cobas®

Roche

cobas® b 123 POC system

Focus on what matters

The **cobas**® b 123 POC system is a fully automated system and intended for professional use in near-patient or laboratory settings.

With flexible configurations and a throughput of up to 30 samples per hour, the **cobas** b 123 POC system can easily be customized to the clinical needs of the ICU, ER, NICU, OR*, dialysis units or the laboratory.

ICU: intended care unit; ER: emergency room; NICU: neonatal intensive care unit: OR: operation room

cobas® b 123 POC system supports you in managing high demand with low personnel resources, and making right decisions with a fast and easy blood gas result.

Simplicity
- No preventative maintenance
- Automated clot elimination
- Integrated consumables

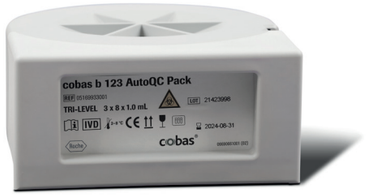
Compact
- Compact design with small footprint
- Broad parameter panel
- Multiple options of sample type and volume

Flexibility
- Multiple configuration options with instrument and consumables
- Transferable consumables reduce waste
- Mobile cart (optional) makes **cobas** b 123 moveable

cobas® b 123 POC system at a glance

01 **cobas b 123 instrument**
Four instrument configuration options:
Type 1: without AutoQC and COOX
Type 2: with AutoQC
Type 3: with COOX
Type 4: with AutoQC and COOX

02 **Sensor cartridge**
BG* + Hct
BG + Hct + ISE**
BG + Hct + ISE + Glu
BG + Hct + ISE + Glu + Lac



03 **Automatic quality control (AutoQC pack)**
24 controls/package:
3 level with 8 ampoules per level

04 **Fluid pack**

With CO-oximetry (COOX):	200 tests/pack
	400 tests/pack
	700 tests/pack
Without CO-oximetry (non-COOX):	200 tests/pack
	400 tests/pack
	700 tests/pack

05 **cobas b 123 mobility cart**
By putting the **cobas** b 123 and UPS*** backup on the moveable mobility cart, the **cobas** b 123 can be used wherever it is needed - near patients.

* BG = pH, pCO_2, pO_2
** ISE = Na^+, K^+, Ca^{2+}, Cl^-
*** UPS = uninterruptible power supply

Key system features

Compact

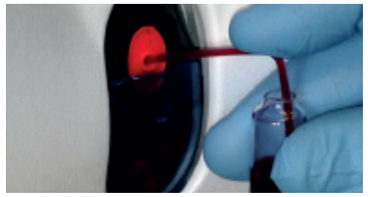
- Compact design: Small footprint with touch screen and integrated printer means that the analyzer can fit into departments where space is at a premium.
- Broad parameter panel: To meet various parameter combinations needed by different health care setups.
- Multiple sample types and volumes: The system can measure whole blood, dialysis solutions and aqueous solutions, from full sample volume to micro sample volume with syringe or capillary to fulfill the needs of critical patient cares

Flexibility

- Multiple configuration options: Different instrument, sensor cartridge and fluid pack configurations allow flexibility for different sample throughputs and parameter needs. AutoQC and oximeter modules are available as optional features.
- Transferable consumables: Reducing waste of tests and offering flexibility in inventory management, by swapping consumables between instruments.
- Mobile cart (optional) makes **cobas** b 123 moveable : With the **cobas** b 123 mobility cart, the instrument can be moved to the location where it is needed.

Simplicity

- No preventative maintenance: All traditional routine maintenance parts are contained in the fluid pack. The sensor cartridge is designed as low maintenance as well. The system is always ready for the next measurement.
- Automated clot elimination: The system detects clots before they reach the sensor and separates them into the waste container. This significantly reduces downtime and time-consuming manual clot elimination procedures. There is no need to use special syringe for clot prevention and no additional cost.
- Integrated consumables: three consumables (sensor cartridge, fluid pack & AutoQC). Sensor cartridge combines up to 10 parameters. Fluid pack contains all 5 working solutions and 2 waste storages to minimize the frequency of consumable replacement.



Change the standard care to a better care

Use Micro Modes where it matters

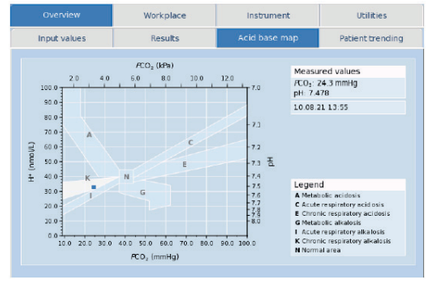
The **cobas** b 123 POC system requires 123 µL for the full panel. However, if sample volume matters you can use a micro mode to measure a limited panel. Starting with just 25 µL for the COOX* means you are able to diagnose your most vulnerable patients with less sample.

Activated parameters	Sample volume
COOX only	25 µL
BG	37 µL
BG + COOX	55 µL
BG + ISE + Hct + Glu + Lac	102 µL
BG + ISE + Hct + Glu + Lac + COOX	123 µL

Acid-base map

It takes time to manually perform calculations based on blood gas results in order to diagnose the type of acid-base disorder (such as metabolic and respiratory acidosis and alkalosis) and choose the right treatment. The **cobas** b 123 automatically provides real-time, graphical acid-base maps to aid in identifying acid-base physiology disorders from pH and pCO_2 measurements, supporting clinicians in making the right decision.

- Differentiate between acute and chronic patient conditions in complex environments such as the ER or ICU
- Rapidly identify metabolic and respiratory acid-base disturbances without the need for a calculator



Acid-base map

v-TAC software – Get arterial blood gas values from venous blood**

Arterial blood gas is the gold standard for acid-base and blood gas testing in critical care. However, arterial punctures are complex, painful for the patient and come with a risk of side effects such as hematoma and infections.[1,2] Roche v-TAC software calculates arterial blood gas values from venous peripheral blood gas measurement results obtained on **cobas** b 123 analyzer, combined with arterial oxygen saturation (SpO_2***) measured by a pulse oximeter. Roche v-TAC may contribute to clinical, workflow and patient benefits.[3,4]

- Improve patient screening in the emergency department
- Gain easier access to arterial blood gas values
- Improve patient experience

Oxygen Saturation** → Venous Sample → v-TAC conversion → Calculated arterial blood bloos gas results

*COOX: CO-oximetry (measuring tHb, O_2Hb, HHb, CoHb, MetHb, SO_2, Bili.)

**v-TAC software is only available in specific markets. Please contact your local Roche Point of Care contact to get more information.

***SpO_2: measured by pulse oximetry

Technical specifications

cobas b 123

Instruments	Variant	Measured parameters	Optional modules
	cobas b 123 <1> POC system	BG (pH, pO_2 , pCO_2), ISE (Na^+, K^+, Cl^-, Ca^{2+}), Hct, Glu, Lac	–
	cobas b 123 <2> POC system	BG (pH, pO_2 , pCO_2), ISE (Na^+, K^+, Cl^-, Ca^{2+}), Hct, Glu, Lac	AutoQC module
	cobas b 123 <3> POC system	BG (pH, pO_2 , pCO_2), ISE (Na^+, K^+, Cl^-, Ca^{2+}), Hct, Glu, Lac, tHb, O_2Hb, HHb, COHb, MetHb, SO_2, Bili	Oximeter module
	cobas b 123 <4> POC system	BG (pH, pO_2 , pCO_2), ISE (Na^+, K^+, Cl^-, Ca^{2+}), Hct, Glu, Lac, tHb, O_2Hb, HHb, COHb, MetHb, SO_2, Bili	AutoQC module & Oximeter module
Parameters	17 measured parameters + 40 calculated parameters		
Sample throughput	30 samples/hour		
Sensor cartridge types	• BG + Hct • BG + ISE + Hct • BG + ISE + Hct + Glu • BG + ISE + Hct + Glu + Lac		
Sample types	• Whole blood • Dialysis solutions • Aqueous solutions • Recommended QC material		
Sample volume	25 – 123 µL (depending on parameter configuration, Hct concentration and sample mode)		
Measurement principles	• Electrochemical principle • Electrical principle • Optical principle		
Physical dimensions	Width: 32 cm Height: 47 cm Depth: 37 cm		
Weight	20 kg (without Fluid Pack and AutoQC Pack) 24.5 kg (with Fluid Pack and AutoQC Pack)		

References

1. World Health Organization (2010), WHO guidelines on drawing blood: best practices in phlebotomy, pp31-32.
2. Hambsch et al. (2015). Clin Transl Sci 8. 857-870.
3. Ekström et al. (2019). Calculated arterial blood gas values from a venous sample and pulse oximetry: Clinical validation. PLoS ONE 14(4):e0215413.
4. Kamperidis et al. (2018). Optimizing acute non-invasive ventilation care in the NHS; the v-TAC approach. Thorax 2018;73(Suppl 4):A1–A282.
5. Roche (2022). **cobas** b 123 POC system Instructions for Use, version 13.0.

Published by
Roche Diagnostics International Ltd
CH-6343 Rotkreuz
Switzerland

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