OPTI R Specifications

Measured Parameters	Range	Resolution
pH	6.6 - 7.8 pH units	0.001 pH units
PCO_2	10 - 200 mmHg	0.1 mmHg
PO_2	10 - 700 mmHg	0.1 mmHg
tHb	5 - 25 g/dL	0.1 mmHg
SO_2	60% - 100%	0.1 %
Na^+	100 - 180 mmol/L	0.1 mmol/L
K^+	0.8 - 10 mmol/L	0.01 mmol/L
iCa	0.2 - 3.0 mmol/L	0.01 mmol/L
Barometric Pressure	300 - 800 mmHg	0.1 mmHg

Operating Parameters

Minimum Sample Size	125 µL
Sample Type	Whole Blood, Plasma, or Serum
Sample Application	Syringe, Capillary or ComfortSampler
Sample Input	Automatic Aspiration
Analysis Time (Time to Result)	< 60 seconds
Ambient Temperature	10°C - 30°C (50°F - 87°F)
Relative Humidity	5% - 95% (non-condensing)
Available Languages	English, Spanish, French, Italian, German, Japanese, Chinese

Calculated Parameters — Input Parameters

Calculated Parameters	Input Parameters	
Actual Bicarbonate (HCO_3)	Operator ID (11 Digits)	Vent Mode
Standard Bicarbonate (st.HCO_3)	Patient ID (15 Digits)	TVol
Base Excess (BE)	Accession Number (12 Digits)	MVol
Base Excess Extra Cellular Fluid (BEecf)	3 User defined fields (9 Digits)	PIP
Base Excess Actual (BEact)	Patient Temp	Pplat
Buffer Base (BB)	Date of Birth	PS
Standard pH (st.pH)	Patient Sex	PEEP
Hydrogen Ion Conc.(cH^+)	Hemoglobin Type	CPAP
Total CO_2 (tCO_2)	Puncture Site	Rate
Oxygen Saturation (SO_2)	Bypass, Sample Type	Flow Rate
Oxygen Content (O_2ct)	Total Hemoglobin	I/E ratio
Alveolar-arterial O_2 Conc.. (AaDO_2)	MCHC	Bi level Pressure
$P50$	O_2 Mode	RQ
St. Ionized Calcium (pH=7.4)(nCa^{++})	FIO_2	
Hematocrit (Hct)	$P50$	

Security

Password	Password Protected Analyzer Setup, Operation and Delete Functions
QC Lockout	User Definable QC Lockout Functions
Operator IDs	Storage for 300 Operator IDs (10 Digit) and Associated PIN (4 Digit)

Miscellaneous

Height x Width x Depth	124 x 362 x 350mm (4.7 x 14.2 x 14in)
Weight	5.5kg (12lbs)
Voltage / Frequency	120 or 240 AC /50 - 60 Hz
Power Consumption (max.)	110 VA
Interface	Ethernet, Serial (ASTM or ACII)
Approvals	CE, UL, IVDD

OPTIMedical

Exclusive Canadian Distributor

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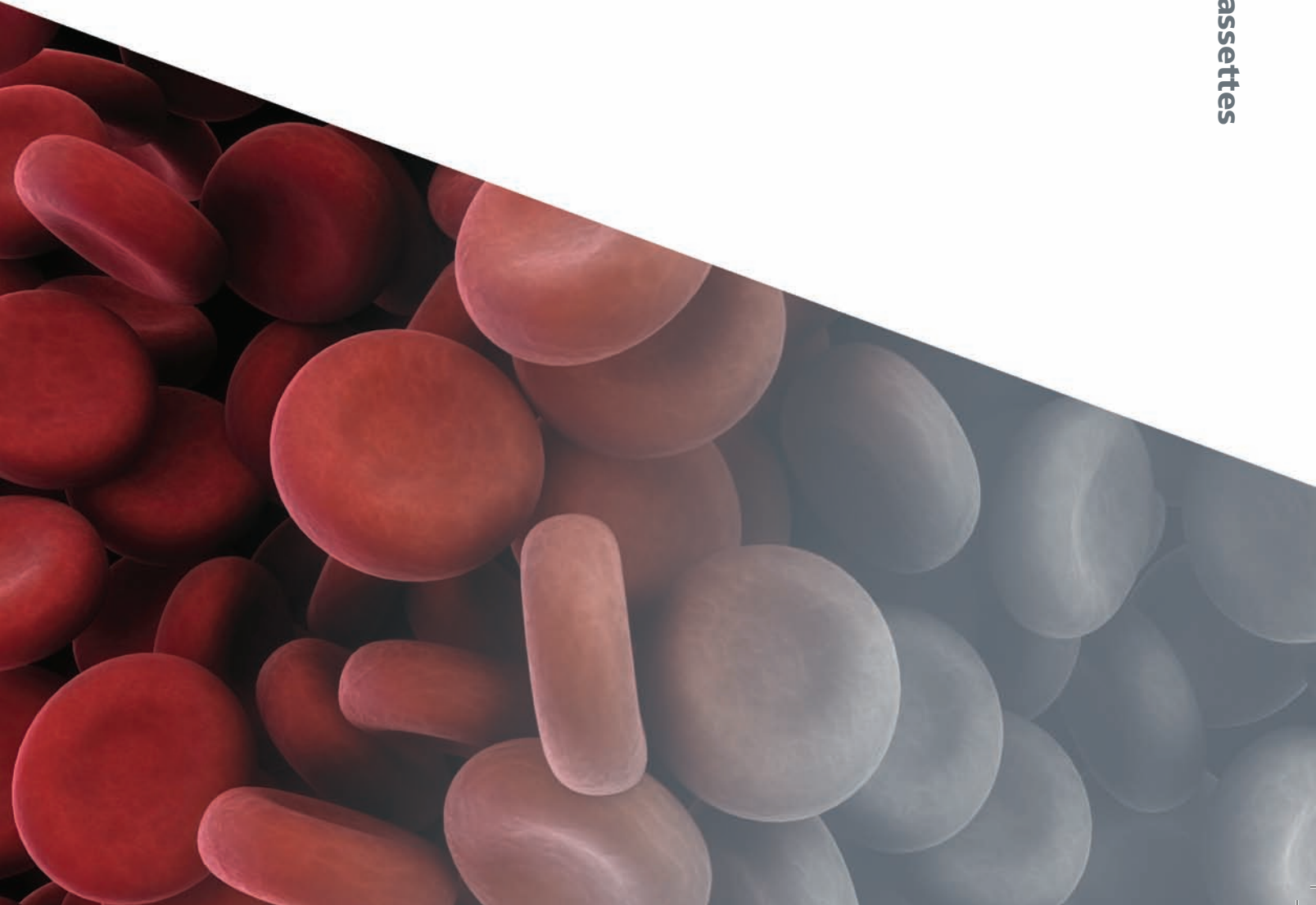
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1-800-265-5494 www.tmml.com

Powerful, Flexible and Convenient...   ...In a Compact Benchtop Analyzer

▶ **Innovative optical technology**

The OPTI R analyzer utilizes the optical technology that has been used in the OPTI CCA for 13 years. This technology does not use electrodes or contact points, eliminating the need for costly electrode maintenance.

▶ **Automated quality monitoring**

The OPTI R analyzer utilizes the OQM (OPTI Quality Monitor) software to ensure accurate results from each measurement. The OQM system continuously monitors the overall system performance and executes corrective action as needed.

▶ **Integrated controls**

The OPTI R fluid pack contains 3 different levels of QC material for use in quality control and quality monitoring. These control materials are completely independent from the material used for calibration and can be programmed to run on a custom schedule.

▶ **Multiple-use cassette**

The OPTI R cassette is designed for 50 patient tests over a 7 day period. Quality control samples do not count against the 50 tests available for patient samples.

	B_{50}*	$E-Ca_{50}$
pH	X	X
PCO_2	X	X
PO_2	X	X
tHb	X	X
SO_2	X	X
Na^+		X
K^+		X
iCa		X

* In development

RFID technology

The OPTI R fluid pack uses RFID (Radio Frequency Identification) to transmit the specific information about the pack to the analyzer. There are no barcodes to scan or numbers to enter, reducing the hands-on time required from the operator.

Hydrogel absorbent

The OPTI R fluid pack waste pouch contains a hydrogel material that solidifies the patient waste. This prevents the possibility of waste spilling from the pack after use and prevents contamination of the operator or the workspace.

Power loss recovery

The OPTI R analyzer can endure up to 8 hours of interrupted power without the loss of the installed consumables. This allows the analyzer to operate in environments with frequent power outages and it allows the device to be moved to different departments within the hospital.

Near Patient Testing

The OPTI R has a heated measuring chamber that provides for a wider operating temperature. In addition, the analyzer measures total hemoglobin and oxygen saturation which makes the device ideal for testing in environments, such as the operating room.
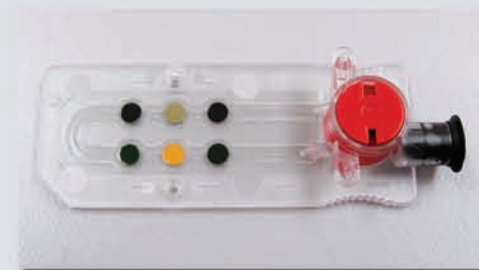
60 second measurement

The OPTI R Analyzer is always calibrated and ready for a patient sample. This allows the analyzer to complete the measurement in less than one minute so that immediate patient assessment can be made.