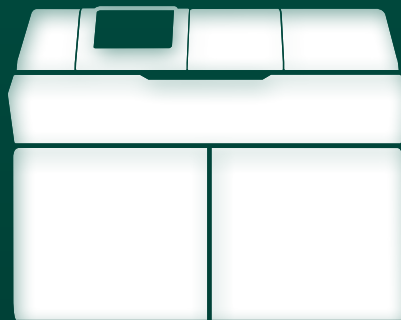


**RAN**DOX

# RX MODENA

A Fully Automated Clinical Chemistry Analyser



CAPABLE OF PERFORMING UP TO 1200 TESTS PER HOUR

» THE RX MODENA IS A FULLY AUTOMATED, CLINICAL CHEMISTRY ANALYSER, THAT PROMISES TO REVOLUTIONISE YOUR LABORATORY



**01** BENEFITS

---

**04** SYSTEM OVERVIEW

---

**05** TEST MENU

---

**07** SOFTWARE

---

**09** FEATURES AT A GLANCE

---

**10** ORDERING INFORMATION

---

**11** SPECIFICATIONS

---

**13** THE RX SERIES

---

**15** RANDOX - A GLOBAL DIAGNOSTIC  
SOLUTIONS PROVIDER

---

**16** CONTACT US

# » BENEFITS

The RX modena is a high throughput, floor standing clinical chemistry analyser, capable of performing up to 1200 tests per hour including ISE. With the ever expansive, unrivalled RX series test menu, the RX modena offers a **winning combination** for large multi-disciplinary laboratories. Icon based, **interactive touch-screen technology** offers an easy to use solution. The RX modena presents a new class of **efficiency** without compromising on the precision, reliability and accuracy that the RX series is famed for.



## 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 and bring more testing in-house **reducing additional costs** of sending tests out.

**Direct, on-board, HbA1c testing** capabilities provide many **time saving benefits** in the laboratory. As there is **no incubation step required** HbA1c tests can be performed immediately, performing QC and Calibration checks is quicker as only one assay is being tested, and offline calculations are not needed enabling **faster recovery times**.



## ACCURATE RESULTS

Achieve accurate patient results first time, every time

The RX modena has two reagent pipettes and a sample pipette to ensure **minimal carryover** and reduce **testing errors**.

Dual five speed stirrers provide **optimised mixing** for each assay. Serum indices detect lipaemic, icteric and haemolytic samples.

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



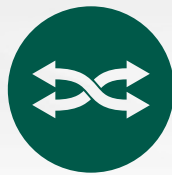
## UNRIVALLED PERFORMANCE

Reliability ensures no interruption to workflow

Sensitive **clot detection sensor** detects clots such as fibrin at the sample pipette. **On-board cuvette checking** function ensures 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.

**7 different calibration options** are available including; Factor, Linear, Point-to-Point, Log-Logit, Exponential, Spline and Spline 2.

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



## FLEXIBILITY & VERSATILITY

---

Increased functionality maximises testing capabilities

**13 wavelengths** (340nm – 800nm) can be generated via a diffraction grating ensuring a multitude of chemistries are possible on one system.

Continuous loading hatch allows samples to be analysed quickly and easily during a run, enhancing productivity.

**Barcode readers** for both sample and reagent identification.

STAT samples can be added and prioritised during a run saving time when it matters most.



## COST SAVINGS

---

Smart technology designed to avoid additional costs

Simple twice yearly preventative maintenance reduces the likelihood of analyser downtime.

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

Economic platform with **low water consumption** of only 20 litres per hour



RANDOX

rxmodena

# » SYSTEM OVERVIEW



## REAGENT CAROUSEL

••➤ The RX modena reagent carousel has 100 cooled positions for 50x70ml & 50x20ml reagent bottles. An automatic barcode will identify the reagents added to the carousel which will be cooled between 8°C and 15°C to allow for a greater on-board stability.



## CUVETTES

••➤ On-board the RX modena there are 153 semi-permanent cuvettes with a life span of 3-6 months. Cuvette check function ensures that only clean and viable reaction vessels are used. The user will be notified when cuvettes are required to be replaced.



## WASH STATION

••➤ A 7 stage washing process includes acid, alkali and pure water, wash steps. Stations 1-5 have liquid level sensors to prevent cuvette overflows. The washing unit washes cuvettes before and after measurement to ensure accurate results each time.



## SAMPLE CAROUSEL

••➤ The RX modena has 94 sample positions available and up to 10 positions for calibrators & controls. STAT functionality allows for the addition of emergency samples when required. An on-board barcode scanner will identify the sample being tested.



## MONITOR

••➤ Interactive touchscreen technology with Windows® based software allows the user to easily navigate through the analyser software. The RX modena monitor is attached to the analyser via an extendable arm and is fully adjustable for the users convenience whilst testing.



## CONTINUOUS LOADING

••➤ Continuous loading is facilitated through a hatch on the analyser. The sample carousel is made up of removable baskets. The software will detect a free space for the user to insert the basket allowing samples to be added quickly and easily during a run.

# » THE RX SERIES TEST MENU



## CLINICAL

### AUTOIMMUNE:

Complement Component 3  
Complement Component 4  
CRP  
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  
Chloride  
Creatinine  
Glucose  
Potassium  
Sodium  
Urea

### BONE PROFILE:

Alkaline Phosphatase  
Calcium  
Phosphorus  
Total Protein

### CARDIAC:

Adiponectin  
Cholesterol  
CK-MB  
CK-NAC  
CRP  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
Digoxin  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
HDL3  
H-FABP  
Homocysteine  
Lipoprotein (a)  
Myoglobin  
sLDL  
Triglycerides

### COMPREHENSIVE METABOLIC PROFILE:

Albumin  
Alkaline Phosphatase  
ALT  
AST (GOT)

Direct Bilirubin  
Calcium  
Chloride  
CO<sub>2</sub> Total  
Creatinine  
Glucose  
Lactate  
Potassium  
Sodium  
Total Bilirubin  
Total Protein  
Urea

### DIABETES:

Adiponectin  
Cholesterol  
Creatinine  
Cystatin C  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Fructosamine  
Glucose  
Glycerol  
HbA1c/Hb  
Microalbumin  
NEFA (Non-Esterified Fatty Acids)  
Ranbut (Hydroxybutyrate)  
Total Protein  
Triglycerides  
Urinary Protein

### ELECTROLYTES:

Calcium  
Chloride (Nondirect)  
CO<sub>2</sub> Total  
Magnesium  
Potassium (Nondirect)  
Sodium (Nondirect)

### HAEMOLYTIC ANAEMIA:

G-6-PDH  
Haptoglobin  
LDH

### HEPATIC FUNCTION:

Albumin  
Aldolase  
Alkaline Phosphatase  
ALT  
Ammonia  
IgA  
IgG  
IgM

Iron (UIBC)  
LDH  
Total Bilirubin  
Total Protein  
Transferrin  
Transthyretin (Prealbumin)

### INFLAMMATION AND INFECTION:

ASO  
CRP  
Lactate  
Rheumatoid Factor

### LIPIDS:

Apolipoprotein A-I  
Apolipoprotein All  
Apolipoprotein B  
Apolipoprotein CII  
Apolipoprotein CIII  
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  
IgE  
Transthyretin (Prealbumin)

### NUTRITIONAL STATUS:

Albumin  
Copper  
Ferritin  
Iron  
Iron (UIBC)  
Lipase  
Magnesium  
Potassium  
sTfR  
TIBC  
Transferrin  
Transthyretin (Prealbumin)  
Zinc

### PANCREATIC FUNCTION:

Amylase

Glucose  
LDH  
Lipase  
Pancreatic Amylase

### RENAL FUNCTION:

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





## VETERINARY

Albumin	Cholesterol	Glucose	Potassium
Alkaline phosphatase	Cholinesterase (Butyryl)	Glycerol	Ranbut (Hydroxybutyrate)
ALT (GPT)	CK-NAC	HDL	Ransel (Glutathione peroxidase)
Aldolase	CO <sub>2</sub> Total	Iron (UIBC)	Ransod (Superoxide dismutase)
Ammonia	Copper	Lactate	Sodium
Amylase	Creatinine	Lactate dehydrogenase	Total Protein
AST (GOT)	Canine CRP	LDL	Triglycerides
Bile acids	CRP	Lipase	Urea
Bilirubin	Fructosamine	Magnesium	Uric Acid
Calcium	Gamma-GT	NEFA (Non-esterified fatty acids)	Urinary protein
Chloride	GLDH	Phosphorus (Inorganic)	Zinc



## TOXICOLOGY

<b>THERAPEUTIC DRUGS:</b>	Phenobarbital	<b>DRUGS OF ABUSE:</b>
Carbamazepine	Phenytoin	Ethanol
Gentamicin	Valproic Acid	
Lithium		



## PROTEINS

<b>SPECIFIC PROTEINS:</b>	Ceruloplasmin	Haptoglobin	Rheumatoid Factor
Apolipoprotein A-I	Complement Component 3	HbA1c/Hb	sTfR
Apolipoprotein AII	Complement Component 4	IgA	Transthyretin (Prealbumin)
Apolipoprotein B	CRP	IgE	Transferrin
Apolipoprotein CII	CRP Full Range (0.3-160mg/l)	IgG	
Apolipoprotein CIII	CRP High Sensitivity	IgM	
Apolipoprotein E	Cystatin C	Lipoprotein (a)	
ASO	Ferritin	Microalbumin	
Beta-2 Microglobulin	Fructosamine	Myoglobin	



## RESEARCH

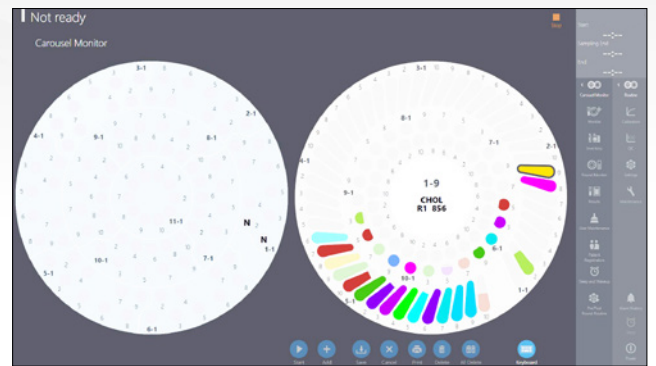
<b>ANTIOXIDANTS:</b>	Transferrin	Glucose/fructose	<b>BIOTECHNOLOGY:</b>
Albumin	Uric Acid	Lactic acid	Glutamate
Bilirubin		Malic acid	Glutamine
Ferritin	<b>FOOD AND</b>	NOPA	
Glutathione Reductase	<b>WINE TESTING:</b>	Potassium	
Ransel (Glutathione Peroxidase)	Acetic acid	TAS	
Ransod (Superoxide Dismutase)	Ammonia	Total SO <sub>2</sub>	
TIBC	Copper		
Total Antioxidant Status	Ethanol		





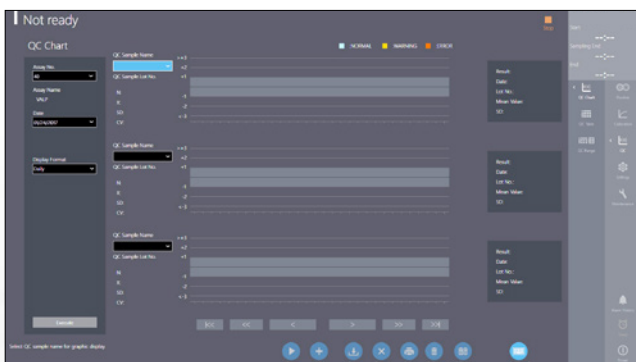
## MAINTENANCE

Maintenance on the RX modena is fast and effective. There are several simple steps to carry out daily, weekly and monthly. Less than 5 minutes daily maintenance is required.



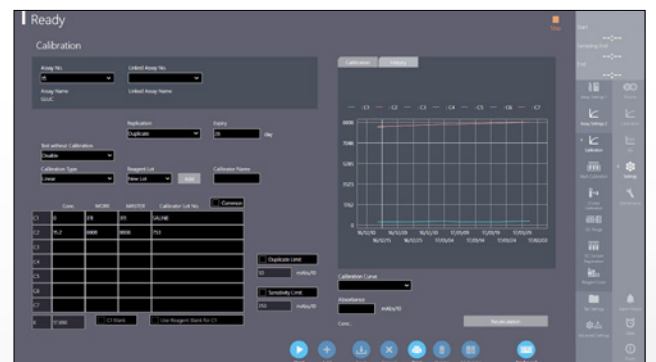
## RUN MONITOR

The run monitor displays full patient demographics. This screen indicates the number of tests and time left until completion. The operator can add emergency STAT samples from this screen.



## QUALITY CONTROL

The QC screen generates Levey-Jennings charts and calibration curves allowing for a visual performance assessment plus easy identification of QC errors and emerging trends. QC multi rules can be applied to ensure high error detection and minimal false rejection.



## CALIBRATION

The software displays the current valid calibration for each assay installed, the reagent blank absorbance (if appropriate) and the calibration check interval. There are 7 calibration models available: Factor, Linear, Point to point, Log-logit, Exponential, Spline & Spline 2.

# » FEATURES AT A GLANCE

Fully automated on-board haemolysis function for HbA1c testing



Economic platform with water consumption of less than 20 litres per hour at peak usage



Continuous loading hatch allows samples to be analysed quickly and easily during each run



Automatic wake up and sleep functionality including programmable daily maintenance



153 cuvettes on-board with cuvette check function



Interactive touch-screen technology with Windows® based software



# » ORDERING & CUSTOMER SUPPORT



In choosing to purchase the RX modena 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 modena analyser

RX9000

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

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



# » SPECIFICATIONS

## PHYSICAL DIMENSIONS

Height	1150mm
Depth	850mm
Width	1300mm
Weight	<300kg

## PERFORMANCE CHARACTERISTICS

Throughput	1200 tests per hour including ISE 800 photometric tests per hour
Analyser accreditation	CE marking & FDA in progress
Analyser type	Compact fully automated random access floor standing clinical analyser
Assay types	End point, 2 point end, rate, 2 point rate and ISE

## REAGENT & SAMPLE SYSTEM

Reagent capacity	Removable tray with 100 cooled positions (50 positions for 70ml bottles and 50 positions for 20ml bottles)
Reagent identification	Automatic barcode reagent identification
Reagent inventory	Calculation of remaining reagent volume and tests available, alert for shortage, expired reagent and expired calibration
Reagent pipette	Dedicated twin reagent micropipette with liquid level sensor and crash detection, rinsed inside and outside with purified water
Sample addition	Immediate sampling interruption for addition of samples via removable panel
Sample capacity	Removable tray with 94 positions for samples, 10 positions for controls and calibrators
Sample dead volume	150µl in standard or primary tubes, 100µl in paediatric cups
Sample dilution	Pre-dilution and automatic re-assay with diluted, reduced or increased sample volume
Sample identification	Barcode sample identification
Sample pipette	Dedicated sample micropipette with liquid level sensor, clot detection and crash detection
Sample tube Size	Multiple primary tube sizes (diameter 12-15mm, height 100mm), paediatric cups
Sample type	Serum, Plasma, Urine & Whole Blood
Sample volume	0.5-25µl (0.1µl increments) ISE: less than 22µl
STAT sampling	Immediate STAT sampling interruption

## REACTION SYSTEM

Reaction time	10 minutes
Minimum reaction volume	50µl
Stirring system	Dual 5 speed paddle stirrers
Temperature	37°C ±0.2°C
Cuvettes	153 Semi-permanent cuvettes, 5nm optical path. Life span:3-6 months
Wash unit	7 stage cuvette washing system
Water consumption	<20L per hour

## OPTICAL SYSTEM

Detector method	Direct absorbance in cuvette (monochromatic or bi-chromatic)
Light source	Halogen tungsten lamp (air-cooled, 6 month service life)
Detection principal	13 wavelengths 340, 380, 415, 450, 478, 510, 546, 570, 600, 660, 700 750, 800nm
ISE tests	Integrated ISE unit (sodium, potassium, chloride)
Wavelength accuracy	±2nm
Absorbance range	0 to 3 Abs

## CALIBRATION & QC

Quality control	Interactive Levey-Jennings charts, daily, monthly and batch QC with data archiving
Calibration principal	Factor, Linear, Point to point, Log-logit, Exponential, Spline and Spline 2

## POWER & CONNECTIVITY

Input voltage	100 - 240 Vac
---------------	---------------

## OPERATING SYSTEM

Operator interface	Windows® based user Interface Touch screen (optional keyboard and mouse available upon request) Software text/language fully editable by user
--------------------	--



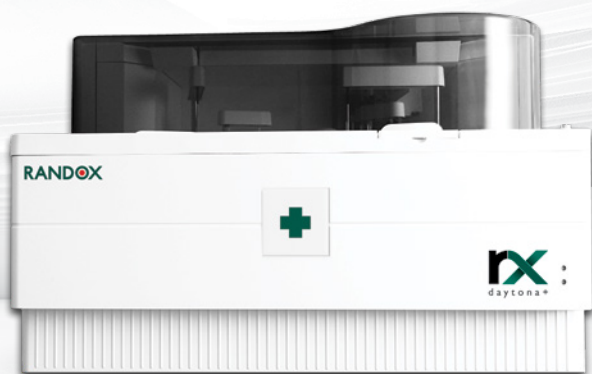
# »» THE RX SERIES



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 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.

# »» 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

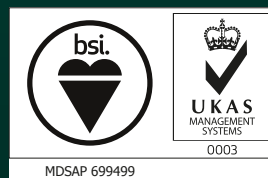
Randox Laboratories-US, Ltd.  
Tel: +1 304 728 2890



### VIETNAM

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

For technical support contact: [technical.services@randox.com](mailto:technical.services@randox.com)



LT677 MAR21