



BA-200

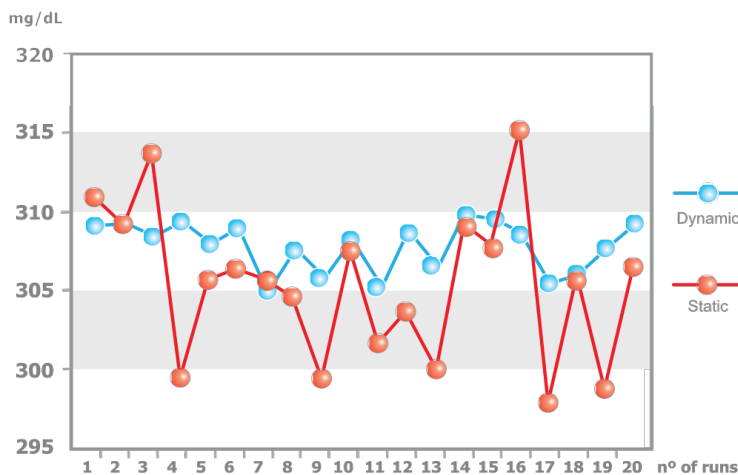
AUTOMATED CLINICAL CHEMISTRY ANALYZER

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STAT and Routine Laboratories Benchtop Random Clinical Chemistry Analyzer

For 35 years Biosystems, S.A. develops IVD products at its facilities in Barcelona (Spain). The quality of our product, together with a personalized Customer Support have been and remain our main business philosophy. Through this experience we can now present our first benchtop analysis system with the most advanced technological features in electronics, design and reliability. The new BA200 joins the BA family, which together with the BA400 offers a wide spectrum of attention to the clinical laboratory with an excellent quality / price ratio.



Dynamic Baseline LED technology

A new more precise measurement algorithm for cuvette blanking allows better trueness in samples of low concentration / catalytic activity along with an improvement in precision.



High reagent and sample capacity (88 positions), the highest grade in flexibility

Any position can be loaded either with a reagent bottle or a sample tube/pediatric well, (samples, controls or standards).

All of them fully accessible to barcode reader.

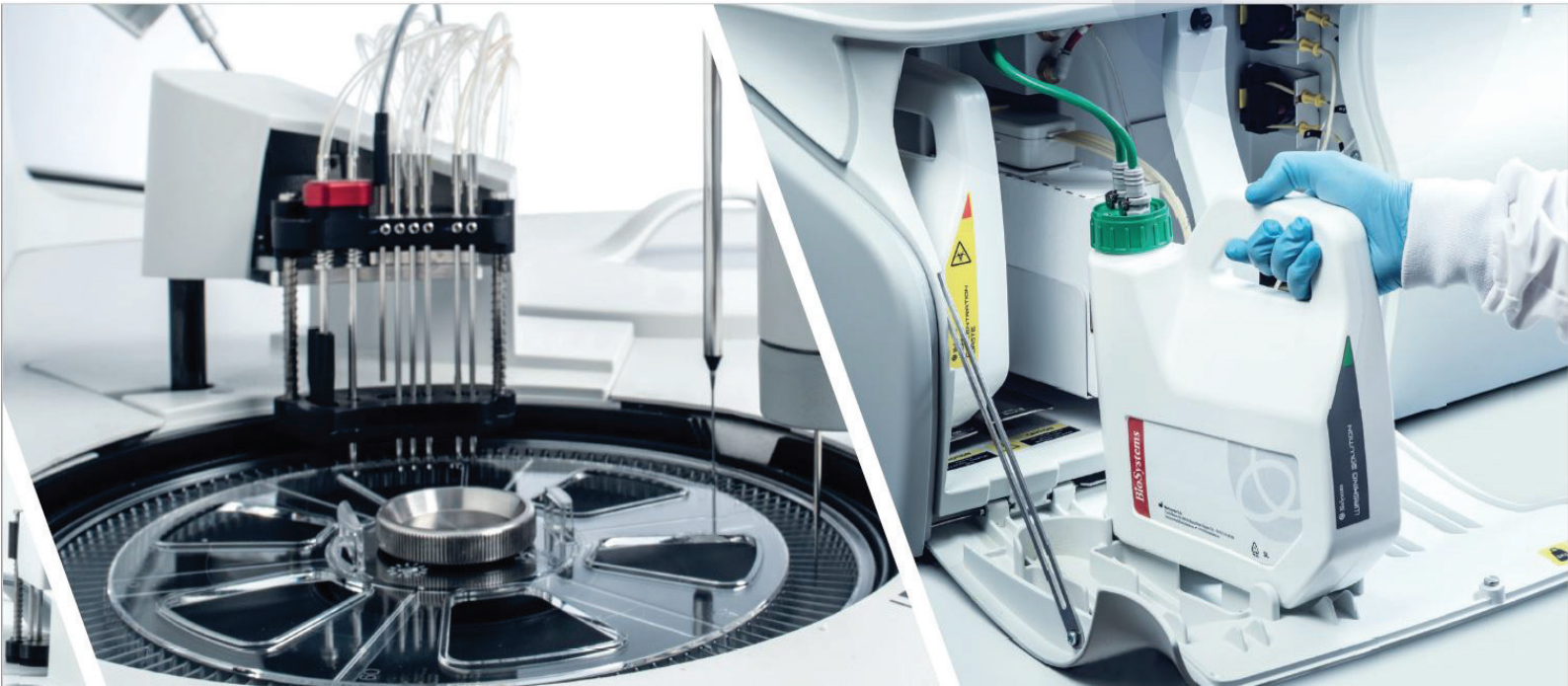


Barcoded dedicated reagents

The BA has several kit sizes suitable for high and low turnover.

Highly accurate dosing

Making the most of reagents with a precise control in consumption of calibrators, controls and reagents.



120 - cuvette rotor with washing station

All 120 cuvettes are easily changed in only one step while all of them are optically checked. Continuous management of optical quality.

Compact system with low maintenance

No additional elements required to be connected out of the analyzer. Long durability pump and LED light sources maintenance - free. Individual collection of High Contamination Waste. Up to 7h of continuous workload.



When time matters, Real 200 t/h throughput

Even with double reagent reactions, the analyzer keeps its speed. Up to 4 volumes can be handled in every cycle.



Technical Specifications

General Performance

Throughput	200 test/h (without electrolytes)
Combined Throughput (ISE+Photometry)	267 test/h (3 channels)
Principles of analysis	300 test/h (4 channels)
	Colorimetry, turbidimetry, ISE method:Na+,K+,Cl- (Li+ as optional)

Sample and reagent handling

Capacity of rotor	88 (44 bottles of 20 mL, 60 mL or sample tube + 44 bottles of 20 mL or sample tubes)
Barcode Detector	Yes
Sample tube size	Diameter from 12 mm to 16 mm (height up to 100 mm)
Pediatric well	13.5 mm diameter
Type of syringe	Ceramic piston pump with low maintenance
Pipetting volume	from 2 µL to 40 µL
Pipetting resolution	0.1 µL
Dilution (Pre/Post) Ratio	From 1:1 to 1:200
Level detection	Yes
Tip wash	Inside and outside
Clot detector	Yes
Vertical collision detector	Yes
Volume of reagent bottles	20 mL, 60 mL
Cooling Unit	Yes (Samples & Reagents)
Temperature range of refrigerator	From 6° C to 11° C (measured at 21° C)
Reagent volume R1	From 90 µL to 300 µL
Reagent volume R2	From 10 µL to 100 µL

Reactions rotor

Minimum reaction volume	180 µL
Maximum reaction volume	440 µL
Number of wells	120
Well material	UV methacrylate
Type of incubation	5 min (fixed)
Temperature reaction rotor	37° C
Accuracy of temperature	± 0.2° C
Temperature stability	± 0.1° C
Mixers	1

Cuvette washing system

Washing station type	7 step with drying
Consumption of washing solution	1.42 mL/cycle (=7.11 µL cws*)

Optical System

Light Source	LED + Hard Coating filter
Number of wavelengths	8
Wavelengths	340 - 405 - 505 - 535 - 560 - 600 - 635 - 670 nm
Filters bandwidth	± 2 nm
Photometric range	-0.2 to 3.5 A
Internal resolution	0.0001
Detector	Main Photodiode + reference photodiode
Measurement accuracy (for 340 nm, 405 nm and 505 nm)	CV < 1% at 0.1 A CV < 0.1% at 2 A

ISE Module (optional)

Sample type	Serum, Plasma or Urine
Electrode type	Na +, K +, Cl -, Li + (optional)
Sample volume	Serum: 100 µL / Urine: 200 µL

Environmental Requirements

Ambient temperature	10° C to 35° C
Relative humidity	10° C to 30° C (With ISE module) <85% without condensation

Dimensions and weight

Dimensions (width, depth and height)	1077 mm x 690 mm x 680 mm
Weight	166 Kg

Electrical Requirements

Mains voltage	115 V to 230 V
Mains frequency	50 Hz or 60 Hz
Electric power	Max. 500 VA Average power: 260 VA

Fluidic Requirements

Water inlet	External tank or mains water supply
Type of water	Purified type II (CLSI)
Water consumption	<9 L/h
High concentration waste tank	2.4 L
Washing solution tank	2.4 L



Biochemistry

Code	Test	Presentation	
		R1	R2
21550	α -Amylase-Direct	8x20 mL	
21534	α -Amylase-EPS	2x60 mL	2x15 mL
21799	α -Amylase Pancreatic	2x60 mL	2x15 mL
2153	Alanine Aminotransferase (ALT/GPT)	8x60 mL	8x15 mL
21547	Albumin	10x60 mL	
21592	Alkaline Phosphatase (ALP)-AMP	4x60 mL	4x15 mL
21590	Alkaline Phosphatase (ALP)-DEA	4x60 mL	4x15 mL
21531	Aspartate Aminotransferase (AST/GOT)	8x60 mL	8x15 mL
21798	Bilirubin (Direct)	4x60 mL	3x20 mL
21510	Bilirubin (Total)	8x60 mL	8x15 mL
21570	Calcium-Arsenazo	10x60 mL	
21558	Carbon Dioxide	2x60 mL	
21505	Cholesterol	10x60 mL	
21557	Cholesterol HDL Direct	2x60 mL	2x20 mL
21585	Cholesterol LDL Direct	2x60 mL	2x20 mL
21588	Cholinesterase (CHE)	2x60 mL	2x15 mL
21790	Creatine Kinase (CK)	2x60 mL	2x15 mL
21792	Creatine Kinase-MB (CK-MB)	2x60 mL	2x15 mL
21502	Creatinine	5x60 mL	5x60 mL
21520	γ -Glutamyltransferase (γ -GT)	4x60 mL	4x15 mL
21503	Glucose	10x60 mL	
21509	Iron-Ferrozine	4x60 mL	4x15 mL
21580	Lactate Dehydrogenase (LDH)	8x60 mL	8x15 mL
21586	Lactate Dehydrogenase (LDH)-IFCC	8x60 mL	8x15 mL
21793	Lipase	2x50 mL	1x20 mL
21797	Magnesium	2x60 mL	2x15 mL
21508	Phosphorus	4x60 mL	2x50 mL
21500	Protein (Total)	10x60 mL	
21501	Protein (Urine+CSF)	4x60 mL	
21528	Triglycerides	10x60 mL	
21516	Urea/BUN-UV	8x60 mL	8x15 mL
21521	Uric Acid	10x60 mL	

Turbidimetry

Code	Test	Presentation	
		R1	R2
22324	Albumin (Microalbuminuria)	4x60 mL	4x15 mL
22923	Anti-Streptolysin O (ASO)	2x60 mL	2x15 mL
22936	Antithrombin III	2x60 mL	2x15 mL
22928	α-1-Acid Glycoprotein	2x60 mL	
22491	α-1-Microglobulin	2x60 mL	2x15 mL
22095	Apolipoprotein A-I (APO A-I)	2x60 mL	2x15 mL
22098	Apolipoprotein B (APO B)	2x60 mL	2x15 mL
22925	b2-Microglobulin	2x60 mL	2x15 mL
22084	Complement Component C3	2x60 mL	
22085	Complement Component C4	2x60 mL	
22921	C-Reactive Protein (CRP)	4x60 mL	4x15 mL
22927	C-Reactive Protein-hs (CRP-hs)	2x60 mL	2x15 mL
22044	Hemoglobin A1C-turbi	75 mL	
22934	Ferritin	2x50 mL	1x50 mL
22082	Immunoglobulin A (Ig A)	2x60 mL	
22081	Immunoglobulin G (Ig G)	2x60 mL	
22083	Immunoglobulin M (Ig M)	2x60 mL	
22929	Prealbumin	2x60 mL	
22922	Rheumatoid Factors (RF)	4x60 mL	4x15 mL
22091	Transferrin	2x60 mL	



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