ABL90 FLEX PLUS analyzer
Specifications

Measured parameters

Type	Parameter	Units	Range of indication
pH	pH	pH scale	6.3 – 8.0
Blood gas	pCO_2	mmHg; Torr	5 – 250
		kPa	0.67 – 33.3
	pO_2	mmHg; Torr	0 – 800
		kPa	0 – 107
Electrolyte	cK^+	mmol/L	0.5 – 25
		meq/L	0.5 – 25
	cNa^+	mmol/L	7 – 350
		meq/L	7 – 350
	cCa^{2+}	mmol/L	0.1 – 9.99
		meq/L	0.2 – 19.98
		mg/dL	0.4 – 40.04
	cCl^-	mmol/L	7 – 350
		meq/L	7 – 350
Metabolite	cGlu	mmol/L	0 – 60
		mg/dL	0 – 1081
	cLac	mmol/L	-0.1 – 31
		meq/L	-0.1 – 31
		mg/dL	-1 – 279
	cCrea	µmol/L	10 – 1800
	cUrea	mmol/L	1 – 50
Oximetry	sO_2	%	-2 – 102
		fraction	-0.02 – 1.02
	ctHb	g/dL	-0.48 – 27.7
		g/L	-4.8 – 277
		mmol/L	-0.30 – 17.2
	FO_2Hb	%	-2 – 103
		fraction	-0.02 – 1.03
	FCOHb	%	-2 – 103
		fraction	-0.02 – 1.03
	FMetHb	%	-2 – 103
		fraction	-0.02 – 1.03
	FHHb	%	-2 – 102
		fraction	-0.02 – 1.02
	FHbF	%	-25 – 121
		fraction	-0.25 – 1.21
	ctBil	µmol/L	-20 – 1000
		mg/dL	-1.2 – 58.5
		mg/L	-12 – 585

The *Range of indication* for a parameter is the range within which the analyzer is physically capable of measuring, as defined in the 'International vocabulary of basic and general terms in the metrology' (VIM).

Derived parameters

$pH(T)$
$pCO_2(T)$
$cHCO_3(P)$
$cBase(B)$
$cBase(B,ox)$
$cBase(Ecf)$
$cBase(Ecf,ox)$
$cHCO_3(P,st)$
cH^+
$cH^+(T)$
$ctCO_2(P)$
$ctCO_2(B)$
pH(st)
$pO_2(T)$
$pO_2(A)$
$pO_2(A,T)$
p50
p50(T)
p50(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
$pO_2(x)$
$pO_2(x,T)$
$ctO_2(B)$
$ctO_2(a–v̄)$
BO_2
$ctO_2(x)$
FShunt
FShunt(T)
RI
RI(T)
VO_2
mOsm
Qx
Q_t
V(B)
sO_2
FO_2Hb
eGFR
Urea:Crea

Measuring system

	*S65 and **C65	**C45	*S65 and **C65 with Crea and Urea
Sample volume (all parameters)	65 µL	45 µL	65 µL
Measuring time (all parameters)	35 sec	60 sec	35 sec
Cycle time	60 sec	85 sec	120 sec
Average uptime	more than 23,5 hours/day		more than 23 hours/day

*S = Syringe **C = Capillary

Security and QA features

Advanced planning of replacement, QC and calibration schedules, Optional automatic QC at startup and after replacements, Continuous sensor status monitoring with corrective actions to get precise results

Sensor cassette

	SC90	SC90 Ki
In-use lifetime	30 days	14 days
Shelf life	4 months	4 months
Storage temperature	2–8°C	2–8°C
Automatic QC	Yes	Yes
All parameters	100/300/600/ 900/1200 tests	300 tests
Excl. MET	600 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
SP90 Ki (680 activities)	14	14				

	SP90 SP90 XL	SP90 Ki*
In-use lifetime	30 days	14 days
Shelf life	6 months**	4 months**
Storage temperature	2–25°C	2–8°C
Startup time	10 minutes	15 minutes

*SP90 Ki: dedicated SP for SC90 Ki
**Germany 3 months

Sample handling

Auto inlet

Automatic opening and closing of inlet
Aspiration from syringe, test tubes and capillary tubes without adapter
Specific short probe position for low volume samples

Sample mixer

Mixing time 7 seconds
For *safe*PICO samplers

Hardware

Computer specifications

8" color TFT-LCD, resolution 800 × 600 SVGA Touch screen
Thermal-sensitive printer

Interface

Built-in barcode reader for operator & sampler ID
   Accepted codes: UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5,
   Discrete 2 of 5, Codabar and more
Serial interface RS232 with power for external barcode reader
3 USB connections
Optional external keyboard
Optional external mouse
Optional external barcode reader

Software

Software platform

Microsoft® embedded software

Data capacity

Patient log: 2000
Activity log: 5000
Calibration adjustment log: 1000
Data secured by password protection
8 different operator profiles

Communication

High-level protocols:
   ASTM
   HL7
   POCT DML1A
Low-level protocols:
   Serial
   Network

Radiometer IT solution
Interface via Ethernet adapter

Wireless communication
Communication standards supported:
   IEEE 802.11
Encryption standards supported:
   Open/WEP/WPA/WPA2 TKIP/AES

Printer display options

Auto print (on/off)
Select derived parameters
Select input variables
Reference ranges with results

Additional information

Dimensions

Width	25 cm
Height	47 cm
Depth	29 cm
Weight	11 kg

Other

Operating environment	15–32°C
Altitude correction	3000 m above sea level
Power	100–240 VAC, 50/60 Hz, 90 W

Data subject to change without notice.

www.radiometer.com