RADIOMETER

CONFIDENCE IN EVERY RESULT

AQM on the **ABL**90 FLEX PLUS

AQM's real-time detection, correction, and reporting helps you deliver better patient care

Automatic Quality Management (**AQM**) is an intuitive, built-in quality assurance system within the **ABL**90 FLEX PLUS analyzer. It works seamlessly to improve the reliability of your blood gas analysis by performing five key checks— calibration, QC, analysis, system, and advanced clot checks.

With real-time detection and automatic correction of issues, **AQM** helps you minimize errors and reduce the need for retesting. It also makes it easier to stay compliant with regulatory standards, with automated activity logging and report building, providing you with clear visibility into quality metrics. This way you can be confident you are getting high-quality results.

DETECTION

- ✓ Calibration checks
- ✓ QC checks
- ✓ Analysis checks
- ✓ System checks
- ✓ Advanced clot check

CORRECTION

- ✓ **Automatic corrective actions**
  Reduce downtime
- ✓ **Intelligent trouble shooting**
  Maximize consumable use and increase uptime

REPORTING

- ✓ **Lab standard**
  Levey-Jennings plots, QC statistics, activity log
- ✓ **Comprehensive reports**
  Full traceability and inspection readiness

AQM boosts your confidence and helps compliance

Continuous error detection, with thorough checks on every sample and automatic corrective actions, means results you can trust

With higher confidence in your results, you'll reduce the need for retesting saving, costs and time

Automated quality management, along with the right documentation, makes compliance tasks easier

What powers **AQM**?

A sealed, stable analytical system

Real-time, built-in QC and calibration checks on six* dedicated solutions, ensuring uninterrupted performance

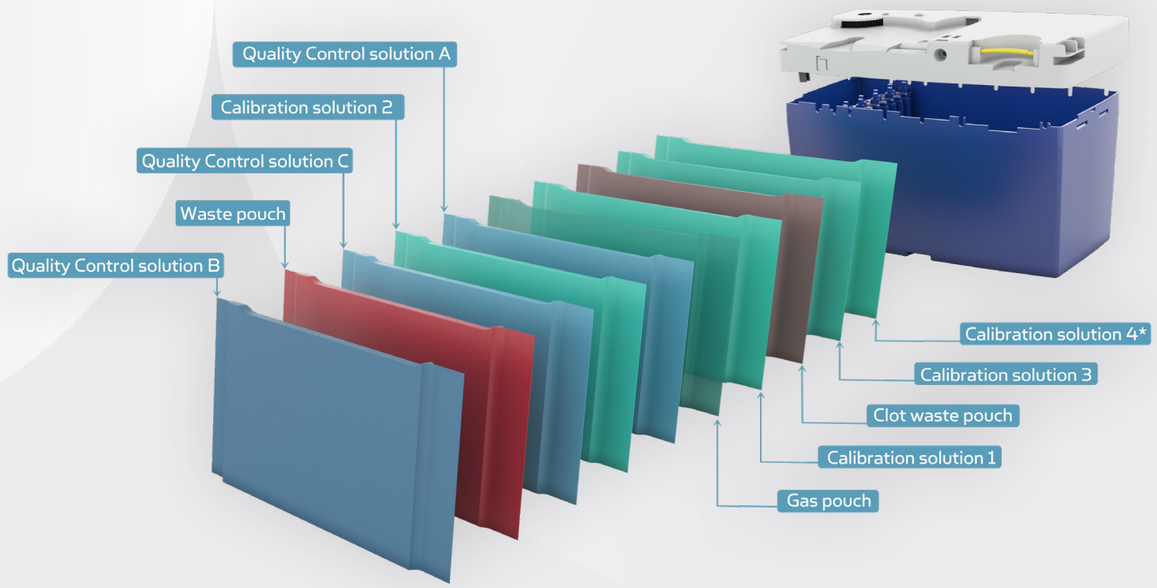
Advanced algorithms that detect and correct errors in real time

(Seven, when the analyzer measures Creatinine and Urea)*

Why it matters?

AQM ensures consistent, reliable performance, when you need it

Advanced error-detection algorithms work around the clock, even when the analyzer is idle



The 5 key checks of **AQM**

Calibrations checks

Continuous 1-point calibrations with every sample give you dependable results

2-point calibrations at set intervals keep your system performing its best

QC checks

Three levels of automatic QC ensure consistency across all results

You'll always have full visibility into individual results and statistics, including Levey-Jennings plots

Independent, in-built QC and calibration solutions validate the integrity of the measuring system automatically

Easily track performance and identify any shifts, trends or bias in your data

Analysis checks

Analysis checks help you spot potential interferences

Checks happen before, during, and after every sample

Ongoing checks with every measurement ensure sample volume and integrity

System checks

Scheduled tests monitor hardware and software to ensure your analyzer functions optimally

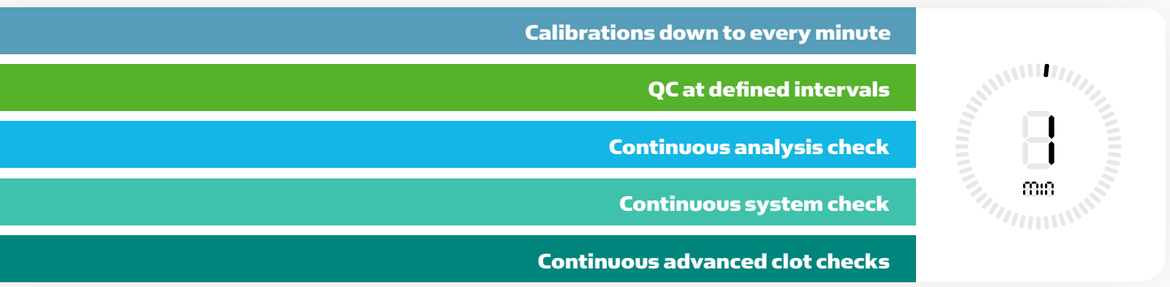
Advanced clot checks

Sensor response analysis ensures continuous insights, even when your analyzer is idle

Detects and eliminates both macro and micro clots, as well as air bubbles*, which might otherwise impact measurements

Pressurized back flush corrective action clears clots, preventing any disruptions in your results

** Note: micro clot check is not available on the ABL90 FLEX PLUS analyzers measuring Creatinine and Urea.*



THE SYSTEM IS CHECKED BEFORE, DURING, AND AFTER EACH MEASUREMENT

Continuous sensor output monitoring, for results you can rely on

Before measurement

The sensors are continuously monitored while the analyzer is idle

If a sensor signal starts to deviate from the expected response, AQM automatically initiates corrective actions

During measurement

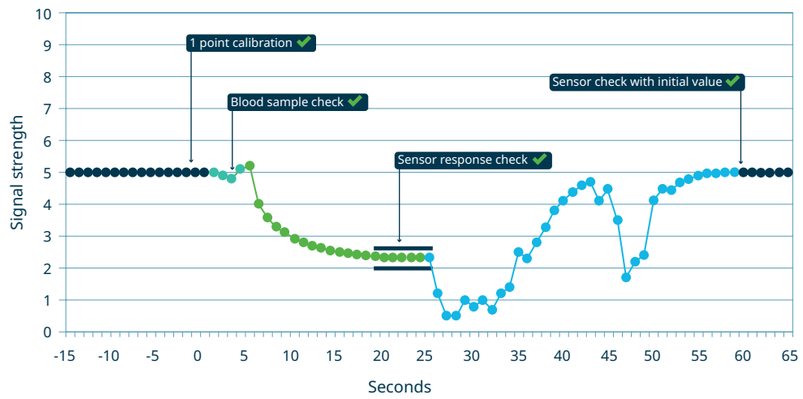
Checks the sensor response during measurement

If an unexpected response is detected, the result is marked with "?" and one or more messages

After measurement

Checks if a patient sample has affected the sensor immediately after the measurement by comparing the sensor signals recorded right before and right after the measurement cycle

If the sensor has not returned to the base level, automatic corrective actions are initiated



ADVANCED CLOT DETECTION

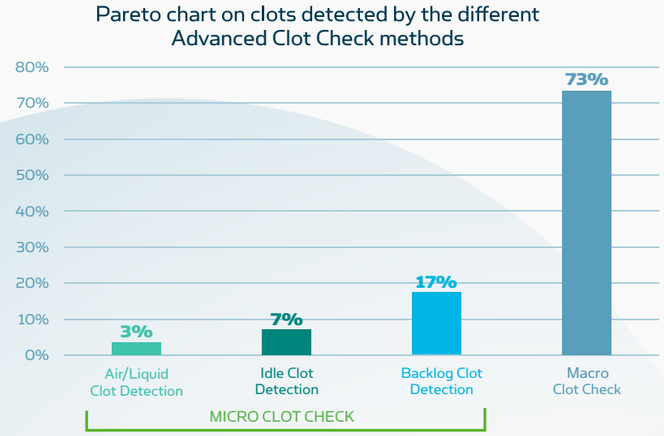
AQM's advanced clot check system ensures accurate readings at all times

Large clot detection and removal prevents blockages that could obstruct liquid flow

Micro clot and air bubble* detection uses three advanced sensor signal analysis algorithms

** - Micro clot check is not available on the **ABL**90 FLEX PLUS analyzers measuring Creatinine and Urea*

Pressurized back flush, with a verification check, eliminates clots, so you can be sure your measurements remain accurate



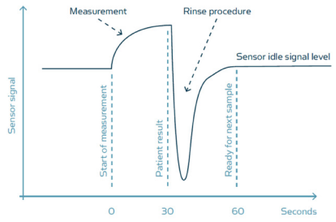
— Advanced Clot Check has been tested at different hospital sites in Denmark and the United Kingdom

— **ABL**90 analyzers, both with and without the Advanced Clot Check feature, were investigated. The analyzers represented various hospital sites and patient groups with potential clot issues, with a special focus on the Delivery Suite and the Neonatal Intensive Care Unit (NICU)

— The **ABL**90 analyzers with Advanced Clot Checks were able to detect and remove 100% of all the clots

Three innovative sensor analysis methodologies

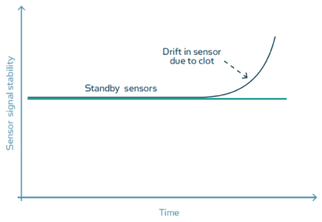
1



Backlog clot detection

Detects micro clots that have attached to a sensor after a measurement

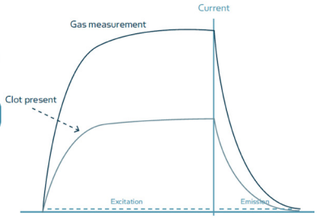
2



Idle clot detection

Identifies clots that affect sensors over time, such as small clots forming on or near sensors

3



Air/Liquid clot detection

Detects clots by comparing actual sensor responses to expected ones when measuring air or liquid

Full statistical transparency of QC results

- Independent QC solutions on three levels automatically validate the system, including the calibration solutions

- Monitor clearly and stay in control of your QC measurements with Levey-Jennings plots

- Westgard rules violations are clearly visible on the chart and allow for timely corrections

- If a QC is rejected, it can be set up to be repeated automatically

- Fully customizable QC schedule

Visualize QC trends with Levey-Jennings plots

- QC results are shown in lab standard Levey-Jennings plots

- View individual QC results over time for each parameter at low, medium, and high concentration levels

- Track trends, shifts, spreads, and bias in your QC results

View QC statistics

- QC statistics give you a clear overview of your QC performance over time for each parameter

- View QC results from registered QC solutions, both Auto QC and ampoule-based

- Access key data such as mean values, two standard deviations, and bias for greater clarity

Access individual QC results

- Easily access results for all parameters from any given QC measurement

- View results alongside upper and lower control limits

- Tap the “Messages” button to view important updates about your built-in QC results

Connect & Care complements **AQM**

AQM integrates seamlessly with the **AQURE** POCT IT solution and the cloud-based Quality Manager, helping you streamline operations

Ensure Quality

The Peer Quality Control module compares your analyzers' QC performance against a selected peer group, helping you stay inspection-ready with monthly reports.

Optimize Workflows

AQURE's **FLEXLINK** module, together with the *safe***PICO** syringes and the **ABL**90 FLEX PLUS analyzer, delivers the first fully automated solution, **1st Automatic**. It helps prevent sample mix-ups by getting the right results to the right place at the right time.

Learn Skills

AQURE offers a comprehensive overview of operator performance, ensuring that only trained, certified operators can access POC devices. Full traceability and automated reports help you stay prepared for inspections.

Confidence and Compliance

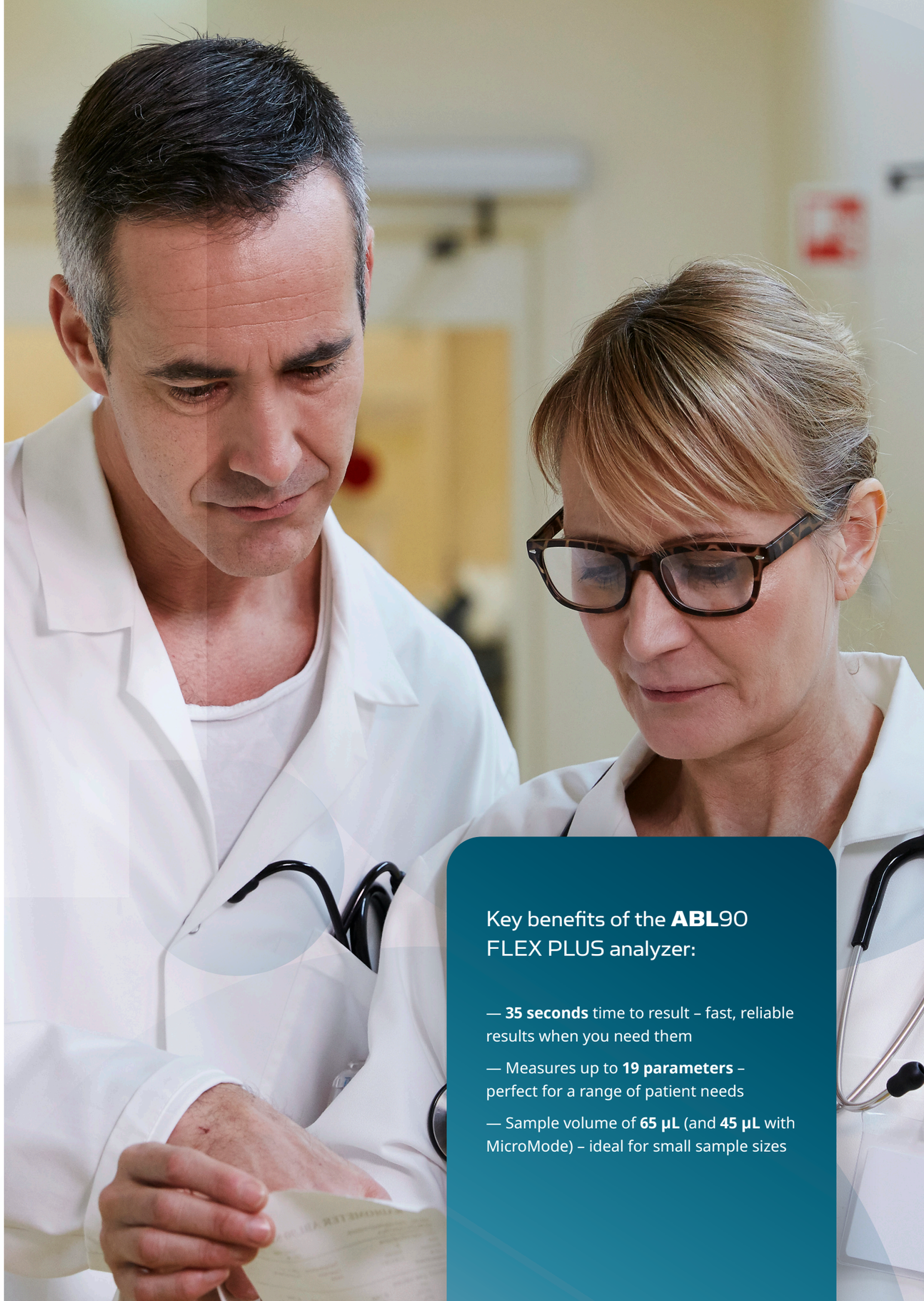
With the **AQURE** POC IT solutions, you can be confident that all analyzer actions are logged and sent to **AQURE** for inspection-ready reports, easing your compliance journey.

All activities are logged and sent to HIL/LIS and/or **AQURE**

Peace of mind with **AQM** on the **ABL**90 FLEX PLUS analyzer

With **AQM** integrated into the **ABL**90 FLEX PLUS analyzer, you can trust in the reliability and accuracy of your results.

- Automatic report generation saves you time and helps compliance
- Real-time, automatic QC and calibrations maintain system integrity around the clock
- Levey-Jennings plots and in-built Westgard and RiliBÄK rules help you catch errors and correct them immediately



Key benefits of the **ABL**90 FLEX PLUS analyzer:

— **35 seconds** time to result – fast, reliable results when you need them

— Measures up to **19 parameters** – perfect for a range of patient needs

— Sample volume of **65 µL** (and **45 µL** with MicroMode) – ideal for small sample sizes

The **ABL**90 FLEX PLUS analyzer

Measured parameters

Type	Parameter
pH	pH
Blood gas	pCO_2
	pO_2
Electrolyte	cK^+
	cNa^+
	cCa^{2+}
	cCl^-
Metabolite	cGlu
	cLac]
Oximetry	sO_2
	ctHb
	FO_2Hb
	$FCOHb$
	$FMetHb$
	$FHHb$
	$FHbF$

Derived parameters

pH(*T*)
pCO_2(*T*)
$cHCO_3^-$(P)
*c*Base(B)
*c*Base(B,ox)
*c*Base(Ecf)
*c*Base(Ecf,ox)
$cHCO_3^-$(P,st)
cH^+
cH^+(*T*)
$ctCO_2$(P)
$ctCO_2$(B)
pH(st)
pO_2(*T*)
pO_2(A)
pO_2(A,*T*)
*p*50
*p*50(*T*)
*p*50(st)
pO_2(A–a)
pO_2(A–a,*T*)
pO_2(a/A)
pO_2(a/A,*T*)
pO_2(a)/FO_2(I)
pO_2(a,*T*)/FO_2(I)
cCa^{2+}(pH=7.40)
Anion Gap(K^+)
Anion Gap
DO_2
Hct
pO_2(x)
pO_2(x,*T*)
ctO_2(B)
ctO_2(a–$\bar{v}$)
BO_2
ctO_2(x)
*F*Shunt
*F*Shunt(*T*)
RI
RI(*T*)
VO_2
*m*Osm
Qx
Q_t
V(B)
sO_2
FO_2Hb

Measuring system

	*S65 and **C65	**C45
Sample volume (all parameters)	65 µL	45 µL
Measuring time (all parameters)	35 sec	60 sec
Cycle time	60 sec	85 sec
Average uptime	more than 23.5 hours/day	

*S = Syringe **C = Capillary

Sensor cassette

In-use lifetime	30 days
Shelf life	4 months
Storage temperature	2 – 8°C
Automatic QC	Yes

BG / LYT / OXI with QC: 600 tests
BG / LYT / MET / OXI with QC: 100/300/600/900/1200 tests

Solution pack

Estimated lifetime of solution packs (days)

No of tests per day	5	10	15	20	30	50
SP90 (680 activities)	30	30	24	20	15	10
SP90 XL (980 activities)	30	30	30	30	23	15

In-use lifetime	30 days
Shelf life	6 months*
Storage temperature	2 – 25°C
Startup time	10 minutes

* - Germany 3 months

RADIOMETER

Whatever comes next, we make sure life comes first.

Radiometer solutions are used in hospitals, clinics, and laboratories in over 120 countries, providing information on critical parameters in acute care diagnostics. Through connected solutions, expert knowledge, and trusted partnership, we help healthcare professionals make diagnostic decisions to improve patient care.

www.radiometer.com

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