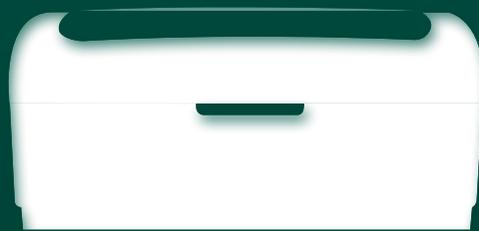


**RAN**DOX

## RX MONACO

A fully automated clinical chemistry analyser



A PHOTOMETRIC THROUGHPUT OF 170 TESTS PER HOUR

» A CONVENIENT SOLUTION FOR LOW TO MID  
VOLUME CLINICAL CHEMISTRY TESTING



W O U J S C O  
RX

A vertical bar on the left side of the page, composed of several segments of varying shades of gray and black, extending from the top to the bottom.

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# » BENEFITS

The RX monaco is a fully automated, discrete, random access clinical chemistry analyser capable of performing **routine & specialised testing** and emergency **STAT sampling**. At optimal configuration, the RX monaco performs **170 photometric tests per hour** providing cost effective, high quality testing for small to medium sized laboratories. Customers can choose between a benchtop system or add a stand to suit their unique circumstances. The RX monaco combines robust hardware and intuitive software with the **world leading RX series test menu for unrivalled performance**.



## TEST MENU & CONSOLIDATION

Expand your testing capabilities on one efficient platform

Extensive dedicated test menu, including; **routine chemistries, lipids, antioxidants, cardiac and diabetes testing** allows laboratories to expand their testing capabilities, **reducing additional costs** of sending samples to be tested externally.

A large number of chemistry tests can be carried out on one platform providing **consolidation opportunities and real cost savings**.



## ACCURATE RESULTS

Achieve accurate patient results first time, every time

Single reagent and sample pipette with **digital liquid level detection** and **collision protection**.

Serum **indices** function detects lipaemic, icteric and haemolytic samples, **ensuring accuracy of results** and reducing the need for expensive repeats.

High quality results **save operator time** avoiding unnecessary additional costs of repeat testing reducing the possibility of patient misdiagnosis.



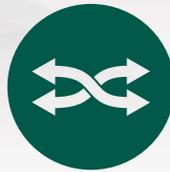
## UNRIVALLED PERFORMANCE

Reliability ensures no interruption to workflow

**On-board cuvette checking** function ensuring only clean and viable reaction vessels are used.

Built in **inventory management** system automatically calculates remaining reagent volume and the number of tests available.

Superior performance means **minimal downtime** and swift **reporting of results**.



## QUALITY CONTROL

Developed to improve confidence in your results

Generation of **Levey-Jennings charts, calibration curves** and **QC statistics** for reliable results. Users can view QC history.

Auto QC interval enables **automatic QC sampling** to ensure **reliable results**.

Unrivalled QC capabilities puts **patient safety** at the centre of your laboratory.



## FLEXIBILITY & VERSATILITY

Increased functionality maximises testing capabilities

**12 wavelengths** generated via diffraction grating (340-800nm) giving the RX monaco a wide range of testing capabilities ensuring a **multitude of chemistries are possible on one system**.

**Rapid STAT** testing is available via the emergency test functionality within the software.

**Barcode readers** for both sample and reagent identification. Windows® based software for **ease of use**.



## COST SAVINGS

Smart technology designed to avoid additional costs

Minimal maintenance required, just **2 preventative maintenance** services per year means **less down time**

Extensive test menu allows **consolidation** of testing, the ability to run specific proteins removes the need for a separate nephelometry system

**Economic** platform with low water consumption of only **5.5 litres per hour**.

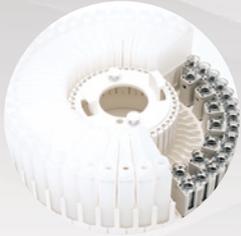


RANDOX

rx  
monaco

W O U S C O  
rx

# » SYSTEM OVERVIEW



## REAGENT & SAMPLE CAROUSEL



A cooled carousel containing 66 user-definable positions are available for samples and 20ml and 70ml reagent bottles - dedicated reagents are available from Randox. Integrated barcode identification ensures smooth recognition of patient samples and reagents. The S/RPT pipette has liquid level detection and collision detection and is rinsed inside and out to prevent carryover.



## CUVETTES



120 semi-permanent reaction cuvettes lasting for 3-6 months. The reaction temperature is controlled by a water bath.



## WASH STATION



A thorough 12 stage washing process with acid, alkali and pure water wash steps helps minimise contamination. The on-board cuvette checking function ensures only clean and viable reaction vessels are used. The combined reagent and sample pipette is rinsed inside and out with warm water to ensure effective cleansing.



## MIXING SYSTEM



The mixing system comprises of a variable 5-speed Teflon coated stirrer to provide optimum mixing of sample, R1 and R2 to ensure best performance. The stirrer is automatically rinsed with purified water to reduce carryover.

# » THE RX SERIES TEST MENU

## CLINICAL

### AUTOIMMUNE:

Complement Component 3  
Complement Component 4  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
IgA  
IgE  
IgG  
IgM  
Rheumatoid Factor

### BASIC METABOLIC PROFILE:

Calcium  
CO<sub>2</sub> Total  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Glucose  
Potassium  
Sodium  
Urea

### BONE PROFILE:

Alkaline Phosphatase  
Calcium  
Phosphorus  
Total Protein

### CARDIAC:

Adiponectin  
Cholesterol  
CK-MB  
CK-NAC  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Homocysteine  
Lipoprotein (a)  
sLDL  
Triglycerides

### COMPREHENSIVE

#### METABOLIC PROFILE:

Albumin  
Alkaline Phosphatase  
ALT

### AST (GOT)

Direct Bilirubin  
Calcium  
CO<sub>2</sub> Total  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Glucose  
Potassium  
Sodium  
Total Bilirubin  
Total Protein  
Urea

### DIABETES:

Adiponectin  
Cholesterol  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Glucose  
HbA1c/Hb  
Microalbumin  
Total Protein  
Triglycerides

### ELECTROLYTES:

Calcium  
CO<sub>2</sub> Total  
Magnesium  
Potassium (Non-Direct)  
Sodium (Non-Direct)

### HAEMOLYTIC ANAEMIA:

LDH

### HEPATIC FUNCTION:

Albumin  
Alkaline Phosphatase  
ALT  
AST (GOT)

Bile Acids

Cholinesterase  
Complement Component 3  
Complement Component 4  
Direct Bilirubin

### Gamma GT

IgA  
IgE  
IgG  
IgM  
Iron  
LDH  
Total Bilirubin  
Total Protein

### INFLAMMATION AND INFECTION:

ASO  
CRP  
Rheumatoid Factor

### LIPIDS:

Apolipoprotein A-I  
Apolipoprotein All  
Apolipoprotein B  
Apolipoprotein E  
Cholesterol  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Lipoprotein (a)  
sLDL  
Triglycerides

### NEONATAL SCREENING:

CRP  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity

### NEUROLOGICAL DISORDERS (CSF):

IgA  
IgE  
IgG  
IgM

### NUTRITIONAL STATUS:

Albumin  
Ferritin  
Iron

Lipase  
Magnesium  
Potassium  
TIBC  
Transferrin

### PANCREATIC FUNCTION:

Amylase  
Glucose  
LDH  
Lipase

### RENAL FUNCTION:

Albumin  
Ammonia  
Beta-2 Microglobulin  
Calcium  
Chloride  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Glucose  
HbA1c/Hb  
IgG  
LDH  
Magnesium  
Microalbumin  
Potassium  
Sodium  
Phosphorus (Inorganic)  
Urea  
Uric Acid



## VETERINARY

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Albumin  
Alkaline phosphatase  
ALT (GPT)  
Amylase  
AST (GOT)  
Bilirubin  
Calcium  
Cholesterol  
Cholinesterase (Butyryl)

CK-NAC  
CO<sub>2</sub> Total  
Creatinine  
Gamma-GT  
Glucose  
HDL  
Iron  
LDL  
Lipase

Magnesium  
Phosphorus (Inorganic)  
Potassium  
Sodium  
Total Protein  
Triglycerides  
Urea  
Uric Acid



## PROTEINS

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### SPECIFIC PROTEINS:

Apolipoprotein A-I  
Apolipoprotein AII  
Apolipoprotein B  
Apolipoprotein E  
ASO  
Beta-2 Microglobulin

Complement Component 3  
Complement Component 4  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
Ferritin  
HbA1c/Hb  
IgA

IgE  
IgG  
IgM  
Lipoprotein (a)  
Microalbumin  
Rheumatoid Factor  
Transferrin



## RESEARCH

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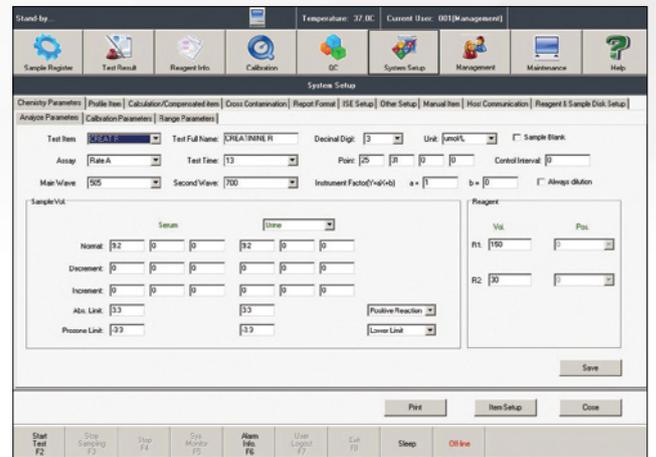
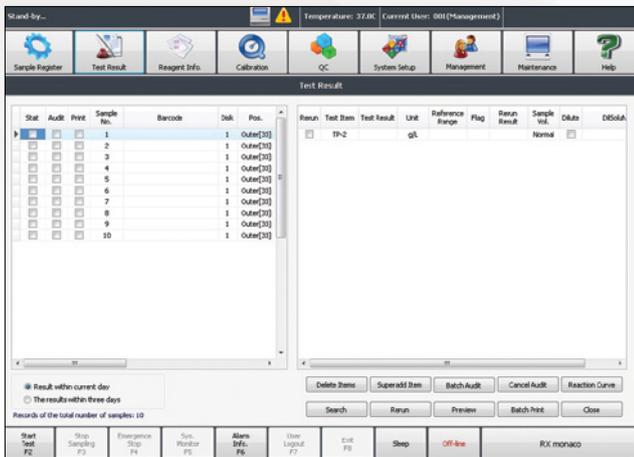
### ANTIOXIDANTS:

Albumin  
Bilirubin  
Ferritin

TIBC  
Transferrin  
Uric Acid

# » SOFTWARE

The RX monaco is provided with familiar, Windows® based software and easily recognisable icons making it appealing and easy-to-use for all staff involved in its operation. Straightforward operation of the software results in minimal training requirements and enhanced productivity. The superior functionality of the quality control software generates Levey-Jennings charts and QC statistics for reliable patient results. LIMS (Laboratory Information Management System) connectivity is easily achievable via ASTM standard. Secure remote diagnostics is available to allow immediate support from expert technical and applications staff, anytime, anywhere.



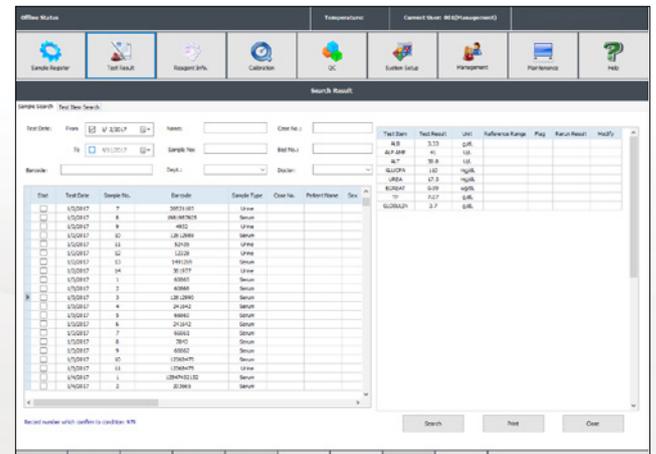
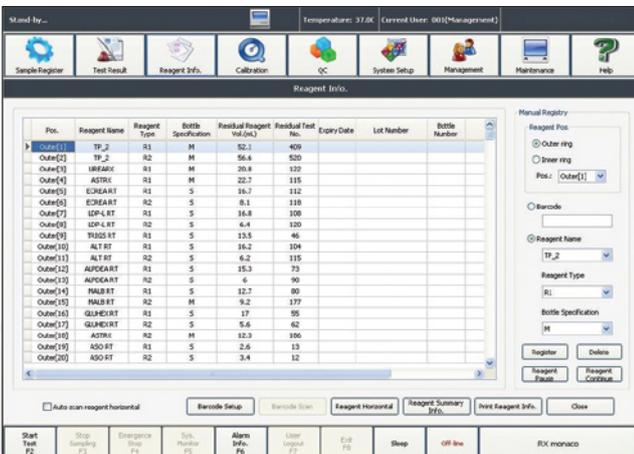
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## REPORTS

The operator can easily search for previous reports and view real time results status, including time left until completion. The report layout is fully customisable plus reports can be previewed, edited and printed as required.

## CHEMISTRY PARAMETERS

The chemistry parameters screen enables sample pre-dilution to be set up and re-running of assays as required. From this screen the operator can also access 3 sub menus: analyse parameters, calibration parameters and range parameters.



## REAGENT INVENTORY

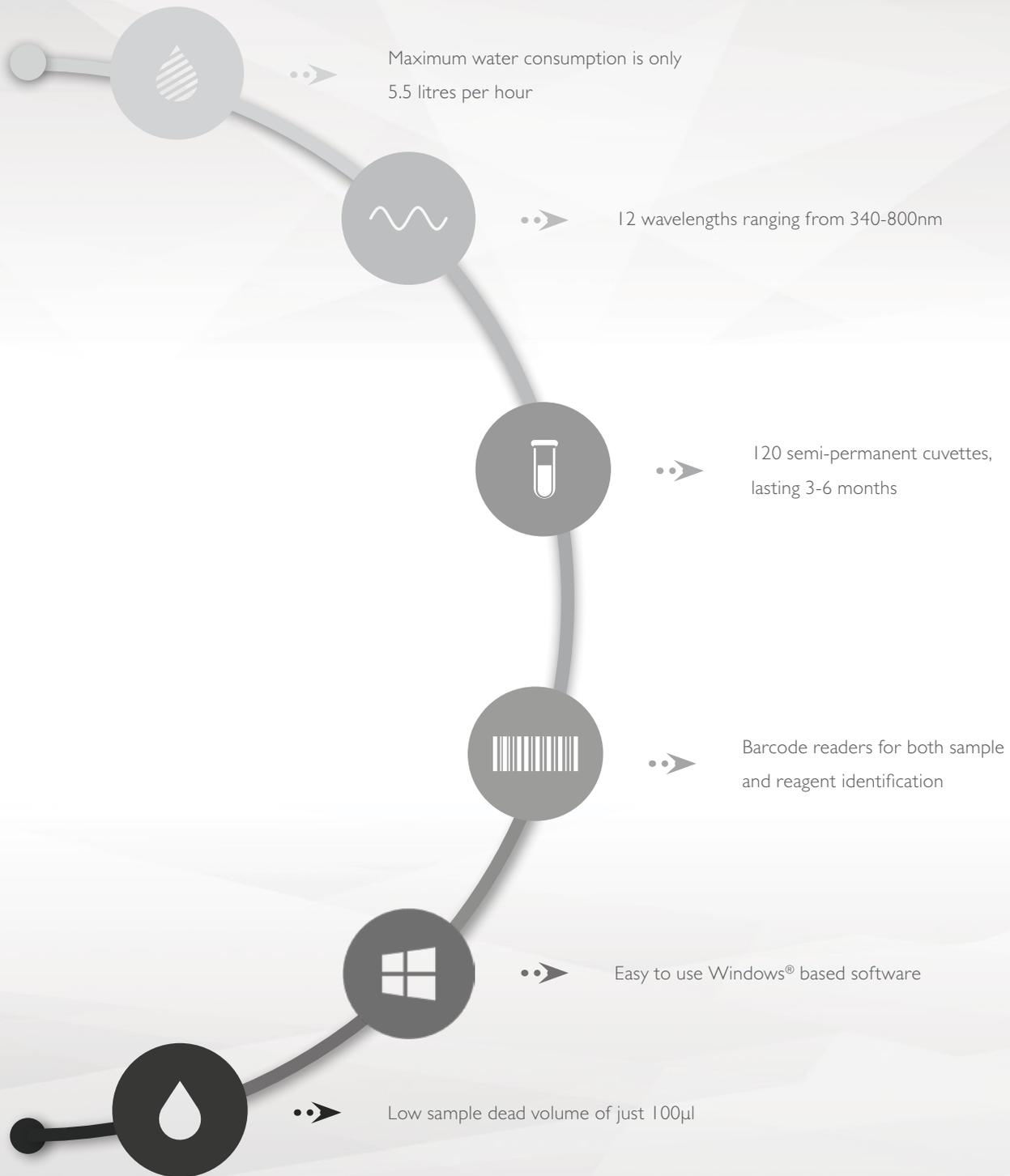
Remaining reagent volume is automatically calculated on-board alongside the number of tests available and stability of the reagents. Should insufficient volume remain for any reagent, an alarm will sound, allowing the operator to resolve the situation.

## RESULTS

Results are easily retrievable via various search options, for example by date or by test item. Laboratory staff can download and print results or transmit results to the LIMS system for all relevant clinicians to view.



# » FEATURES AT A GLANCE



# » ORDERING & CUSTOMER SUPPORT



In choosing to purchase the RX monaco from Randox you are partnering with a company that has over 35 years' experience in the IVD industry and clinical chemistry analyser placements in over 120 countries worldwide. Customers needs vary and Randox sales staff and distributor partners will work with your laboratory to create a bespoke package to suit your requirements. Randox Laboratories provide customers with an unrivalled technical support service.

## ORDERING INFORMATION

RX monaco analyser (benchtop)	RX5000
RX monaco analyser with stand	RX5001

For more information contact your local representative, or email us at:

[theRXseries@randox.com](mailto:theRXseries@randox.com) 

# » SPECIFICATIONS

## PHYSICAL DIMENSIONS

Height	517mm
Depth	752mm
Width	998mm
Weight	120kg

## PERFORMANCE CHARACTERISTICS

Throughput	170 tests per hour constant speed
Analyser type	Fully automated, discrete, random access bench-top clinical chemistry analyser
Assay types	End-point, rate, 2 point assays
Maintenance	Daily maintenance – probe & mixer wash/water bath exchange/cuvette check

## REAGENT & SAMPLE SYSTEM

Reagent & Sample capacity	Shared reagent & sample carousel with a total of 66 user defined positions (positions for reagents $\geq$ 3, positions for samples $\geq$ 9)
Reagent cooling	5-15°C
Reagent & sample Identification	Internal barcode scanner
Reagent inventory	Test & report remaining reagent volume, linked to work list
Reagent & sample pipette	Single reagent & sample pipette with digital liquid level detection & collision detection function, rinsed inside & out (warm water rinsing)
Reagent container	20ml and 70ml
Sample type	Serum, plasma, urine
Sample volume	3-35 $\mu$ l (0.1 $\mu$ l increments)
Sample dead volume	100 $\mu$ l in primary tubes
STAT sampling	STAT priority function available

## REACTION SYSTEM

Reaction time	13 minutes
Reaction volume	150-550 $\mu$ l
Stirring speed	Independent stirring after reagent injection (Teflon coated)
Temperature control	Water bath

Water consumption	5.5 litres per hour
Water requirements	NCCLS type 1 or 2 purified water supply at 0.5 bar pressure
Cuvettes	120 semi-permanent optical plastic cuvettes, 6mm optical path. Life span: 3-6 months
Cycle time	15 seconds

## OPTICAL SYSTEM

Incubator temperature	37°C ± 0.1°C
Light source	Long life quartz halogen lamp (water cooled)
Detection principle	12 wavelengths generated via diffraction grating: 340, 380, 405, 450, 480, 505, 546, 570, 600, 660, 700, 800nm
Detector method	Direct absorbance in cuvette (monochromatic or bi-chromatic)
Wavelength accuracy	±2nm
Absorbance range	0 to 3.3 Abs

## CALIBRATION & QC

Calibration principle	1 point, 2 point, multi-point, non-linearity method
Quality control	QC interval, monthly QC

## OPERATING SYSTEM

External output	Standard RS-232C interface
Software	Windows®

## POWER REQUIREMENTS

Power supply	240 VAC 50Hz/60Hz
Power output	650VA

# »» THE RX SERIES



A semi-automated clinical chemistry analyser with the ability to run flow cell or cuvette mode. The RX misano offers 9 wavelengths spanning 340-700nm as standard, with an optional 280nm. A large 7" touch screen monitor responsive even when wearing lab gloves allows the user to easily navigate through the testing screens of the analyser. USB port allows to import Randox-defined test menus and export patient, QC and calibration results.



A fully automated, random access, benchtop clinical chemistry analyser with a throughput of 270 photometric tests per hour, increasing to 450 with the optional ISE unit. There are 12 wavelengths spanning 340-800nm and the RX daytona+ provides liquid level, clot and crash detection. Software is windows based and STAT sampling is available via an emergency loading port. The RX daytona+ offers superior performance for mid volume laboratories.



A fully automated, random access benchtop clinical chemistry analyser with a photometric throughput of 400 tests per hour increasing to 560 including ISE. There are 12 wavelengths spanning 340-800nm and the RX imola provides liquid level, clot, crash and bubble detection. Software is windows based and STAT sampling is available via an emergency loading port. The RX imola offers efficiency for medium sized laboratories.



A fully automated, random access, floor standing clinical chemistry analyser with a photometric throughput of 800 test per hour, increasing to 1200 including ISE. There are 13 wavelengths spanning 340-800nm and a fully automated onboard, haemolysis function for running HbA1c. Accurate results are supported by liquid level, clot, and crash detection. The operating system utilises a modern touchscreen interface and Windows® icon based software.

# »» RANDOX - A GLOBAL DIAGNOSTIC SOLUTIONS PROVIDER

Randox has been supplying laboratories worldwide with revolutionary diagnostic solutions for over 35 years. Our experience and expertise allow us to create a leading product portfolio of high quality diagnostic tools which offer reliable and rapid diagnosis. We believe that by providing laboratories with the right tools, we can improve health care worldwide.

## REAGENTS

Randox offers an extensive range of diagnostic reagents, giving biochemistry laboratories the opportunity to advance their routine and niche testing.

The Randox reagents range goes beyond routine chemistries. At Randox we re-invest significantly in research and development to ensure we meet the ever changing needs of the laboratory. As a result, the esoteric reagents range from Randox is extensive and includes sLDL, Lipoprotein(a), H-FABP, Cystatin C, TxBCardio, Adiponectin, Bile Acids, Copper, D-3-Hydroxybutyrate, G-6-PDH, Non-Esterified Fatty Acids, Total Antioxidant Status and Zinc.

Randox Reagents provide a number of benefits for the laboratory: Cost savings through excellent stability, automated methods and standards supplied with some kits; confidence in results with high performance methods, minimal interferences and wide measuring ranges; convenience and choice with applications for over 100 biochemistry analysers; liquid ready-to-use reagents, a wide range of kit sizes and complementary controls and calibrators.

## ACUSERA

Randox is a world leading manufacturer of multi-analyte, true third party controls. Thousands of laboratories rely on us to accurately assess test system performance and ultimately empower them with the confidence required to release patient test results. With more than 390 analytes available across the Acusera range we can uniquely reduce the number of individual controls required while simultaneously reducing costs, time and storage space. A choice of formats are available, including liquid or lyophilised, ensuring flexibility and suitability for laboratories of all sizes and budgets.

Some of our principle products include Clinical Chemistry, Immunoassay, Urine, Immunology/Proteins, Cardiac Markers and Therapeutic Drugs among others. As a primary manufacturer, Randox are also able to offer the unique service of custom made controls.

## RIQAS

Boasting over 45,000 participants and more than 360 parameters across 32 comprehensive & flexible EQA programmes, RIQAS is the largest international EQA scheme. Designed to cover all areas of clinical testing, each of our multi-analyte programmes benefit from a wide range of concentrations, frequent reporting, rapid feedback and informative yet user-friendly reports.

## BIOCHIP ARRAY TECHNOLOGY

Biochip Array Technology (BAT) is an innovative assay technology for multi-analyte screening of biological samples in a rapid, accurate and easy to use format. BAT offers highly specific tests, coupled to highly sensitive chemiluminescent detection, providing quantitative results in easy to interpret reports. Randox BAT assays offer diagnostic, prognostic and predictive solutions across a variety of disease areas including sexually transmitted infection, cardiovascular disease (CVD), familial hypercholesterolemia (FH), colorectal cancer and respiratory infection.

Contact us for more information on any of our products and services:

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