

RX MISANO

A HIGH PERFORMANCE SEMI-AUTOMATED
CLINICAL CHEMISTRY ANALYSER



RANDOX

» TRANSFORMING SEMI-AUTOMATED CLINICAL
CHEMISTRY TESTING FOR LABORATORIES GLOBALLY



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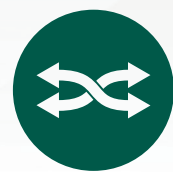
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» BENEFITS

The RX misano shines a new light on semi-automated clinical chemistry testing with increased **auto-functionality** and **ground-breaking technology**. Revolutionising the RX series with its **bold look, innovative design, and outstanding performance**, it sets the benchmark for the next generation of the RX series clinical chemistry analysers. The RX misano is capable of high standard, **precise results** at a **competitive price per test**.



TEST MENU & CONSOLIDATION

Expand your testing capabilities on one intuitive 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

Increased automatic features including **automatic flagging** of errors and advanced built in **QC software** detects problems as early as possible allowing the user to amend errors ensuring **confidence in results**.

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



FLEXIBILITY & VERSATILITY

Increased functionality maximises testing capabilities

Up to **10 wavelengths** can be generated via solid state filter device (340-700nm standard, 280nm available for wine testing) giving the RX misano a wide range of testing capabilities.

The ability to **run flow cell or cuvette mode** ensures that a maximum number of tests can be performed on one intuitive clinical chemistry analyser.



ADVANCED SECURITY

Guarantees patient results are safely secured

Advanced password protection functions for analyser setup, assay management and QC result inclusion/exclusion. This ensures only those who should have access can gain access to this system.

Complete confidence with results securely stored and **patient confidentiality adhered to**. Unique user names and passwords also increase traceability of results.



COST SAVINGS

Use smart technology designed to avoid additional costs

User-friendly maintenance screen guides the user through simple step-by-step instructions **removing the cost of expensive engineer call outs**.

Easy to use maintenance function ensures the user can easily amend any errors efficiently, **minimising downtime in the laboratory** resulting in reduced costs of sending tests out and removing the possibility of delayed patient results.



INCREASED CONVENIENCE

Developed to improve efficiency in your laboratory

Extremely **small footprint** taking up minimal space in a laboratory, without minimising the range of testing capabilities, means it is very easily moved throughout various departments with little effort.

Multiple languages available offering unrivalled convenience for multiple users, allowing each user to navigate through the software in their native language.



» SYSTEM OVERVIEW



CUVETTES & FLOW CELL

- Option to run flow cell or cuvette mode ensures a maximum number of chemistries can be performed on one system. Flow cell washing avoids contamination ensuring accurate results are produced.



USB PORT

- USB port for importing Randox-defined test menus and exporting patient, QC and calibration results. Enables the user to quickly export results from the analyser and convert into CSV format. Optional on-board printer is available for laboratories that prefer to directly print results from the analyser.



LCD TOUCH-SCREEN DISPLAY

- Quality display on a large 7" LCD touch-screen, responsive even when wearing lab gloves. Simple on screen icon based navigation allows the user to efficiently complete their testing with minimal effort.



ADVANCED PASSWORD PROTECTION

- Advanced password protection functions for analyser setup, assay management and QC result inclusion/exclusion. This gives laboratories confidence that their results are well protected on this system and only those who are authorised can gain access.

» THE RX TEST MENU



CLINICAL

ANAEMIA:

Iron
G-6-PDH

BASIC METABOLIC PROFILE:

Calcium
CO₂ Total
Chloride
Creatinine
Glucose
Potassium
Sodium
Urea

CARDIAC:

Cholesterol
CK-MB
CK-NAC
Direct HDL Cholesterol
Direct LDL Cholesterol
Triglycerides

COMPREHENSIVE METABOLIC PROFILE:

Acid Phosphatase
Albumin
Alkaline Phosphatase

ALT

AST (GOT)
Bilirubin (Total/Direct)
Calcium
Chloride
CO₂ Total
Creatinine
Glucose
Potassium
Sodium
Urea

DIABETES:

Cholesterol
Creatinine
Cystatin C
Direct HDL Cholesterol
Direct LDL Cholesterol
Glucose
Glucose Hexokinase
Microalbumin
NEFA
Ranbut (Hydrobutyrate)
Total Protein
Triglycerides
Urinary Protein

ELECTROLYTES:

Calcium
Chloride
CO₂ Total
Magnesium
Potassium
Sodium

INFLAMMATION:

Aldolase
ASO

HEPATIC FUNCTION:

Aldolase
Albumin
ALT
AST (GOT)
Bile Acids
Bilirubin (Total/Direct)
Cholinesterase
Total Protein

LIPIDS:

Apolipoprotein A-I
Apolipoprotein B
Cholesterol
Direct HDL Cholesterol

Direct LDL Cholesterol
Triglycerides

NUTRITIONAL STATUS:

Albumin
Iron
Lipase
Magnesium
Potassium
Zinc

RENAL FUNCTION:

Albumin
Beta-2 Microglobulin
Calcium
Creatinine
Cystatin C
Glucose
Microalbumin
Potassium
Sodium
Phosphorus (Inorganic)
Urinary Protein
Urea
Uric Acid

05



VETERINARY

Albumin
Alkaline phosphatase
ALT (GPT)
Ammonia
Amylase
AST (GOT)
Bile acids
Bilirubin
Calcium

Chloride
Cholesterol
Cholinesterase
CK-NAC
CO₂ Total
Copper
Creatinine
Gamma-GT
GLDH

Glucose
Ransel (Glutathione peroxidase)
Ranbut (Hydroxybutyrate)
Iron
Lactate
Lipase
Magnesium
NEFA (Non-esterified fatty acids)
Phosphorus (Inorganic)

Potassium
Sodium
Ransod (Superoxide dismutase)
Total Protein
Urea
Uric Acid
Urinary protein



RESEARCH

ANTIOXIDANTS:

Glutathione Reductase
Ransel (Glutathione Peroxidase)
Ransod (Superoxide Dismutase)
Total Antioxidant Status

FOOD AND WINE

TESTING:
Acetic acid
Ammonia
Copper
Ethanol
Glucose/fructose

Lactic acid
Malic acid
NOPA
Potassium
TAS
Total SO₂



SPECIALITY TEST

Ethanol (DOA)
Acid Phosphatase

»» THE RX SERIES A-Z TEST MENU



SEMI-AUTOMATED

Acetic Acid	Cholinesterase	Lactate
Acid Phosphatase	CK-MB	Lactic Acid
Albumin	CK-NAC	Lipase
Aldolase	CO ₂ Total	Magnesium
Alkaline Phosphatase	Copper	Malic Acid
ALT (GPT)	Creatinine	Microalbumin
Ammonia	Cystatin C	NEFA (Non-esterified fatty acids)
Amylase	D-3-Hydroxybutyrate (Ranbut)	Phosphorus (Inorganic)
Apolipoprotein A- I	Direct HDL Cholesterol	Potassium
Apolipoprotein B	Direct LDL Cholesterol	Sodium
ASO	G-6-PDH	Superoxide Dismutase (Ransod)
AST (GOT)	Gamma-GT	Total Antioxidant Status
Beta-2 Microglobulin	GLDH	Total Protein
Bile acids	Glucose Oxidase	Triglycerides
Bilirubin (Direct)	Glucose Hexokinase	Urea
Bilirubin (Total)	Glutathione Peroxidase (Ransel)	Uric Acid
Calcium	Glutathione Reductase	Urinary protein
Chloride	Glycerol	Zinc
Cholesterol	Iron	

» SOFTWARE

The RX misano has been developed with the user in mind by incorporating a **user friendly responsive touch-screen display**. The various different software screens allow the user to navigate through the analyser features at the touch of a button. The RX misano has a number of different screens including a home screen, quality control screen, parameter screen, reports screen, maintenance screen, and settings screen. Patient results, QC, and calibration data can all be extracted from the RX misano via USB port and transferred into CSV format allowing the user to format the data to their preference.



QUALITY CONTROL SCREEN

The quality control screen on the RX misano allows the user to view **daily or monthly QC data including reaction curves, calibration curves and Levey-Jennings charts** enabling full traceability of results. This will allow the laboratory to monitor the performance of the analyser and ensure that everything is working properly. Results will be clearly displayed on Levey-Jennings charts allowing laboratory staff to review results and correct any errors in a timely manner ensuring accurate results are produced.



PARAMETER SCREEN

The RX misano features a parameter screen with a simple search function allowing the user to choose the tests they want to run from the extensive RX series test menu. On this analyser the user can **create favourite test menus** by clicking on the star icon at the bottom of this screen to select commonly run tests, this will ultimately save time when running frequent tests. Open channels for custom chemistry parameters required for non-routine or research applications ensures **maximum number of tests can be run**.



MAINTENANCE SCREEN

The maintenance screen guides the user through simple step-by-step instructions. This will **reduce the amount of analyser downtime** in the laboratory and **save additional costs** of engineer call out fees. **Minimal daily maintenance** is required which saves time for the operator. The maintenance screen includes functions such as pump wash and flow cell wash to avoid contamination ensuring accurate patient results.



REPORT SCREEN

The user can easily search for reports by clicking on the reports icon on the home screen. A number of search variations can be used, including date, test name, test type, username, batch ID etc and filtered by patient results, calibrations or QC. Simple touch screen search function makes it easy to find reports **allowing the user to review and compare reports.**



SYSTEM SETTINGS SCREEN

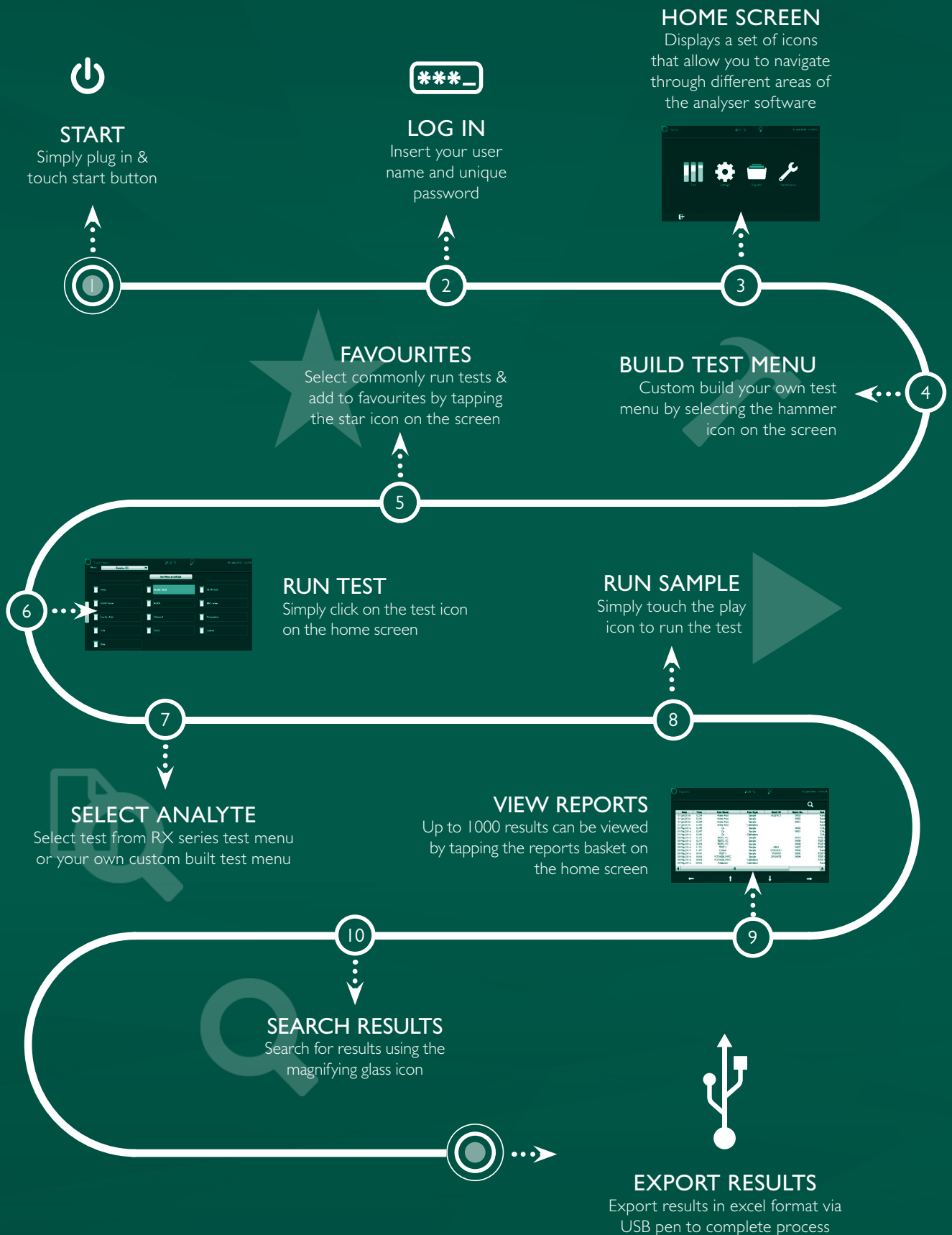
Enables the user to update the general settings on the system software. These settings include date, time, numbering format etc. This ensures that all reports generated reflect the correct date and time guaranteeing all **results are fully traceable.**



HOME SCREEN

Displays four icons enabling **easy navigation** through the different features of the software using simple icon based technology. These icons include tests, settings, reports & maintenance. The date and time are clearly displayed at the top of the screen, along with the temperature allowing the user to check if the analyser is at the correct temperature to run tests under recommended settings.

»» FEATURES AT A GLANCE



» ORDERING & CUSTOMER SUPPORT

In choosing to purchase the RX misano 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 misano analyser	RX6015
RX misano cuvette incubator	A702-496

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

theRXseries@randox.com



» SPECIFICATIONS

PHYSICAL DIMENSIONS

Width	235mm
Depth	330mm
Height	305mm
Weight	6.5kg

PERFORMANCE CHARACTERISTICS

Analyser type	Semi-automated, flow-cell based, primarily closed bench-top system with possibility to create open assays
Analysis method	UV/Colormetric (rate/endpoint), Turbidimetric Immunoassay
Aspiration volume	Programmable aspiration volume of 250-500uL
Assay types	1-Point, 2-Point, Rate-A, 1-PT-S Blank, Absorbance, Wine Colour, Wine Hue
Calibration principal	Linear, K-Factor, Spline, Point-to-Point, Log-logit, Storage of up to 1 calibration curve per method
Chemistry parameters	User can import, build, edit and save up to 20 different test menus containing 100 tests each
Cuvettes	Flow cell (volume 18µl) mode or cuvette mode in plastic, quartz or glass Cuvette temperature controlled by dry block thermostat (optional)
Detection principal	Multiple wavelength solid state filter device. 9 wavelengths 340-700nm (340, 420, 520, 546, 578, 600, 620, 660, and 700nm), or 10 wavelengths including optional 280nm for phenols testing in wine products
Error sensors	Automatic flagging of inaccurate results/testing errors Humidity & Temperature sensors Pressure sensor alert if liquid absent or removed prior to completion of aspiration
Light source	Halogen Tungsten Lamp (12 V 20 W) (estimated service life 1000 hrs at 23°C ambient)
Maintenance requirements	Minimal. Includes step-by-step icon-based on-screen instructions
Measurement interval	2 to 999 sec
Operator Interface	Unique, embedded icon-based software available in multiple languages & password protected USB port for importing Randox-defined test menu, updating software and exporting patient, QC and calibration results

Open/closed channels	Open channels available
Quality control	Advanced built-in QC software automatically displays reaction curves, calibration curves & Levey Jennings charts
Reaction temperature	Programmable +20°C to +40°C steps in 1°C, +/- 0.5°C (room temperature)
Sample volume	5µl - 1,000µl
Relative humidity range	Indoor humidity: 80% up to +31°C , down to 50% at +40°C
Report generation	Date, Time, Test Name, Test Type, Batch ID, Batch #, Test Menu, and Username
Sample aspiration mode	Aspiration via water-proof capacitive touch-start button
Sample types	Serum, Plasma, Urine, Wine
Storage capacity	1,000 main records each holding 1,000 results, 1,000 calibrator results and 1,000 QC results
Temperature control	Heats to 37°C < 30 seconds & cools from 37°C to 25°C in < 1 minute

POWER & CONNECTIVITY

Display	7" high resolution LCD (RGB)(800x480) touch-sensitive screen (responsive to lab gloves)
Input voltage	Universal Power Supply: 100 to 240 V RMS, at 50/60Hz
Power consumption	130 W Max
System connections	USB Port for importing and customising test menus as well as exporting results

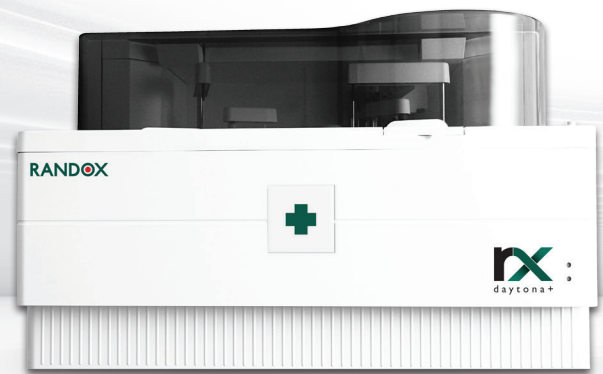
OPTIONAL ACCESSORIES

Printer	Integrated thermal printer with full graphics facility
Cuvette incubator	Incubation for 10 cuvettes before measurement

ACCESSORIES

Accessories and consumables	Aspiration tubing, peristaltic pump tubing, waste tubing, spare lamp, printer paper, cleaning cloth, Randox CellClean, USB pen
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»» THE RX SERIES



A fully automated, random access clinical chemistry analyser with 12 wavelengths between 340-800nm and a throughput of 170 tests per hour. Available as a benchtop or floor standing model with Windows® based software and STAT sampling as standard. The low throughput of the RX monaco provides small to mid-volume laboratories with cost effective analysis and high quality testing.

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:

Head Quarters

Randox Laboratories Ltd, 55 Diamond Road, Crumlin, County Antrim, BT29 4QY, United Kingdom

☎ +44 (0) 28 9442 2413 ✉ marketing@randox.com 🌐 randox.com/clinical-chemistry-analysers/

International Offices



AUSTRALIA

Randox (Australia) Pty Ltd.
Tel: +61 (0) 2 9615 4640



BRAZIL

Randox Brasil Ltda.
Tel: +55 11 5181-2024



CHINA

Randox Laboratories Ltd.
Tel: +86 021 6288 6240



CZECH REPUBLIC

Randox Laboratories S.R.O.
Tel: +420 2 1115 1661



FRANCE

Laboratoires Randox
Tel: +33 (0) 130 18 96 80



GERMANY

Randox Laboratories GmbH
Tel: +49 (0) 215 1937 0611



HONG KONG

Randox Laboratories Hong Kong Limited
Tel: +852 3595 0515



ITALY

Randox Laboratories Ltd.
Tel: +39 06 9896 8954



INDIA

Randox Laboratories India Pvt Ltd.
Tel: +91 80 2802 5000



POLAND

Randox Laboratories Polska Sp. z o.o.
Tel: +48 22 862 1080



PORTUGAL

Irladox Laboratorios Quimica Analitica Ltda
Tel: +351 22 589 8320



PUERTO RICO

Clinical Diagnostics of Puerto Rico, LLC
Tel: +1 787 701 7000



REPUBLIC OF IRELAND

Randox Teoranta
Tel: +353 7495 22600



SLOVAKIA

Randox S.R.O.
Tel: +421 2 6381 3324



SOUTH AFRICA

Randox Laboratories SA (Pty) Ltd.
Tel: +27 (0) 11 312 3590



SOUTH KOREA

Randox Korea
Tel: +82 (0) 31 478 3121



SPAIN

Laboratorios Randox S.L.
Tel: +34 93 475 09 64



SWITZERLAND

Randox Laboratories Ltd. (Switzerland)
Tel: +41 41 810 48 89



UAE

Randox Medical Equipments Trading LLC
Tel: +971 55 474 9075



USA

Randox Laboratories-US, Ltd.
Tel: +1 304 728 2890



VIETNAM

Randox Laboratories Ltd, Vietnam
Tel: +84 (0) 8 3911 0904

For technical support contact: technical.services@randox.com



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