NEW

GEM® PREMIER™ 5000 | iQM®2

The Intelligent Blood Gas Analyzer.

- NEW iQM2 provides **real-time assurance**
- GEM PAK offers **advanced simplicity**
- GEMweb® Plus Custom Connectivity for **complete control** of analyzers—in the lab and at the point-of-care

iQM2 assures quality before, *during* and after every sample

Continuous quality monitoring through 5 types of checks:

- System checks
- Sensor checks using multiple levels of NIST-traceable Process Control Solutions (PCS)
- Pattern Recognition checks
- ***New*** IntraSpect technology—checks *during* every sample analysis
- PCS stability checks

Automatic, real-time:

- **Detection** of sensor, system-stability or sample errors
- **Correction** of errors
- **Documentation** of all corrective actions, with reports available from any analyzer or PC

GEMweb Plus Custom Connectivity

Provides intuitive, customizable control of instruments and operators—from any GEM Premier 5000 system or PC

Simple all-in-one, multi-use GEM PAK

- Contains all components needed for testing
- Just replace every 31 days*
- No refrigeration required

* 21-day onboard use-life for 600-test PAK.

Instrumentation Laboratory
A Werfen Company

GEM 5000 PREMIER™ | iQM2®

Technical Specifications

Analyzer

More than 30 menu PAK options for customized flexibility

Test volumes
75, 150, 300, 450, 600*

Menu
Blood Gas, Hct, tHb, O_2Hb, HHb, COHb, MetHb, sO_2, tBili**
Blood Gas, Electrolytes, Hct, tHb, O_2Hb, HHb, COHb, MetHb, sO_2, tBili**
Blood Gas, Electrolytes, Glu, Lac, Hct, tHb, O_2Hb, HHb, COHb, MetHb, sO_2, tBili**

* PAKs have a 31-day onboard use-life, except 600-test PAK which has a 21-day use-life.
** PAKs available with or without tBili.

Dimensions and Weight
H: 18.6 in W: 13 in D: 16.4 in Wt: 45.4 lbs

Sample Volume

150 µL	BG††/Hct/Lytes‡‡/Glu/Lac/CO-Ox or any subset of the menu that includes CO-Ox
100 µL	CO-Ox/tBili only
65 µL (micro mode)	BG/Hct/Lytes/Glu/Lac (capillary only)
††BG	= pH, pCO_2, pO_2
‡‡Lytes	= Na^+, K^+, Ca^{++}, Cl^-

Sample Type
Heparinized whole blood

Time to Results

All tests with and without CO-Ox:	45 seconds from sample introduction
Sample capacity:	75 – 600 tests
Throughput:	29 samples/hour

Interface Protocols
ASTM or HL7 enables data transmission to a laboratory, hospital or third-party information-management system.

Measurement Methodology

Amperometric:	pO_2, Glu, Lac
Potentiometric:	pH, pCO_2, Na^+, K^+, Ca^{++}, Cl^-
Conductivity:	Hct
Optical measurement following chemical lysing of the whole blood sample:	tHb, O_2Hb, COHb, MetHb, sO_2, HHb, tBili

Measured Analytes

Analyte	*Unit*	*Reportable Range†*
pH	n/a	7.00 – 7.92
pCO_2	mmHg	6 – 125
pO_2	mmHg	6 – 756
Na^+	mmol/L	100 – 180
K^+	mmol/L	1.0 – 19
Ca^{++}	mmol/L	0.11 – 4.25
Cl^-	mmol/L	40 – 158
Glu	mg/dL	4 – 685
Lac	mmol/L	0.3 – 17
Hct	%	15 – 72
tHb	g/dL	3.0 – 23
O_2Hb	%	0 – 100
COHb	%	0 – 75
MetHb	%	0 – 30
HHb	%	0 – 100
tBili	mg/dL	2.0 – 40
sO_2‡	%	0 – 100

‡ sO_2 = O_2Hb/O_2Hb+HHb.
† The reportable range for a parameter is the range where performance claims are verified and validated.

Derived (Calculated) Parameters

BE(B)	p_{50}	RI
BE(ecf)	O_2cap	CcO_2
tHb(c)	sO_2(c)	a-vDO_2
Ca^{++} (7.4)	O_2ct	Q_{sp}/Q_t (est)
Anion gap (AG)	HCO3 – std	Q_{sp}/Q_t
P/F ratio	TCO_2	Hct(c)
pAO_2	HCO_3^- (c)	
CaO_2	A-aDO_2	
CvO_2	paO_2/pAO_2	

GEM PAK

Dimensions and Weight
H: 6.75 in W: 10 in D: 8 in Wt: 8.1 lbs

All-in-one, multi-use cartridge contains all components for analytical testing, including: sampler, sensor card, CO-Ox, tubing, PCSs, waste, lysing and reference.

All PCSs are traceable to NIST or CLSI at Medical Decision Levels.

Onboard use-life
Up to 31 days

Storage stability
Room-temperature storage. Six-month stability at 15 – 25° C.

Improving patient care and efficiency. Now that's intelligent.

Werfen