RAPIDPoint® 500e* Blood Gas System Product Specifications

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System Description

Point-of-care blood gas analyzer

System Menu

pH	K$^+$	Lactate
pCO_2	Ca^{++}	tHb
pO_2	Cl$^-$	CO-oximetry
Na$^+$	Glucose	nBili

Parameter Specifications

Analyte	Units	Reporting Range
pH	–	6.500–7.800
Pleural pH	–	7.000–7.500
pO_2	mmHg	10.0–700.0
	kPa	1.33–93.32
pCO_2	mmHg	5.0–200.0
	kPa	0.66–26.66
Na$^+$	mmol/L	100.0–200.0
K$^+$	mmol/L	0.50–15.00
Ca^{++}	mmol/L	0.20–5.00
	mg/dL	0.8–20.0
Cl$^-$	mmol/L	65.0–140.0
Glucose	mmol/L	1.1–41.6
	mg/dL	20–750
Lactate	mmol/L	0.18–30.00
	mg/dL	1.6–270.3

CO-oximetry Parameters

Analyte	Units	Reporting Range
tHb	g/dL	2.0–25.0
	g/L	20–250
	mmol/L	1.2–15.5
nBili	mg/dL	2.0–30.0
	µmol/L	34–513
sO$_2$	%	15.0–100.0
FO$_2$Hb	%	0.0–100.0
FHHb	%	0.0–100.0
FCOHb	%	0.0–100.0
FMetHb	%	0.0–100.0

Calculated Parameters

pH(T)	BO$_2$
pCO_2(T)	pO_2 (A-a)(T)
pO_2(T)	pO_2 (a/A)(T)
HCO$_3^-$act	p50
HCO$_3^-$std	Q̇sp/Q̇t(T)
BE(B)	Q̇sp/Q̇t(T)(est)
BE(ecf)	RI(T)
ctCO$_2$	pO_2/F$_1$O$_2$
Ca^{++}(7.4)	ctO$_2$(a), ctO$_2$(∇)
AnGap	ctO$_2$([a-$\bar{v}$]/a)
Hct	ctO$_2$(v), ctO$_2$(a-∇)
sO$_2$	ctO$_2$(Hb)
O$_2$SAT(est)	V̇O$_2$
mOsm	ḊO$_2$

Input Parameters

Patient Demographics

Patient ID	Sex
Last Name	Date of Birth
First Name	

Sample Demographics

Location	Temperature
Physician ID	tHb
Draw Date	F$_1$O$_2$
Draw Time	Flow
Accession No.	Resp Rate
Operator ID	pATM
Up to 10 custom demographic fields available	

Ventilator Settings (optional)

Ventilator Flow
Respiratory Rate
Continuous Positive Airway Pressure
Positive End Expiratory Pressure
Peak Inspiratory Pressure
Tidal Volume
Allen Test

Integri-sense™ technology is the guardian of patient results. It is a comprehensive series of analyzer functional checks and flagging mechanisms designed to deliver accurate test results.

*Not available for sale in the U.S. Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

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Sample Types

Whole blood (arterial, venous, mixed venous and capillary); pleural fluid; dialysate†

Measurement Volume

Sample volume: 100 µL

Time to Result

Approximately 60 seconds

Cycle time: approximately 120 seconds

Measurement Cartridge

Use life: 28 days, or maximum number of tests

Size: 100/250/400/750 tests

Cartridge initialization time: approximately 24 minutes

Calibration

1-point calibration every 30 minutes; 2-point calibration every 2 hours; full calibration every 8 hours

Quality Control

Automatic Quality Control (AQC) cartridge: three levels of independent quality control solutions; customizable QC schedule; ampule QC

System Dimensions

Width: 30.0 cm (11.5 in.)

Depth: 42.0 cm (16.0 in.)

Height: 55.0 cm (21.5 in., display at highest position)

Weight: 16.55 kg (36.5 lb, excluding cartridges)

Touchscreen: 21.1 x 15.8 cm (8.3 x 6.2 in.)

Integrated and External Barcode Scanner‡
For patient ID, operator ID, and ampuled QC

1D barcode symbologies: Code 128, Codabar, Code 39, Interleaved 2 of 5

2D barcode symbologies: PDF47, MicroPDF417, Datamatrix, QR Code, Micro QR Code, Aztec and MaxiCode

External Interfaces

USB (3 ports); RS232; 10BASE-T Ethernet; barcode scanner

Power Requirements

Rating: 150 VA

Voltage: 100–240 VAC

Frequency: 48–62 Hz

Environmental Requirements

Temp: 15–30°C

Humidity: 5–85% noncondensing

Barometric Pressure: 523–800 mmHg

Safety

TUV-listed, CSA, EN/IEC 61010-1, JIS

EMC

61326-2-6: Class B

Operating System

MICROSOFT WINDOWS 10 IoT Enterprise (1809)

Data Security

Patient data encryption

MCAFEE enabled anti-malware

Endpoint configuration

Firewall

Two-step operator authentification

No hard-coded password

USB on/off functionality

Data Capacity

Patient samples: 250

QC samples: 250

Operators: 5000

Communication

Wireless§

LIS

Dual-port transmission via Ethernet and serial port

POCcelerator™, UniPOC™, RAPIDComm®—Data Management Systems

Features and specifications are subject to manufacturer change.

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†Feature not available in the U.S.

‡External scanner is optional and is not included with the analyzer.

§This feature applies only to facilities that implement an external wireless bridge between the RAPIDPoint 500e system and a DMS.

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