

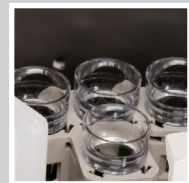
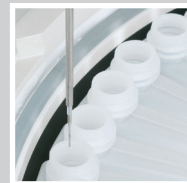


CE

RANDOX

RX monaco

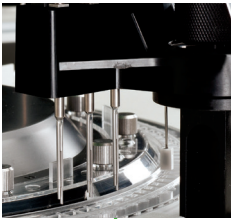
A FULLY AUTOMATED SOLUTION FOR HIGH QUALITY
CLINICAL CHEMISTRY TESTING



SYSTEM OVERVIEW

The RX monaco is a fully automated, cost effective solution for low to mid volume clinical chemistry testing offering the ultimate in convenience, performance and confidence. At optimal configuration, the RX monaco performs 170 tests per hour providing cost effective, high quality testing for small to medium sized laboratories.

WASH STATION



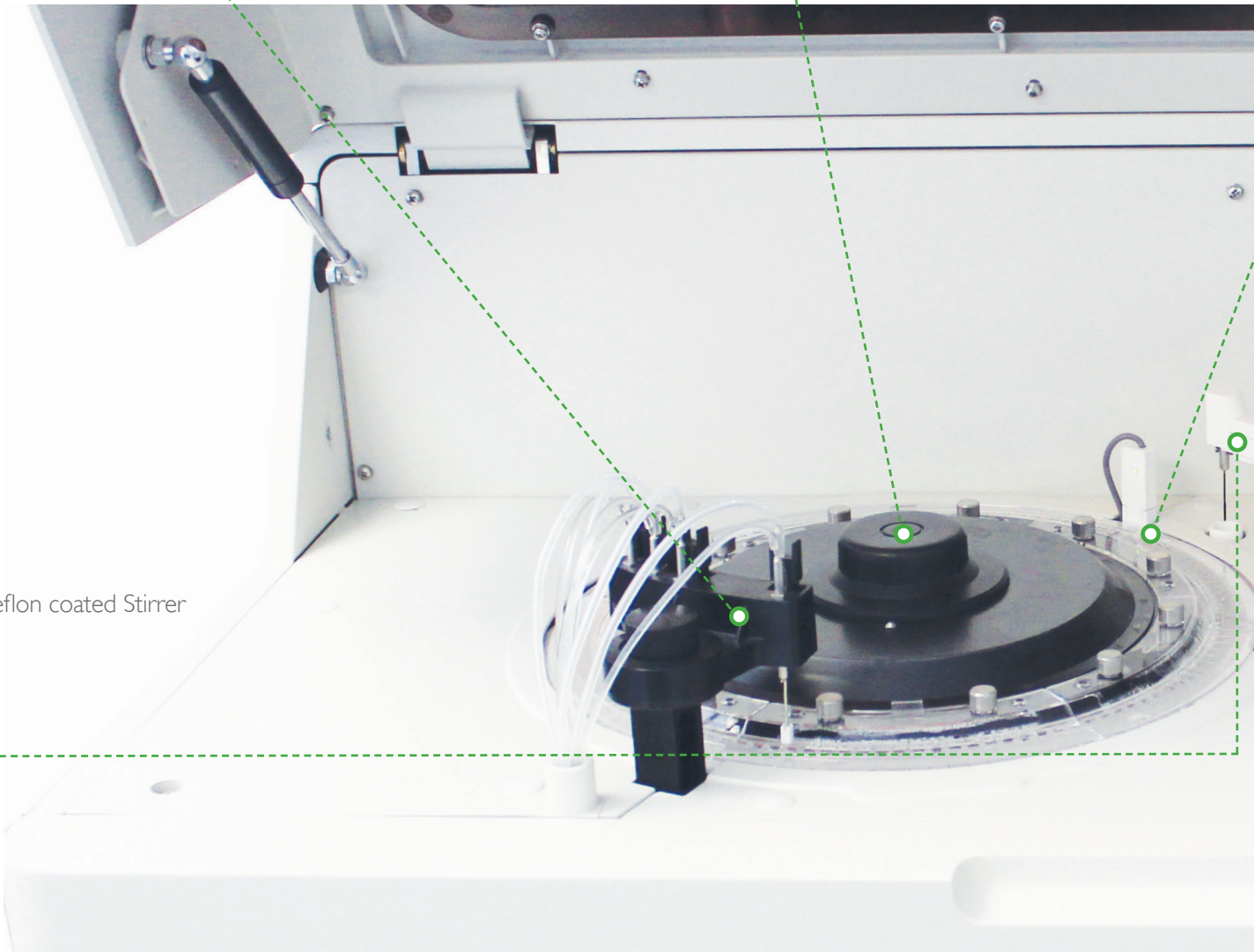
- 12 stage washing system
- Onboard cuvette checking system
- Unique pipette washing & rinsing
- Includes acid, alkali and pure water wash steps

REACTION SYSTEM



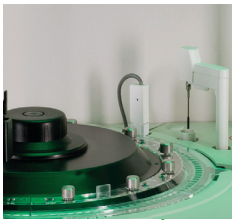
- 120 semi-permanent cuvettes, 6mm optical path
- Water bath temperature control
- Minimum reaction volume of 150 μ l
- Cycle time of 15 seconds

● Teflon coated Stirrer



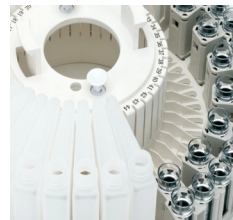
The RX series test menu allows for complete consolidation of routine and specialised testing onto one efficient, easy to use platform.

OPTICAL SYSTEM

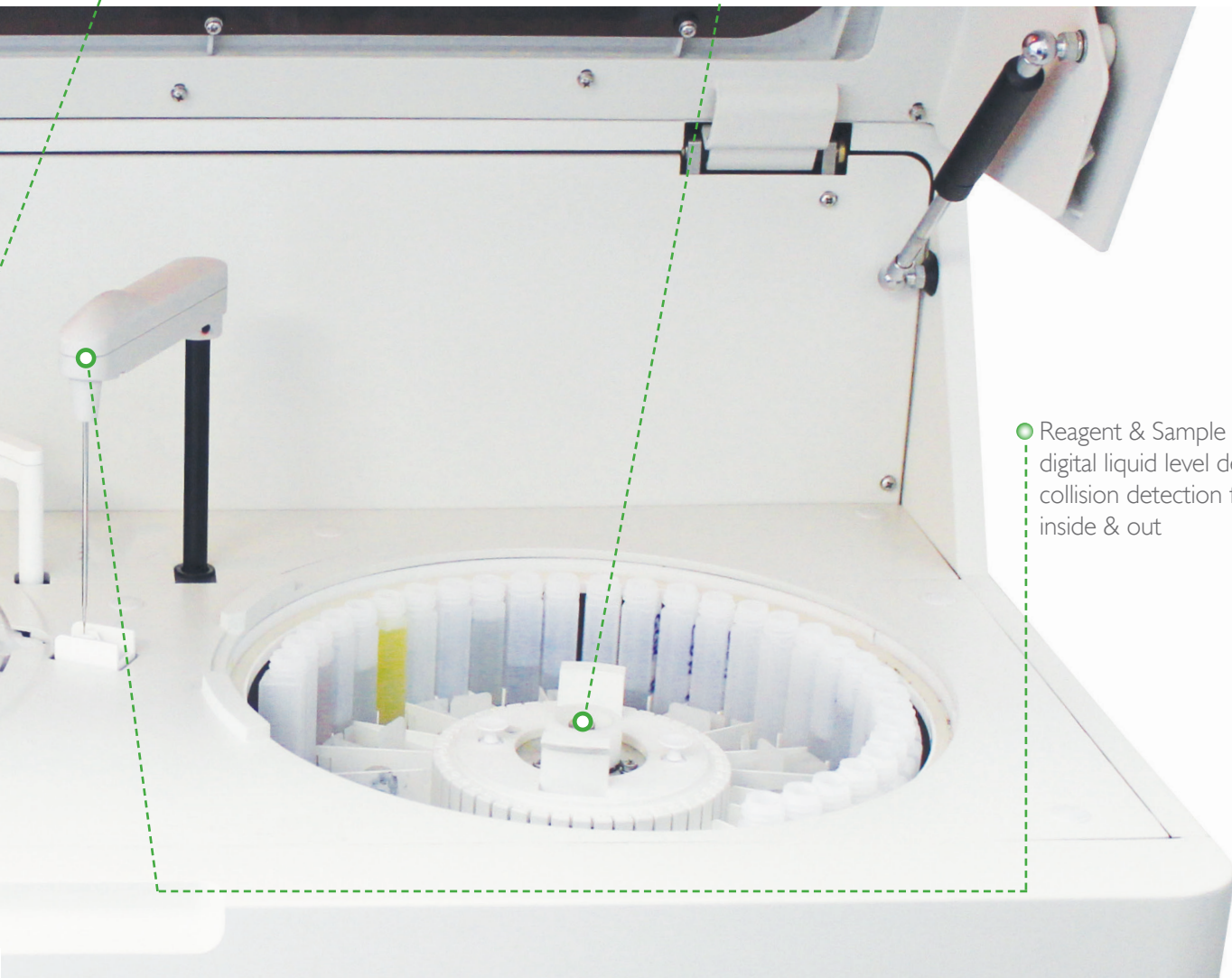


- Direct absorbance in cuvette (monochromatic or bi-chromatic)
- Liquid level and collision detection
- 12 wavelengths generated via diffraction grating: 340, 380, 405, 450, 480, 505, 546, 570, 600, 660, 700 and 800nm

REAGENT & SAMPLE CAROUSEL



- Utilises both bar-coded and non bar-coded samples
- Integrated barcode readers for reagent and sample identification
- Uses 20ml reagent bottles



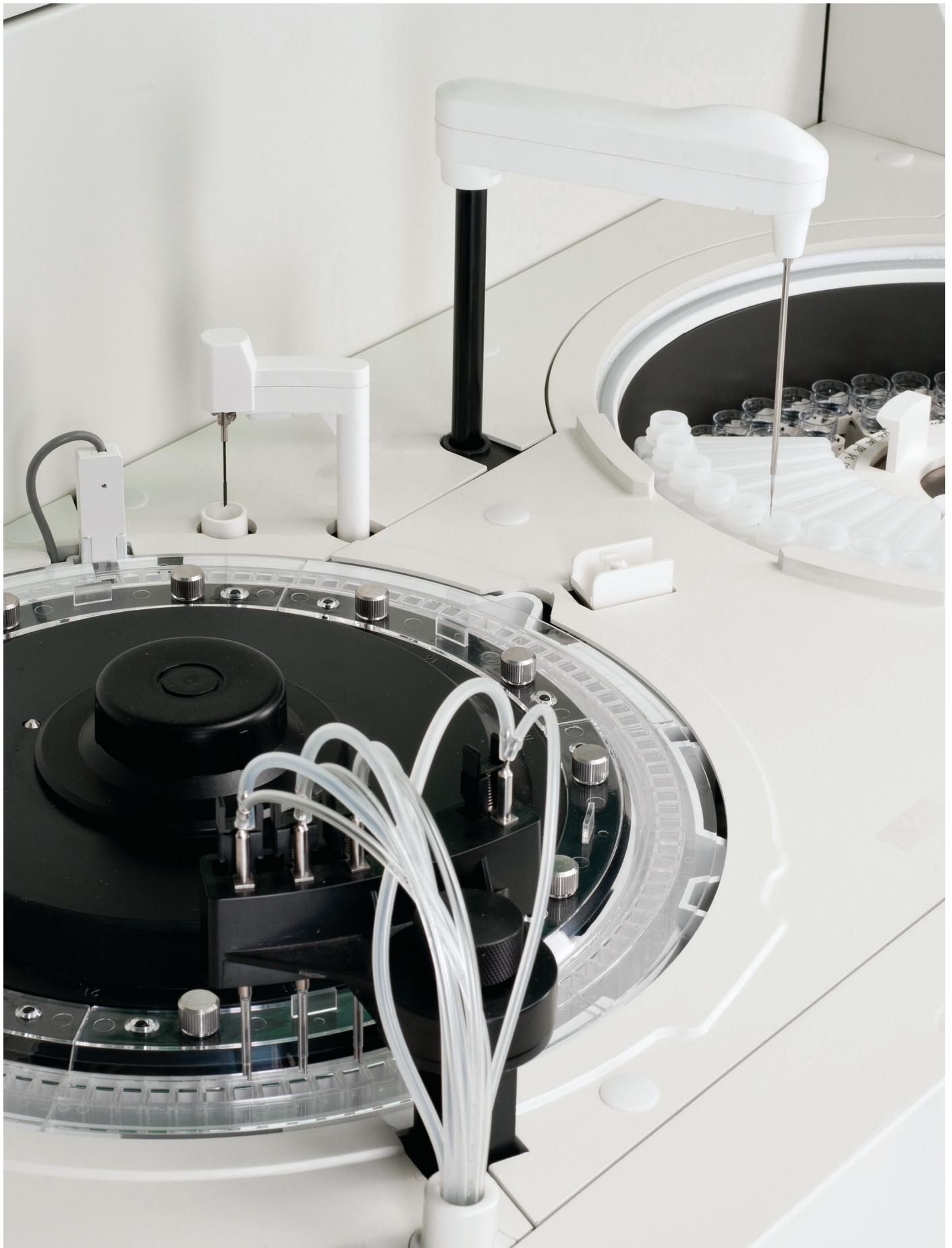
- Reagent & Sample pipette with digital liquid level detection & collision detection function, rinsed inside & out



RX monaco

- Fully automated chemistry analyser
- 170 photometric tests per hour with STAT priority function
- Extensive dedicated test menu
- Versatile shared reagent and sample carousel with 66 user defined positions
- Low water consumption of just 5.5 litres per hour
- 120 semi-permanent cuvettes automatically washed in a 12 step cleaning process
- Digital liquid level & collision detection
- Independent Teflon coated stirrer
- Minimum daily maintenance required
- Cooled reagent & sample carousel to enhance onboard stability
- Options for bench top or floor stand models
- Built in Inventory Management System automatically tests and reports remaining reagent volume
- Low reagent volume of 10 - 350 μ l (1 μ l increments) & sample volume of just 3 - 35 μ l (0.1 μ l increments)

■ Why RX monaco?



● OPTIMAL PERFORMANCE

- Throughput of 170 tests per hour
- Single reagent and sample pipette with digital liquid level detection and collision protection
- Built in inventory management system automatically tests and reports remaining reagent volume
- 120 semi-permanent cuvettes

● USER FRIENDLY

- Easy to use Windows® based software
- Serum indices function detects lipaemic, icteric and haemolytic samples, ensuring accuracy of results and reducing the need for expensive repeats
- Integrated barcode readers for reagent and sample identification

● OPTIMUM LABORATORY EFFICIENCY

- Low minimum reaction volume of 150µl improves cost-effectiveness and reduces waste
- Cuvette check function ensures only clean and viable reaction vessels are used

● ADVANCED ON-BOARD STABILITY

- Cooled reagent and sample carousel ensure reagent, controls and calibrators can be stored on-board the analyser without compromising stability

● SUPERIOR QC CAPABILITIES

- Generation of Levey-Jennings charts, calibration curves and QC statistics
- Auto QC interval
- User defined multi point rules
- QC result search history

● TIME AND COST EFFECTIVE

- Minimal daily maintenance required
- Economic platform with low water consumption of only 5.5 litres per hour at maximum throughput
- Bar-coded reagents and samples mean no time is wasted programming routine assays

● HIGHLY ACCURATE TESTING

- Independent stirring system, automatically rinsed with purified water to reduce carryover
- 120 semi-permanent cuvettes on-board automatically washed in 12 step cleaning programme to minimise contamination
- Warm water washing

● COMPLETE CONSOLIDATION

- Extensive dedicated test menu facilitates complete instrument consolidation
- A complete range of clinical chemistry instrumentation, reagents, IQC and EQA available from a single supplier allows for consolidation and real cost savings

● STAT SAMPLING

- STAT priority functionality enables emergency samples to be processed immediately
- SuperAdd function

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
CO₂ Total
Chloride
Creatinine Enzymatic
Creatinine (Jaffe)
Glucose
Potassium
Sodium
Urea

BONE PROFILE:

Alkaline Phosphatase
Calcium
Phosphorus
Total Protein

CARDIAC:

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

COMPREHENSIVE METABOLIC PROFILE:

Albumin
Alkaline Phosphatase
ALT
AST (GOT)
Direct Bilirubin
Calcium

Chloride
CO₂ Total
Creatinine Enzymatic
Creatinine (Jaffe)
Glucose
Lactate
Potassium
Sodium
Total Bilirubin
Total Protein
Urea

DIABETES:

Adiponectin
Cholesterol
Creatinine Enzymatic
Creatinine (Jaffe)
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)
CO₂ Total
Lithium
Magnesium
Potassium (Nondirect)
Sodium (Nondirect)

HAEMOLYTIC ANAEMIA:

G6P-DH
Haptoglobin
LDH

HEPATIC FUNCTION:

Albumin
Aldolase
Alkaline Phosphatase
Alpha-I Antitrypsin
ALT
Ammonia
AST (GOT)
Cholinesterase

Complement Component 3
Complement Component 4
Direct Bilirubin
Gamma GT
GLDH
Glycerol
Haptoglobin
IgA
IgG
IgM
Iron (UIBC)
LAP
LDH
Total Bilirubin
Total Protein
Transferrin
Transthyretin (Prealbumin)

INFLAMMATION AND INFECTION:

Alpha-I Acid Glycoprotein
ASO
CRP
Lactate
Rheumatoid Factor

LIPIDS:

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

NEONATAL SCREENING:

Alpha-I Antitrypsin
CRP
CRP Full Range (0.3-160mg/l)
CRP High Sensitivity
IgE
Transthyretin (Prealbumin)

NEUROLOGICAL DISORDERS (CSF):

IgA
IgG
IgM

NUTRITIONAL STATUS:

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

PANCREATIC FUNCTION:

Amylase
Glucose
LDH
Lipase
Pancreatic Amylase

RENAL FUNCTION:

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

VETERINARY

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

TOXICOLOGY

THERAPEUTIC DRUGS:

Acetaminophen	Phenobarbitol
Carbamazepine	Phenytoin
Digoxin	Salicylate
Gentamicin	Theophylline
Lithium	Valproic Acid

DRUGS OF ABUSE:

Amphetamines	Ecstasy
Barbiturates	EDDP
Benzodiazepines	Ethanol
Cannabinoids	Methadone
Cocaine metabolite	Opiates

PROTEIN

SPECIFIC PROTEINS:

Alpha-1 Antitrypsin	ASO	Cystatin C	IgM
Alpha-1 Acid Glycoprotein	Beta-2 Microglobulin	Ferritin	Lipoprotein (a)
Apolipoprotein A-1	Ceruloplasmin	Fructosamine	Microalbumin
Apolipoprotein AII	Complement Component 3	Haptoglobin	Myoglobin
Apolipoprotein B	Complement Component 4	HbA1c/Hb	Rheumatoid Factor
Apolipoprotein CII	CRP	IgA	Transthyretin (Prealbumin)
Apolipoprotein CIII	CRP Full Range (0.3-160mg/l)	IgE	Transferrin
Apolipoprotein E	CRP High Sensitivity	IgG	

RESEARCH

ANTIOXIDANTS:

Albumin
Bilirubin
Ferritin
Glutathione Reductase
Ransel (Glutathione Peroxidase)
Ransod (Superoxide Dismutase)
TIBC
Total Antioxidant Status
Transferrin
Uric Acid

FOOD AND WINE TESTING:

Acetic acid
Ammonia
Copper
Ethanol
Glucose/fructose
Lactic acid
Malic acid
NOPA
Potassium
TAS
Total SO₂

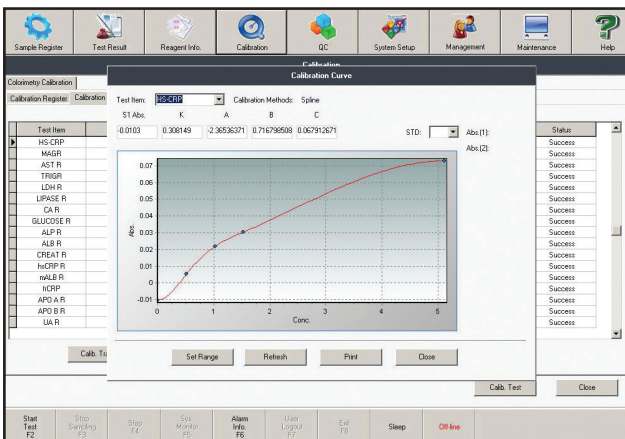
BIOTECHNOLOGY:

Glutamate
Glutamine

SPECIALITY:

Acid phosphatase

The intuitive software allows easy access to information and control of operations from the main screen with informative tabs which ensures straight forward operation.



Calibration Screen

CALIBRATION

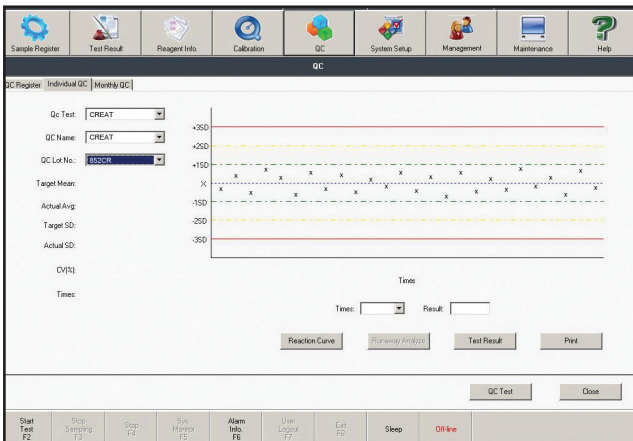
- Register calibration, review calibration data and displays multipoint calibration curves

REAGENT INFORMATION

- Registration & reagent inventory information
- Monitors and controls reagent inventory

RESULTS

- Review, query, download & print results
- View reaction curves



Quality Control Screen

QUALITY CONTROL

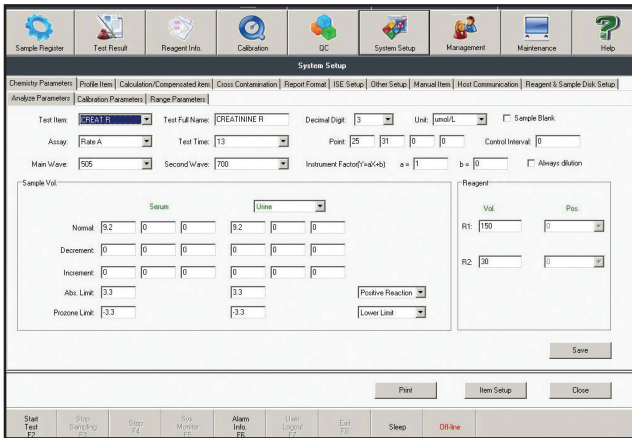
- QC registry, generation of Levey-Jennings charts & analysis of QC statistics allows assessment of results

SYSTEM SETUP

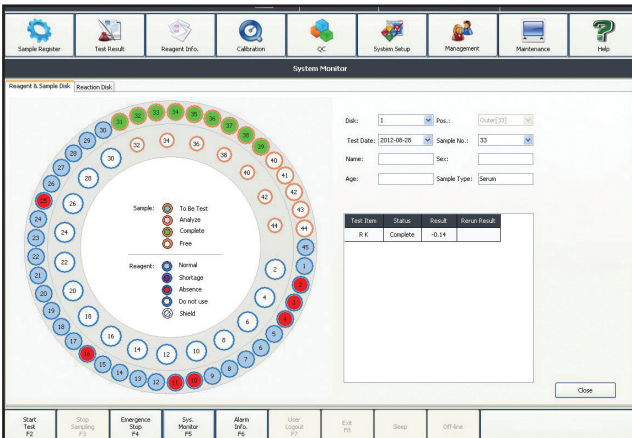
- Define system parameters
- LIS communication set up
- Single reagent & sample carousel

SYSTEM MANAGEMENT

- Displays full patient demographics
- View workload statistics
- Database backup & restore



Parameter Screen



Run Monitor Screen

● MAINTENANCE

- Periodical maintenance & check-up, minimal daily maintenance required
- Robust parts

● ONLINE HELP GUIDE

- Guides user through analyser functions
- Troubleshooting tool for chemistry and maintenance queries

● REDUCED DOWNTIME

- Save on time and costs with secure remote diagnostics allowing immediate support from expert technical and applications staff, anytime, anywhere

● CONNECTIVITY

- Software capable of connecting to LIS

● USER - FRIENDLY INTERFACE

- Familiar Microsoft Windows® based software offers ease of navigation
- Intuitive symbol based software results in minimal training requirements and enhanced productivity

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 ≥ 3 , positions for samples ≥ 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 volume	0-350 μ l (1 μ l increments)
Reagent container	20ml and 70ml
Sample type	Serum, plasma, urine, CSF, & supernatants
Sample volume	3-35 μ l (0.1 μ l increments)
Sample dead volume	100 μ l/50 μ l (paediatric)
STAT Sampling	STAT priority function available

REACTION SYSTEM

Reaction time	13 minutes
Reaction volume	150-550 μ l
Stirring System	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
Cycle time	15 seconds

OPTICAL SYSTEM

Incubator temperature	37°C \pm 0.1°C
Light Source	Long life quartz halogen lamp (water cooled)
Detection principal	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	\pm 2nm
Absorbance range	0 to 3.3 Abs

CALIBRATION & QC

Calibration principal

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® XP/Windows® 7

POWER REQUIREMENTS

Power supply

240 VAC

50Hz/60Hz

Power output

650VA

ORDERING INFORMATION

RX monaco analyser

RX5000

RX monaco analyser with stand

RX5001





A-Z TEST MENU

Acetaminophen
Acetic Acid
Acid phosphatase
Adiponectin
Albumin
Aldolase
Alkaline Phosphatase
Alpha-1 Acid Glycoprotein
Alpha-1 Antitrypsin
ALT
ALT (GPT)
Ammonia
Amphetamines
Amylase
Apolipoprotein A-I
Apolipoprotein All
Apolipoprotein B
Apolipoprotein CII
Apolipoprotein CIII
Apolipoprotein E
ASO
AST (GOT)
Barbiturates
Benzodiazepines
Beta-2 Microglobulin
Bile Acids
Bilirubin (Direct & Total)
Calcium
Canine CRP
Cannabinoids
Carbamazepine
Ceruloplasmin
Chloride (Non-Direct)
Cholesterol
Cholinesterase
Cholinesterase (Butyryl)
CK-MB
CK-NAC
CO₂ Total
Cocaine metabolite
Complement Component 3
Complement Component 4
Copper
Creatinine (Jaffe)
Creatinine Enzymatic
CRP
CRP Full Range (0.3-160mg/l)
CRP High Sensitivity
Cystatin C
Digoxin
Ecstasy
EDDP
Ethanol
Ferritin
Fructosamine
G-6-PDH
Gamma GT
Gentamicin
GLDH
Glucose

Glucose/Fructose
Glutamate
Glutamine
Glutathione Peroxidase (Ransel)
Glutathione Reductase
Glycerol
Haptoglobin
HbA1c/Hb
HDL Cholesterol (Direct)
Heart-Type Fatty Acid Binding Protein (H-FABP)
Homocysteine
Hydroxybutyrate (Ranbut)
IgA
IgE
IgG
IgM
Iron
Lactate
LAP
LDH
LDL Cholesterol (Direct)
Lipase
Lipoprotein (a)
Lithium
L-Lactic Acid
Magnesium
Malic Acid
Methadone
Microalbumin
Myoglobin
NEFA (Non-Esterified Fatty Acids)
Opiates
Pancreatic Amylase
Phenobarbitol
Phenytoin
Phosphorus
Potassium (Non-Direct)
Rheumatoid Factor
Salicylate
sLDL
Sodium (Non-Direct)
Superoxide Dismutase (Ransod)
Theophylline
TIBC
Total Antioxidant Status
Total Protein
Transferrin
Transthyretin (Prealbumin)
Triglycerides
TxB Cardio
Urea
Uric Acid
Urinary Protein
Valproic Acid
Zinc

RX series

The RX series has been developed by Randox to meet the growing needs of clinical laboratory testing. Robust hardware combined with intuitive software ensures exceptionally low downtime with unrivalled precision and accuracy for results you can trust.



● RX monza

The RX monza is a compact semi-automated analyser with astonishing functionality, offering 192 channels, 79 of which have dedicated parameters. The RX monza will open exciting opportunities for both routine and specialised testing including coagulation testing.



● RX monaco

The RX monaco is a fully automated random access clinical analyser capable of carrying out 170 tests per hour. It provides unrivalled performance for low to mid volume testing.



● RX daytona+

Superior performance for mid volume laboratories. The RX daytona+ is capable of running 270 photometric tests per hour or 450 tests per hour including ISEs.



● RX imola

Efficiency for medium sized laboratories. The RX imola is a random access benchtop clinical analyser with a throughput of 560 tests per hour including ISEs.

RX series

Precision. Reliability. Accuracy.



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) 2151/93 706-11



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 22 6714 0600



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



Portugal
Irlindox 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



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



Vietnam
Randox Laboratories Ltd.Vietnam
Tel: +84-8-39 11 09 04

RANDOX

Randox Laboratories Ltd, 55 Diamond Road, Crumlin, County Antrim, United Kingdom, BT29 4QY
T +44 (0) 2894422413 F +44 (0) 2894452912 E marketing@randox.com I www.randox.com