any sample in any order, at any time – no need to batch
- Multiple assays on the same patient sample
- HPV, CT/GC and trichomonas simultaneously on a single platform
- Samples can be loaded and left to run completely unattended with on-board temperature control

AMPLIFICATION

LabTIE – Gel electrophoresis Combs and Trays



Temperature range: 0 - 121 °C
Dimensions: (h x w x d)
 Small tray: 21.7 x 70 x 101 mm
 Medium tray: 27.5 x 147 x 114 mm
No of parallel samples:
 Gel Comb teeth for small tray:
 White 5, Blue 9, Yellow 15
 Gel comb teeth for medium tray:
 Green 14, Red 28

Highlights:

- Trays and Combs are compatible with: Biorad, Biostep, Sigma, Topac, Scie-Plas, Clarit-E series and LabTIE
- Compatible with a standard multichannel pipet (9.0 mm spacing)
- Color coded. Each color resembles a number of teeth.
- Solid moulded. Combs are not glued.
- Special designed teeth that enables the user to remove the comb out of the Agar gel with minimum force
- Stronger Teeth than traditional gel-combs
- Thin teeth variants for better results
- Autoclavable + Boiling agar resistant
- Exchange program for traditional and damaged combs

NIPPON Genetics EUROPE – PCRMax ECO48



Dimensions: 320 x 345 x 310 mm (h x w x d)

Highlights:

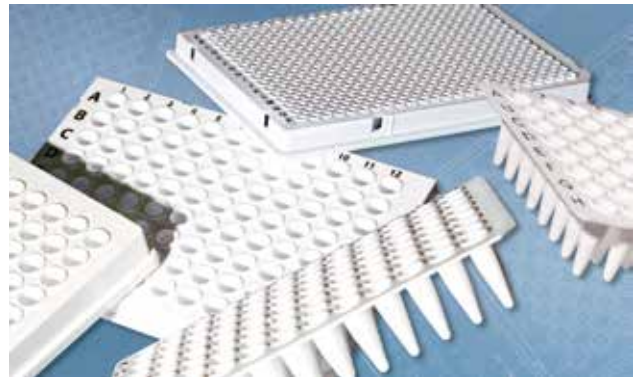
- Fastest PCR Block allows 20-40 minutes per run
- MIQE compliant
- Best PCR block temperature uniformity of ± 0.1 °C allowing HRM-analysis
- Adaptive Light Control inhibits cross-talk effect between wells
- 4 Filters calibrated for all major dyes (SYBR, HEX, VIC, ROX, Cyfi5, etc.)
- Complete control and analysis software package included

Orion Diagnostica Oy – Orion GenRead



Highlights: Orion GenRead, the handy system for pathogen detection brings fast and accurate results within reach of a wide range of laboratories. The CE marked system consists of a small, portable instrument and a C. difficile test, followed by a Salmonella test in 2015. This easy to use solution combines reliability with user friendliness for flexible daily laboratory routines. The Orion GenRead system is based on SIBA, Orion Diagnostica's proprietary isothermal nucleic acid amplification technology.

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

DETECTION

NIPPON Genetics EUROPE – FastGene FAS Digi



Dimensions: 500 x 300 x 260 mm (h x w x d)

Highlights:

- Best signal intensity using next generation of safe LED light (Blue/Green technology)
- Superior Sensitivity for green and red DNA Stains.
- Imaging area of 160 * 200 mm for large gels
- 12 MPixel Image in JPEG and RAW Format
- Attachable to thermal printer
- Compatible with our white LED light table for protein detection

Shimadzu – MultiNA



Highlights:

- Fully automated microchip electrophoresis system for DNA and RNA analysis
- Low running costs due to reusable microchips
- Fluorescence detection for high-sensitive detection
- No need of harmful EtBr for staining
- Easy and reliable size determination and semi-quantification of DNA and RNA
- 4 different DNA kits (from 25 bp to 12,000 bp) and one RNA kit available
- Fast automation with up to 120 samples per schedule

EXTRACTION

LabTIE – Ball Dispenser



Temperature range: 0 - 121 °C
Sample throughput: 96 wells filled / 8 seconds
Assays: DNA Extraction

- Highlights:**
- 75-80x productivity improvement (600 sec → 8 sec)
 - Fast Return of Investment
 - Full range of stainless steel plates for different ball quantities and ball sizes
 - Works in drop mode, no need to invert device 'up-side-down'
 - High quality design, easy to clean and autoclavable
 - Optional Vibration Unit

Dispensing balls/beads into industry standard 96 well plates for grinding tissue samples to enable DNA extraction.

NIPPON Genetics EUROPE – MagCore SUPER



Dimensions: 770 x 760 x 700 mm (h x w x d)
No of parallel samples: 1 to 16 samples

- Highlights:**
- Fully-automated DNA/RNA Extraction of prokaryotic, eukaryotic, viral material, tissue, fluids, FFPE samples, etc.
 - DNA concentration determination and quality control by integrated spectrophotometer (280 & 260 nm)
 - CE-IVD registered
 - Patented Magnetic Beads Technology used in over 60 kits

Promega – Maxwell Gerät



Dimensions: 326 x 438 x 327 mm (w x h x d)
Sample throughput: 16 samples/30 minutes
Weight: 11 kg
No of parallel samples: 16
Handheld/Stationary: very small benchtop instrument

- Highlights:**
- Instrument and reagents for walk away DNA and RNA purification and quantitation
 - next generation model: including touch pad and Quantus Fluorometer
 - Process a variety of sample types for downstream applications in molecular diagnostic and for other clinical applications
 - 1-16 samples purified in only 30min.
 - CE IVD registered
 - One-way cartridges, no cross contamination
 - For tissue, stool, blood, buffy coat, swabs, plasma, serum and other human sample types

FOR RESEARCH ONLY

Eppendorf – Mastercycler nexus X2



Dimensions: 321 x 250 x 412 mm (h x w x 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 – BioSpectrometer fluorescence



Dimensions: 150 x 295 x 400 mm (h x w x 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 – Eppendorf μ Cuvette G1.0

Dimensions: 48 x 12.5 x 12.5 mm (h x w x d)
Height of light beam: 8.5 mm
Volume: $\geq 1.5 \mu\text{L}$ (dsDNA)

Highlights:

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

LabTIE – Seed Dispenser



Temperature range: 0 - 121 °C
Sample throughput: 60 seeds/10 seconds (petri dish)
Assays: Large variability of seed tests:
 Germination, Tox, Quality, Resistance and Coating tests

Highlights:

- 75-80x productivity improvement (600 sec \rightarrow 8 sec)
- Fast Return of Investment
- Full range of stainless steel plates for different ball quantities and ball sizes
- Works in drop mode, no need to invert device 'up-side-down'
- High quality design, easy to clean and autoclavable
- Optional Vibration Unit

Dispensing Seed in different sizes and quantities into Petri dish plates for research purposes.

SARSTEDT – Low DNA Binding Micro Tubes



Highlights: As the trend towards decreasing sample volumes continues, it is increasingly important to minimize potential interaction between the analyte and tube. Our low protein and new low DNA binding micro tubes are specifically designed to meet the requirements in protein and DNA analytics while maximizing recovery rates.



The highly evolved senses of a hunter.



With true sample-to-result automation, adaptable workflow options and assays using proven TMA technology, the Panther[®] system is built for maximum efficiency. See what the Panther can do for you in your lab.

Aptima Combo 2[®]
Assay

Aptima[®] *Trichomonas vaginalis*
Assay

Aptima[®] HPV
Assay

Aptima[®] HPV Genotype 16 18/45
Assay

Aptima[®] HIV-1
Quant Dx Assay

Diagnostic Solutions | Hologic.com | euinfo@hologic.com

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PANTHER[®]

Microbiology

Mass Spectrometry
Identification/
Susceptibility



MASS SPECTROMETRY

Bruker Daltonics – Maldi Biotyper



- Highlights:**
- Leading microbial ID system
 - Fast, accurate and cost effective
 - Broad application range
 - Available as an IVD solution

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: 7 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



- Highlights:**
- iDplus Assurance is a Linear MALDI-TOF for simple microbial identification using SARAMIS and basic analytical life sciences using launchpad. Combining speed of analysis, positive and negative ionization and wide mass range, the iDplus Assurance provides excellent quality and reliability in a general analytical setting.

Shimadzu – iDplus Confidence



- Highlights:**
- iDplus Confidence is a Reflectron MALDI-TOF. The patented curve-field reflectron design in the iDplus Confidence extends analysis possibilities beyond the simple identification. Expanding on microbial ID, reflectron mode ensures high resolution and high mass accuracy required for molecular profiling and structural analysis.

Shimadzu – iDplus Performance



Highlights: iDplus Performance is a MALDI-TOF/TOF. It delivers flexibility and ease of use in a robust and reliable research-grade instrument. Advanced MS/MS performance utilizing the highest collision energy to fragment compounds for accurate structural analysis. The most versatile iDplus platform from simple identification to in-depth proteomics, lipidomics and sequencing.

IDENTIFICATION/SUSCEPTIBILITY

Amplex BioSystems – eazyplex line



Dimensions: 300 x 200 x 210 mm (h x w x d)
Weight: 2 kg / 4.4 lb
No of parallel samples: 2

Highlights: Molecular Diagnostics made easy!

- Detection of MRSA, CRO and VRE in 15-30 min.
- Isothermal Amplification
- Lyophilized tests, shipping and storage at RT
- 2 min sample pretreatment
- No DNA / RNA extraction necessary
- Portable device, mains or battery-powered
- Real-Time-Detection
- Use independently via touchscreen or link to a computer via USB cable

Amplex BioSystems – eazyplex SuperBug CRE



Assays: lyophilized ready to use reagents, shipment and storage at RT, different sample material evaluated

Highlights: Carbapenemases! Clear confirmation in 15 min even from blood culture!

Precise evidence of:

- KPC,
- NDM,
- OXA-48 and OXA-181
- VIM as well as
- CTX-M-1 and
- CTX-M-9 group

Beckman Coulter – MicroScan WalkAway plus System



Highlights: The WalkAway plus System includes LabPro Information Management software designed to simplify workflow and minimize technologist interaction while accommodating differing regional and institutional environments through extensive customization features. The WalkAway plus System delivers gold-standard accuracy for microorganism identification and susceptibility testing. It also enables simultaneous processing of conventional, rapid and specialty panels on a single, automated platform. Additionally, the system delivers accurate emerging resistance detection for the toughest pathogens, including VISA, VRSA, and MRSA. The customizable LabPro AlertEX software automates detection of atypical results for quick reporting and directs staff to the most appropriate action based on customized institutional procedures. It is ideal for mid- to high-capacity laboratories.

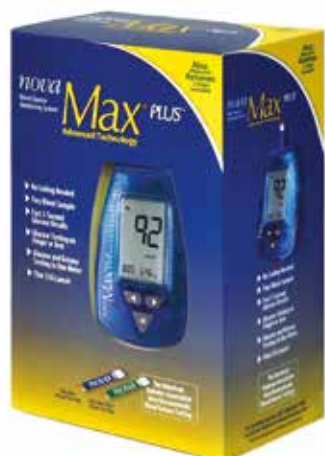
POCT

Blood Glucose
Clinical Chemistry
Urinalysis
Other



BLOOD GLUCOSE

Nova Biomedical – Nova Max Plus Blood Glucose Monitor Kit



Dimensions: 91 x 58 x 23 mm (h x w x d)
Weight: 0,075 kg
Assays: Glucose and β -Hydroxybutyrate

- Highlights:**
- Nova Max Plus incorporates advanced technology for accurate and precise self-monitoring of blood glucose and ketones by people with diabetes.
 - Nova Max Plus has the most comprehensive features for fast, easy, and error-free blood glucose and ketone monitoring.

EKF Diagnostics – Hemo Control



Dimensions: 160 x 160 x 68 mm (h x w x d)
Weight: 0.7 kg
Assays: Hemoglobin and Hematocrit

- Highlights:**
- Simple point of care analyser to test the level of hemoglobin and hamtocrit from just one drop of blood. Hemo Control is easy to use and delivers results with a CV of <2% after 25–60 seconds.

CLINICAL CHEMISTRY

Nova Biomedical – StatStrip Lactate POC Analyzer



Dimensions: 152 x 83 x 46 mm (h x w x d)
Weight: 0,266 kg
Assays: Lactate

- Highlights:**
- StatStrip Lactate is a handheld, true point-of-care testing system that brings lactate testing directly to the patient's bedside.
 - StatStrip Lactate point-of-care testing provides the fastest turnaround time possible (13 seconds), on the smallest whole blood sample (0.6 microliters), and can be easily operated by medical and nursing staff.
 - StatStrip Lactate is a very low cost device that makes lactate testing practical and affordable in any size ED, ICU, or Medical Unit.

Nova Biomedical – StatSensor Creatinine POC Monitoring System



Dimensions: 152 x 83 x 46 mm (h x w x d)
Weight: 0,266 kg
Assays: Creatinine

- Highlights:**
- StatSensor Creatinine is a handheld analyzer and miniaturized, disposable biosensor for whole blood creatinine testing.
 - StatSensor advanced technology enables simple rapid and accurate assessment of renal function by finger stick capillary blood sampling at the point of care.
 - Minimize Risk of Contrast Media Induced Nephropathy (CMIN) - StatSensor provides rapid, point of care renal assessment prior to contrast media imaging
 - Improve Productivity and Workflow - StatSensor point of care testing can prevent costly procedure room openings and workflow interruptions when patients arrive for imaging appointments without a current creatinine/eGFR workup.
 - Improve Patient Satisfaction - StatSensor point of care testing can prevent patient dissatisfaction when renal function must be determined before an image procedure can be performed.

Orion Diagnostica Oy – QuikRead go



Dimensions: 270 x 155 x 145 mm (h x w x d)
Weight: 1.7 kg
Assays: CRP, CRP+Hb, hsCRP+Hb, Strep A, iFOBT, in 2015: wrCRP, wrCRP+Hb

Highlights: QuikRead go brings ease of use, reliability and speed to healthcare professionals' everyday work in point-of-care. The flexible CE marked system supports treatment decisions and increases patient comfort and satisfaction. The test selection includes CRP, CRP+Hb, hsCRP+Hb, iFOBT and Strep A tests. This year two new products, wrCRP and wrCRP+Hb, will be launched in the product portfolio. Thousands of healthcare professionals worldwide use QuikRead go system to ease their everyday processes.

URINALYSIS

Analyticon Biotechnologies AG – Urilyzer 100



Dimensions: 77 x 190 x 260 mm (h x w x d)
Weight: 1.5 kg
Assays: Glucose, Blood, Ketones, Nitrite, Protein, Leucocytes, Bilirubin, Urobilinogen, pH-Value, Specific Gravity, Ascorbic Acid.

Highlights:

- Up to 120 test/hour in fast mode
- Memory of 3000 patient test and 1000 QC tests
- Quality control management with reminder function
- Operator management with password protection
- Convenient connectivity via serial connection or ethernet
- Touch screen, autostart function and start-up wizard

OTHER

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

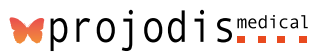


Highlights:

- 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
LIS, Middleware, POCT
Middleware
Other



LIS

Infomed CS – sLis Enterprise Suite



sLis Enterprise Suite for Clinical & Radiology Laboratories is a process-optimized framework that supports health professionals in the prompt delivery of their services, helps them to set the laboratory under control and minimize the cost, with efficiency and safety.

It listens closely to today's Clinical and Radiology Lab departments growing demands and offers specific process driven modules and a strong system management tool that enables any health organization to easily adapt the Laboratory workflow.

The client has the ability to compose his coherent solution, based on sLis Platform, combined with the appropriate sLis Modules, deployed and configured properly via sLis Toolkit, sharing the same database and integrated with third party applications.

The system provides among others:

- Enterprise-wide information management
- Seamless multi-site management & multilingual support
- Full Front & Back Office support
- High level security & availability
- Quality assurance support

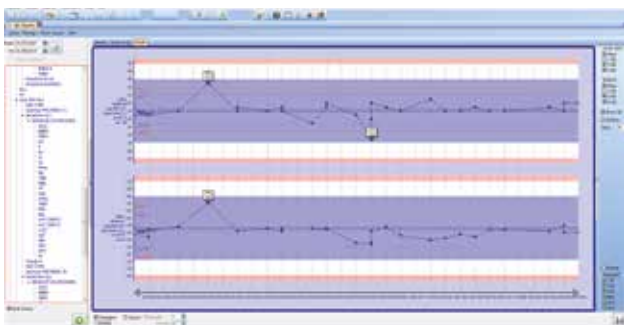
Infomed CS – sLis Enterprise L.I.S.



sLis Enterprise L.I.S. is a complete solution, designed and developed by Infomed software engineers team, expertized and experienced for more than 20 years in health informatics market, in order to:

- Improve the procedures and the everyday routine operations of clinical Lab
- Be adapted in any health unit, from a small private laboratory to a complex, multisite, multilingual clinical laboratory installation
- Fully integrate with all the known HIS/ERP/CIS of the market, adapting with reliability the HL7 protocol
- Provide process efficiency via streamlined, easily configurable data edit & review procedures
- Enable enhanced reporting via the embedded report generator & the ad-hoc query builder tool
- Incorporate the automate distribution of results via native e-mail & fax server
- Allow remote access via sLis Enterprise web module, encouraging interactions with referring doctors and senders from any location
- Support the accreditation process, establishing organization SOP's

Infomed CS – sLis Enterprise QC



sLis Enterprise Quality Control Module offers to the laboratories extended capabilities in order to ensure result accuracy and manage quality assessment.

Using the state of the art technology of sLis Enterprise Suite, conforms with the international quality assurance standards, supports internationally recognized QC methods such as Levey-Jennings control charts and Westgard Rules and offers many unique features.

With its incredibly functional interface the Quality Control Module allows instant accessibility to QC results and incidents with graphical and textual representation.

Product Key Benefits:

- Full management of the controls and test procedures
- Instrument integration for data collection automation
- Laboratory fully logs controls, results, and incidents of analyzers
- Various export formats
- Conforms to national and international regulatory reviews
- Organization-wide standardization of processes

Medat – Laboratory Information Systems



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.



i-SOLUTIONS Health's 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 customise the product to function exactly as their organisations require, while individual users can modify specific functions to suit the processes within a particular laboratory environment. LabCentre has a modular construction so organisations 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 organisations 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. ■

LIS, MIDDLEWARE, POCT

i-SOLUTIONS Health – LabCentre

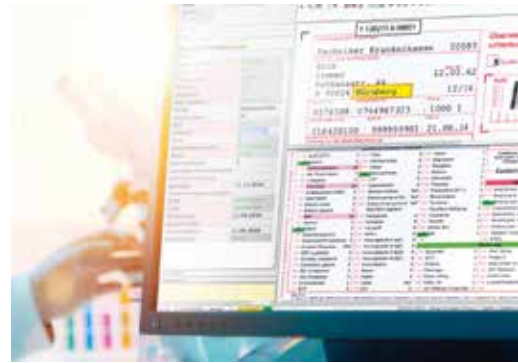


Highlights: LabCentre is a market-leading laboratory and pathology information management system. It helps doctors, scientists, technologists and management staff to track samples and testing processes, communicate results to other health professionals, and monitor costs and reporting.

LabCentre supports the following disciplines:

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

Mediaform Informationssysteme – Software Solutions



Highlights: Order data management for the laboratory and hospital. With our LabFlow Management software solutions, our tried and tested ScanTools form recognition software and the QM-Suite quality management system we will help you to read, transmit and analyse data without errors.

Quality Management:

- SOP management in conformity with standards
- Interactive training management
- Central, web-based communication
- Easy installation without additional software

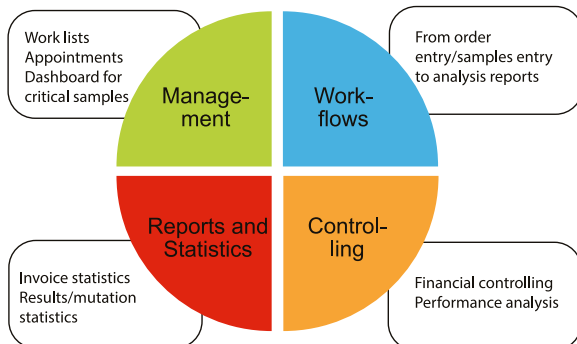
Order data and sample management:

- Automated recording of orders and samples
- Form recording and document creation
- Integration of electronic order data
- Analysis and monitoring of order data

www.mediaform.de

Projodis Medical – GenLAB7

Management Software for Molecular Genetics Labs



Highlights: GenLAB7 supports the administration, management and controlling of all your lab workflows. Our software can easily be integrated in your existing IT infrastructure. We provide a high reliability regarding all quality management processes.

- Report automation
- Audit trail
- Interface to robots and external devices
- Data transfer to hospital databases
- Flexible user interface with individual layouts

www.projodis-medical.com

Servolab Medizin Software – Servolab 4



- Highlights:**
- Language independent
Supported languages: German, English, Spanish, Catalan, Portuguese, Brazilian, Turkish
 - Operating big european laboratories
 - Complete solution from order entry to billing
 - Unit graphical interface for all modules of standard lab, microbiology, virology, blood banking, nuclear medicine
 - Support of standard connections ASTM, HL7, XML
 - Datawarehouse and datamining
 - Flexible team using Scrum for development
 - ISO certified since 2004

Document Management

The hidden champion

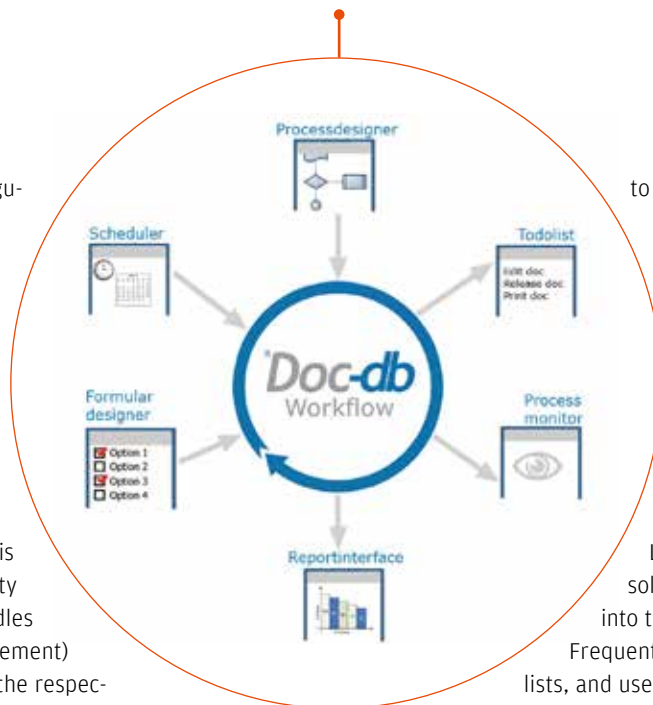
Doc-db is a full-fledged document management system which has been internationally available since 2006.

The integrated, freely configurable workflow server can be adapted to organization-specific document management processes. The system controls, monitors, and documents the creation of documents, "read" confirmations, follow-ups, automated dispatch of emails, chat function, print-outs and much more. Continued display of documents is ensured beyond document validity dates. The Doc-db database handles the complete QM (quality management) documentation automatically in the respective file format and enables easy migrating of your existing documents.

Close collaboration of Doc-db experts with lab physicians and quality management officers continuously leads to innovative solutions that support the routine lab management. A LIS interface allows the exchange of data such as the definition of sample materials, instructions, and norm values online as well as in SOPs and service catalogues.

The DAkkS (German accreditation) list and the document index are created automatically including updates for compliance with RILIBÄK (guidelines of the German Medical Association) and ISO 15189 and 17025.

Today not only labs but entire hospitals work with Doc-db since the solution offers dedicated modules such as the structured quality report in accordance with §137 SGB V (German Social Code) or the contract management module which can be used



to store and retrieve contracts in a Doc-db database.

Doc-db covers more than just the lab. The system workflows describe customer-specific processes. The software creates tailored solutions such as complaint management, risk management, and shift scheduling. The service-based architecture allows the exchange of data with LIS and HIS. Thus Doc-db enables solutions which integrate seamlessly into the customers' IT landscape.

Frequent Doc-db user meetings, mailing lists, and user working groups provide a platform for continued exchange of ideas and experiences.

Based on user suggestions and feedback, software engineers develop useful features. Users and developers alike value the dialogue as they profit from shared insights. ■

Further benefits of
Doc-db

- » Choice of languages
- » Autonomous system
- » Efficiency
- » Easy installation



Stefan Szepanek works as Head of Development for Zenon GmbH, Bochum, Germany.

Information Technology

MIDDLEWARE

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.

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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

OTHER

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.

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 external document connector (XDC)



Highlights:

- Doc-db XDC allows a connection to an external document repository, e.g. reagent data sheets from reagent suppliers.
- Available documents are identified, downloaded and added to the Doc-db local document repository.
- Downloaded documents can be linked to already existing local documents (e.g. SOP) and are controlled according to ISO 15189 and ISO 17025.
- Connectivity interfaces are available for numerous reagent suppliers and diagnostic companies.

Zenon – Doc-db QM contract management



Highlights:

- The Doc-db contract management module can be used to store and retrieve contracts in a Doc-db Database.
- Resubmissions of contracts can be configured in their workflows.
- Editing of contracts is multiuser enabled.
- Contracts in Doc-db are full-text indexed and therefore searchable. User defined contract attributes can be used to assign reportable metadata to the contracts (also searchable).
- The print-manager supports the controlled and logged printing of contracts.
- Standard contract report of a single contract and contract overview report delivered.
- Zenon offers the programming of individual contract reports depending on your needs.

Non-Diagnostic

eppendorf

Hettich
LAB TECHNOLOGY

 **SARSTEDT**

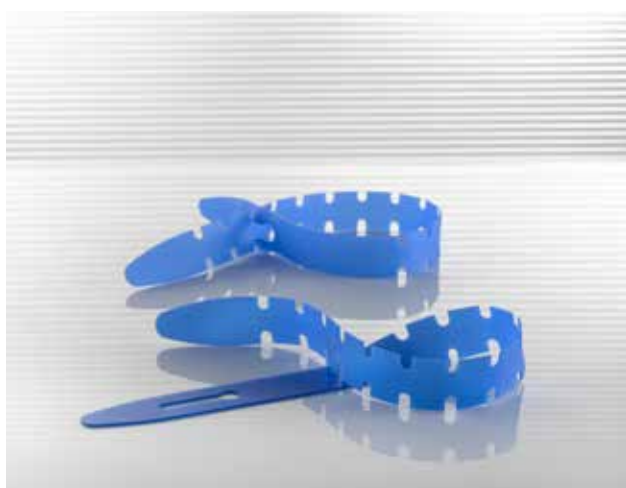
 **DÜRR
TECHNIK**

Blood Collection
Compressors
Centrifuges
Incubators
Liquid Handling
Pipette Tips
Other


greiner bio-one

BLOOD COLLECTION

Greiner Bio-One – VACUETTE Super-T Disposable Tourniquet



Highlights: VACUETTE - For improved safety and hygiene in blood collection

- Single-Use
- Easy application and quick release
- Protects from cross-contamination
- Latex-free and non-DEHP
- Practical reclosable box

Greiner Bio-One – VACUETTE Safety Products



Highlights: VACUETTE - For improved safety and hygiene in blood collection

- Wide product range for different vein conditions
- Reliable protection for user and patient
- Innovative safety technology combined with unique handling comfort
- Practical combination products with pre-attached needle save time
- Conform with the EU Directive 2010/32

SARSTEDT – Salivette - Saliva Collection



Highlights:

- Simple, hygienic collection of saliva for diagnosis and therapy monitoring for various different parameters.
- For saliva collection, the Salivettefi is available with different swab options: a plain cotton swab, a cotton swab with citric acid preparation to stimulate salivation, and a synthetic swab specially designed for cortisol determination.

SARSTEDT – Safety-Lancets



Highlights:

- Our sterile Safety-Lancets enable the safe, gentle collection of capillary blood.
- Since the needle point or blade is safely concealed before and after use, the risk of needle injuries and cross contamination is eliminated when the lancets are used according to the instructions.
- Our product range covers the most varied of skin types and the entire range of blood volumes to be extracted.
- The lancets cannot technically be reused once they have been triggered, and can be safely disposed of in our disposal boxes.

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.

SARSTEDT – Multi-Safe Disposal boxes



- Highlights:**
- Our wide, tailor-made range of Multi-Safe disposal boxes corresponds to the current European directive on the prevention of needle stick injuries.
 - With our extensive product range of Multi-Safe boxes we are able to meet any disposal need in the field of medicine and laboratory.
 - With the various options, from the convenient 200 ml format to the autoclavable 60 l disposal box for clinical waste, we offer an optimal solution for every need.

COMPRESSORS

Dürr Technik – SICOLAB - compressor station



- Dimensions:** 510 x 580 x 653 mm (h x w x d)
Weight: from 66 kg
Noise level: from 48 db(A)
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
 - Compact – fits under the laboratory bench
 - Mobile – with wheels and handling grips
 - Wide variety of versions
 - Membrane dryer and filters as options

CENTRIFUGES

Hettich Lab Technology – ROTINA 420



Max. number of tubes: 104 x blood collection (13 x 75/100 mm)/
52 x 15 ml conical tubes

Rotational frequency: max. 15.000/min

Relative centrifugal force: max. 24.400 x g

Dimensions: 423 x 506 x 650 mm (h x w x d)

Weight: 75 kg

Highlights:

- Strong performance - wide range of accessories
- Rotors and adapters for all common applications
- Comfortable control panel, 98 program storage spaces
- Automatic lid locking
- Aerosoltight bucket lids with convenient single hand lid lock

Hettich Lab Technology – ROTOFIX 32 A



Max. number of tubes: 12 cyto chambers, 28/20 blood collection tubes (13 x 75/100 mm)

Rotational frequency: 6,000/min

Relative centrifugal force: max. 4,226 x g

Dimensions: 257 x 366 x 430 mm (h x w x d)

Weight: 23 kg

Highlights:

- Benchtop centrifuge for clinical chemistry and cytology
- Large selection of cyto accessories for spin preparations
- Cyto packages for urine and CSF cytology: Centrifuge, rotor (optionally open or with leaktight lid), clips and cyto-chambers

INCUBATORS

Eppendorf – Thermomixer F0.5/F2.0



Dimensions: 163 x 206 x 304 mm/
(h x w x d) 170 x 206 x 304 mm (F2.0)

Weight: 6.2 / 6.3 (F2.0) kg

Maximum speed: 2,000/1,500 (F2.0) / min

Temperature range: 4 °C above RT to 100 °C

Highlights:

- Temperature accuracy: Max. ± 0.5 °C at 20-45 °C
- Heating and mixing in 0.5 mL (F0.5) or 2.0 mL reaction vessels (F2.0)
- Efficient mixing up to 1,500 rpm (F2.0) or 2,000 rpm (F0.5)
- Excellent mixing performance due to unique 2D-Mix-Control technology

Hettich Lab Technology – HettCube 600 R



Temperature range: 0 °C to +65 °C

Internal volume: 520 l

Power consumption: 49 W/h at +37 °C

Dimensions: 1990 x 535 x 690 mm (h x w x d)

Weight: 163 kg

Highlights:

- Sustainable - economic - high quality
- Best growth conditions
- Temperature: Constant and homogeneous distribution
- Eco-friendly: Low Power consumption - small carbon footprint
- More validated usable volume, footprint reduced by up to 50 %

LIQUID HANDLING

Eppendorf – Easypet 3



Type: Pipette Controller

- Highlights:**
- Intuitive and convenient speed adjustment made simple with the tips of your fingers
 - Lightweight, well-balanced and ergonomic design that allows for fatigue-free pipetting
 - Vibrant backlit LEDs provide optical feedback of the remaining battery life
 - Lithium polymer rechargeable battery offers long cordless runtime
 - Smooth setting of pump speed
 - Operation while recharging is possible
 - Autoclavable pipette adapter for sterile applications
 - Quick release of aspirating cone for easy exchange of membrane filters

Eppendorf – epMotion 96



Dimensions: 229 x 457 x 533 mm (h x w x d)

Weight: 19 kg

- Highlights:**
- 0.5 to 300 µL volume range with one system
 - 96 parallel channels for semi-automated electronic pipetting
 - Intuitive software and convenient touch control
 - Excellent pipetting precision <3% and accuracy <2% (at 1 µL)

Eppendorf – epMotion 5070/5075



Dimensions: 630 x 650 x 480 mm/
(h x w x d) 670 x 1070 x 610 mm (5075)

Weight: 45 kg (without accessories)/85 kg (5075)

Power consumption: 150 / 700 (5075) W

Deck positions: 4/15 (5075) SBS/ANSI

- Highlights:**
- Maximum pipetting accuracy from 1 to 1,000 µL
 - Optical sensor for verifying liquids, labware, tips
 - Compatible with tubes (0.2 ml to 50 ml) and microplates with up to 384 wells
 - Three thermal module options for heating or cooling of samples or reagents (5075)

Eppendorf – Multipipette M4



Type: Dispenser

- Highlights:**
- Repetitive dispensing modes allowing the user to fill the tip once and dispense up to 100 times without a refill
 - Automatic combitip recognition eliminates time-consuming volume calculations
 - Wide dispensing range: 1 µL to 10 µL
 - Integrated step counter: dispensing procedures can be continued error-free after an interruption or distraction
 - Central combitip ejector: fully emptied Combitip can be easily ejected with one hand
 - Perfect for viscous or foaming solutions and liquids with high vapour pressure through direct displacement principle
 - Safe handling of toxic, radioactive or infectious material

Eppendorf – Reference 2



Type: Pipette

- Highlights:**
- One-button operation offers fast handling with reduced operating effort and active aerosol reduction. To avoid accidental tip ejection a clear haptic feedback is provided.
 - Spring loaded tip cone improves user-to-user reproducibility and improved ergonomics by lowering tip attachment force
 - High flexibility incl. a spring-loaded tip cone which can be switched on/off optionally
 - Secondary adjustment supports easy adjustment for most accurate pipetting of different liquids without the need for a full calibration.
 - External edges made from stainless steel equip the pipette with outstanding robustness
 - Embedded RFID chip with all data regarding the pipette offers a simple identification and documentation with Eppendorf TrackIT

PIPETTE TIPS

SARSTEDT – Low Retention Pipette Tips



- Highlights:**
- Minimising sample loss
 - Optimised surface for enhanced dispensing behavior
 - Improved sample recovery
 - Minimal sample loss of highly viscous liquids or samples containing detergents
 - Cost savings in valuable reagents

OTHER

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.

SARSTEDT – Sediplus Sedimentation System



- Highlights:**
- Venous and capillary blood collection systems for blood sedimentation with matching accessories and devices for automatic detection are available.
 - The automatic blood sedimentation system Sediplus S 200 with 10 measurement positions, and the Sediplus S 2000 with 40 positions (can optionally be extended to 160 positions) for a high sample throughput, optimise ESR measurement.
 - The S-Sedivette venous blood collection system enables hygienic, easy handling in an enclosed system. The Microvette CB 200 ESR blood collection system is designed for 200 µl of blood only and ensures minimal patient discomfort when collecting blood. Both systems are proven to perform well in comparison with the Westergren method.

Companies / Suppliers

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	Automation	Sample Processing	Chem./Immunochem.	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	IT	Non-Diagnostic
Amplex BioSystems GmbH								53			
Analyticon Biotechnologies AG									56		
ASP Lab Automation AG		6									
Beckman Coulter, Inc.	8	7	11 13 14 24		29 32		46	53		62 63	
Bruker Daltonik GmbH				18		42		52			
Cecil Instruments Limited.			11								
DIAsource ImmunoAssays SA			14 15								
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JADAK Europe								55 56			
LabTIE B.V.							46 48 49				

Companies / Suppliers

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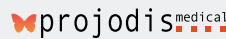
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	Automation	Sample Processing	Chem./Immunochem.	Mass Spectrometry	Hematology	Pathology	DNA	Microbiology	POCT	IT	Non-Diagnostic
Medat Computersysteme GmbH										58	
Mediaform Informationssysteme GmbH										60	
Shenzhen Mindray Bio Medical Electronics Co., Ltd.	8		11 16		26						
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Notes

» STREAMLINE MULTI-DISCIPLINARY TEAM MEETINGS USING A JOINT RADIOLOGY AND PATHOLOGY PLATFORM

Read our article discussing how a common IT platform for radiology and pathology images and reports not only increases efficiency, but also improves information sharing, enabling a team approach to the care process and reducing the risk of errors. sectra.com/mdt-pathology



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