



CE

RANDOX

RX imola

Rapid, comprehensive clinical chemistry testing on a superior fully automated analyser



RX series

Precision. Reliability. Accuracy.

The RX imola is a cost effective system that delivers consistent high quality results. Capable of handling the workload of a medium to high throughput laboratory the RX imola provides rapid, comprehensive testing on a small footprint analyser.

Reagent Carousel

- Reagents cooling 8-15 °C
- 60 cooled positions for 20ml, 50ml & 100ml bottles
- Automatic barcode for reagent identification



Dual Stirrers

- Dual 5 speed
- Stirrers rinsed with purified water



System Overview

The RX imola is a fully automated system with random access and STAT sampling functionality, boosting productivity and saving time when it matters most.

Wash Station

- 8 stage washing system
- Includes acid, alkali and pure water wash steps
- Cuvettes have a curved inner surface to aid efficient cleaning and drying



Sample Carousel

- Removable carousel with 72 positions for samples
- Immediate sample interruption for addition of samples via removable panel
- Barcode sample identification



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RX imola

- 400 photometric tests per hour & up to 560 including ISE
- Versatile reagent carousel with 60 cooled positions
- Universal sample carousel with 72 positions for samples, 20 cooled positions for controls and calibrators
- Separate cooled inner carousel for controls and calibrators
- Integrated barcode readers for reagent and sample management
- Dual 5 speed stirrers rinsed with purified water
- Liquid level sensor, crash, bubble and clot detection
- Low reagent volume – R1: 150-350 μ l (1 μ l increments) R2: 20-250 μ l (1 μ l increments) & sample volume of just 2-35 μ l (0.1 μ l increments)
- Unique loading hatch allows emergency samples to be analysed quickly and easily at any time
- Extensive dedicated test menu consolidates your testing requirements
- Low water consumption of just 18 litres per hour
- Intuitive user friendly software (Windows[®])
- Up to 10 user defined multipoint rules as with 6 different calibration options available to ensure the most accurate results
- 90 permanent Pyrex[®] cuvettes with cuvette check function ensuring only clean and viable reaction vessels are reused

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Benefits at a glance

Optimal Performance

- Dual reagent probe minimizes carry over increasing accuracy and throughput
- Five speed mixing arms eliminate foaming and ensure adequate mixing of latex enhanced immunoturbidimetric reagents
- 90 cuvettes onboard with cuvette check function ensuring only clean and viable reaction vessels are reused International accreditation CE, FDA and UL certification

High Throughput

- 400 photometric tests per hour
- 240 ISE tests per hour
- 560 maximum throughput

Advanced QC Capabilities

- 6 different calibration options available increases confidence that the optimum algorithm is being used to achieve the most accurate results
- Automatically generates Levey-Jennings Charts, running mean values and QC statistics
- Up to 10 user defined multipoint rules

Time Saving

- Automatic sample re-runs allows staff to prioritise their time
- Programmable test profiles remove the need to manually programme tests
- Up to 50 reference ranges can be specified for each assay
- Pre-programmed settings for all dedicated barcoded reagents and closed channels removes the need to input parameter manually - select 60 parameters at any one time from a database of 500
- User defined auto start function allows priming and washing to be done out of hours

Highly Accurate Testing

- Integrated ISE unit for sodium, potassium and chloride
- Serum indices check the integrity of patient samples flagging if samples are deemed icteric, haemolytic or lipaemic
- Dedicated micropipette facilitates crash protection, bubble and four levels of clot detection

Flexibility

- RX imola is capable of running monochromatic, bi-chromatic, endpoint, kinetic, ISE, sample blanking and reagent blanking assays
- 12 wavelengths can be generated via diffraction grating

Advanced Onboard Stability

- Cooled reagent carousel with 60 positions (30 positions for 100ml or 50ml bottles and 30 positions for 20ml bottles)
- Cooled sample carousel with 72 positions for samples, 20 cooled positions for controls and calibrators

STAT Sampling

- Unique loading hatch allows emergency samples to be analysed quickly and easily during run

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)
Bile Acids

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 All
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	CO2 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-I	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 SO ₂

BIOTECHNOLOGY:

Glutamate
Glutamine

SPECIALITY:

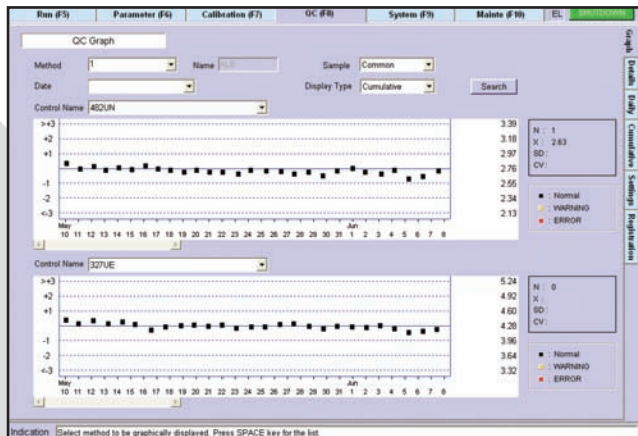
Acid phosphatase

RX series

Precision. Reliability. Accuracy.



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



Quality Control Screen

Quality Control

- Levey-Jennings charts, running mean values and QC

Run Monitor

- Displays full patient demographics
- View status in real time including time to completion

Chemistry Parameter Screen

- Set up to 20 test profiles and define order of analysis
- Enables sample dilution and test re-runs

Maintenance Screen

- Less than 5 minutes daily maintenance required



Calibration Screen

Calibration Screen

- Sets calibrator serial dilution and displays multipoint calibration curves

Results Screen

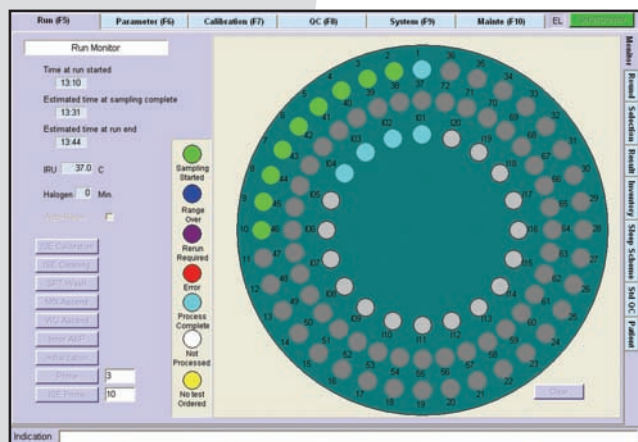
- Download and print results

Easy to Follow Reports

- View real time results status, including time to completion

Connectivity

- Software capable of connecting to LIMS system via RS232 standard



Run Monitor Screen

Intuitive Operations

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

Reduced Downtime

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

Specifications

PHYSICAL DIMENSION

Height	690 mm, 27in
Depth	582 mm, 23in
Width	970 mm, 38in
Weight	150kg, 331lbs

PERFORMANCE CHARACTERISTICS

Throughput	400 photometric tests per hour; 240 ISE tests per hour
Analyser accreditation	CE marking in compliance with In Vitro Diagnostic Medical Device Directive 98/79/EC, FDA 510k cleared and UL certification
Analyser type	Compact fully automated random access bench top clinical analyser
Assay tests	Endpoint, kinetic, biochromatic, turbidmetric, sample blanking, reagent blanking and ISE
Maintenance	Daily maintenance-less than 5 minutes. No rear access required. Simple twice yearly preventative maintenance service.
Data management	Storage of up to 30,000 patient reports, search facility, test counter
Test channels	60 photometric channels, 3 direct ISE tests - sodium, potassium and chloride
Sleep mode	User defined sleep mode capabilities with automatic wash and instrument prep

REAGENT & SAMPLE SYSTEM

Reagent capacity	Removable tray with 60 cooled positions (30 positions for 100 or 50ml bottles and 30 positions for 20ml bottles)
Reagent cooling	8-15°C
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
Reagent volume	RPT1: 150 to 350µl, RPT2: 20-250µl (in 1µl increments)
Sample addition	Immediate sampling interruption for addition of samples via removable panel
Sample capacity	Removable tray with 72 positions for samples, 20 cooled position for controls and calibrators
Sample dead volume	100µl in primary tubes
Sample dilution	Pre-dilution and automatic re-assay with diluted, reduced or increased sample volume Dilution mixture 100-350µl consisting of 2 –35µl of sample and 20 – 350µl of diluent
Sample identification	Barcode sample identification
Sample pipette	Dedicated sample micropipette with liquid level sensor, crash detection, bubble detection and 4 levels of clot detection. Rinsed inside and outside with purified water
Sample tube Size	Multiple primary tube sizes (diameter 13 to 16mm, height 75 to 100 mm), paediatric cups
Sample type	Serum, Plasma, Urine, CSF and supernatant
Sample volume	2 to 35µl (0.1µl increments)
STAT sampling	Immediate STAT sampling interruption

REACTION SYSTEM

Minimum reaction volume	150µl
Stirring speed	Dual 5-speed rotating stirrers rinsed with purified water
Stirring system	Paddle type rotating stirrer cleaned with purified water

Temperature	37°C±0.3
Cuvettes	90 reusable Pyrex® cuvettes with 5-year lifespan, min volume 150µl, Max volume 450µl, 8-stage cuvette washing system
Cuvette size	8 (W) × 6.23 (D) × 30 (H)mm
Cycle time	9 seconds
Water consumption	18L per hour
Water requirements	NCCLS type 1 or 2 purified water supply at pressure [0.15-0.34Mpa]

OPTICAL SYSTEM

Detector method	Direct absorbance in cuvette (bichromatic and monochromatic)
Detection principal	12 wavelengths: 340, 380, 415, 450, 510, 546, 570, 600, 660, 700, 750 and 800 nm
ISE tests	Integrated ISE unit
Light source	Halogen tungsten lamp (air-cooled, 6 months service life)

CALIBRATION & QC

Quality control	Interactive Levey Jennings Charts, Daily, Monthly and Batch QC with data archiving, Automatic QC and Automatic calibration
Calibration principal	Factor; Linear, 2 point, point to point, spline, log-logit and exponential. Up to 7 calibrators per test

POWER & CONNECTIVITY

Input voltage	100 - 240Vac
Power consumption	<900 VA
UPS requirements	1230 W (analyser and PC)
LIMS connectivity	Bi-directional; ASTM standard (RS232 connection)

OPERATING SYSTEM

Operator interface	15" LCD display and printer externally connected. Windows® based user Interface 100-249 VAC, 1230 Watt approx
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ORDERING INFORMATION

RX imola analyser with ISE

RX4900

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-1
Apolipoprotein AII
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
Phenobarbital
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

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 400 photometric tests per hour or 560 tests per hour including ISEs.



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Learn more at

