STAT PROFILE®
pHOx®

Advanced Technology Blood Gas Critical Care Analyzers

Five Test Menus, Assay Choices Include
pH, PCO_2, PO_2, SO_2%
Hct, Hb, Na^+, K^+, Ca^{++}, Mg^{++}[1]
Cl^-, Glu, Lac

Measured SO_2%, Hct and Hb

Fast Stat Results

New, Simple Easy to Use Color Touch Screen

Easy Sample Access

Low Cost Blood Gas Critical Care Testing

nova® biomedical

STAT PROFILE®
pHOx®

Advanced Technology, Low Cost Blood Gas Analyzers

Nova Biomedical, Technology Leader in Whole Blood Testing

Nova Biomedical is a world technology leader in the development of advanced technology, biosensor-based whole blood analyzers for stat and critical care testing. Over the last 30 years, Nova has introduced more than 20 whole blood biosensors, including the industry's first biosensors to directly measure glucose, lactate, hematocrit, calcium, chloride, creatinine, urea, lithium and magnesium on whole blood. Nova whole blood analyzers have earned a reputation for quality and value with over 40,000 analyzers sold worldwide.

pHOx Models/Menus

Stat Profile pHOx Basic:
pH PCO_2 PO_2

Stat Profile pHOx Oximetry:
pH PCO_2 PO_2 SO_2% Hct Hb

Stat Profile pHOx Plus:
pH PCO_2 PO_2 SO_2% Hct Hb Glu Na^+ K^+ Ca^{++} or Cl^-

Stat Profile pHOx Plus C:
pH PCO_2 PO_2 SO_2% Hct Hb Glu Na^+ K^+ Ca^{++} Cl^-

Stat Profile pHOx Plus L:
pH PCO_2 PO_2 SO_2% Hct Hb Glu Lac Na^+ K^+ Ca^{++} or Cl^-

Stat Profile pHOx Plus M[1]:
pH PCO_2 PO_2 Hct Glu Lac Na^+ K^+ Ca^{++} Mg^{++}

Low Cost Blood Gas/Critical Care Testing

Stat Profile pHOx models combine advanced optics, long-life biosensors, rugged electromechanical design, and computer automation to provide the best clinical and economic value for blood gas and critical care analyses. The combination of reuseable long life sensors plus a single reagent cartridge provides the most cost effective way for a hospital to provide blood gas assays.

- Stat Profile pHOx biosensors have long lives and require minimal reagent consumption, reducing operating costs.
- Low reagent consumption extends reagent cartridge life to as long as 45 days.
- pHOx reagent cartridges eliminate cost of gas tanks, as many as 5 separate reagents, and waste container replacements.
- Cost efficient onboard quality control cartridges reduce the wastage of quality control ampules that discard virtually all of the QC ampule contents.

Measured Hb, Hct and SO_2%

A unique technology feature of Nova Stat Profile pHOx analyzers is their ability to measure hemoglobin, hematocrit and oxygen saturation on each sample. Advanced biosensors, optics and algorithms enable measurement of these parameters without the added cost, complexity and sample volume of a CO-Oximeter.

Ionized Magnesium[1]

pHOx Plus M provides ionized magnesium as part of its test panel. Ionized magnesium is a very important electrolyte. It works with potassium and calcium to maintain strong and rhythmic cardiac contraction.

1. Not available in the US

Bright, Color Touch Screen

- The bright, large, color touch-screen interface can easily be operated by clinicians, nurses or other point-of-care personnel with minimal training.
- Intuitive screen buttons clearly identify each analyzer function

Simplified Operation

All routine functions are initiated from the home screen, including capillary or syringe analysis, quality control analysis, or calibration

Fast Stat Results, High Throughput

- A complete 11-test profile is available and displayed on screen in only 52 seconds.
- Throughput rates of 40 to 50 samples per hour can be achieved.

Results - Measured at 37ºC

Test	Value	Units	Alert
pH	7.3		↓↓
PCO2	36	mm Hg	↓
PO2	82	mm Hg	↓
SO2 %	96	%	
Hct	33	%	↓↓
Hb	11	g/dL	↓↓
Na+	141.5	mmol/L	
K^+	2.66	mmol/L	↓↓
Ca^{++}	0.74	mmol/L	
Glu	5.8	mmol/L	
Lac	2.5	mmol/L	↑

Home | Sample Info | Options | Next Page

Test results are presented on-screen in a large, easy to read format, and printed. Abnormal and critical results are prominently flagged using symbols and color highlighting.

Easy Capillary or Syringe Sampling

An extra wide opening to the sampler area allows easy access and excellent visibility even when very large or very small sample containers are used.

- A universal capillary sampling port accepts capillary tubes in a horizontal position to prevent spillage or dripping. No capillary adapter or sample transfer is required.
- For syringe samples, the sample probe automatically positions itself at the optimal angle.

Small Sample Volume

Stat Profile pHOx analyzers contribute to blood conservation with sample volumes as low as 45 microliters for blood gases and only 125 microliters for a full 11-test profile.

Snap-in Reagent Cartridge Reduces Maintenance

Stat Profile pHOx uses a single, ready to use cartridge containing all reagents necessary for calibration, sample analysis, and waste collection.

The reagent cartridge includes a sealed waste container that receives the sample and reagent waste. The waste container is completely enclosed for safe and easy disposal, eliminating potential exposure to biohazard waste.

Automated Quality Control

A single on-board Auto-QC cartridge combines multiple levels of liquid controls allowing any level of quality control to be run automatically on a programmed schedule, or on demand. Time and labor involved in performing quality control tasks manually are eliminated.

Auto Repeat and Flagging

If any analyte value is outside the target range, it is automatically re-analyzed. If a control value remains outside of range, the user is notified.

Automatic Data Storage and Reporting

All quality control data is automatically stored. Daily and cumulative statistical reports and Levey-Jennings graphs can be recalled and printed.

QC Lockout Option

An optional QC lockout feature programs the analyzer to suppress test results for any analyte that is not within its control range.

Stat Profile pHOx Series Specifications

Measured Tests	Methodology
Na^+	Direct ISE
K^+	Direct ISE
Ca^{++}	Direct ISE
Glucose	Enzyme/Amperometric
Lactate	Enzyme/Amperometric
Mg^{++1}	Direct ISE
Cl^-	Direct ISE
pH	Direct ISE
PCO_2	Severinghaus
PO_2	Amperometric
SO_2%	Optical, reflectance
Hematocrit	Conductivity/Na^+ correction
Hemoglobin	Multi-wavelength reflectance/ conductivity correction

Calculated:

Tests	Resolution	Tests	Resolution
HCO_3	0.1 mmol/L	a/A	0.1
TCO_2	0.1 mmol/L	PO_2/FIO_2	0.1
Be-ecf	0.1 mmol/L	Anion Gap	0.1 mmol/L
B-eb	0.1 mmol/L	SBC	0.1 mmol/L
O_2Ct	0.1 mL/dL (1 mL/L)		
A	0.1 mmHg (0.01 kPa)		
A-aDO_2	0.1 mmHg (0.01 kPa)		

Measurement Range:

Na^+	80 - 200 mmol/L
K^+	1 - 20 mmol/L
Ca^{++}	0.1 - 2.7 mmol/L
Glu	0.8 - 28 mmol/L
Lac	0.3 - 20 mmol/L
Mg^{++1}	0.1 - 2.5 mmol/L (0.24 - 6.08 mg/dL)
Cl^-	50 - 200 mmol/L
pH	6.50 - 8.00 (H^+: 316.23 - 10.00 mmol/L)
PCO_2	3.0 - 200 mmHg (0.4 - 26.7 kPa)
PO_2	0 - 800 mmHg (0.0 - 106.7 kPa)
SO_2%	30 - 100 % (0.3 - 1.00)
Hb	4.0 - 24.0 g/dL (2.5 - 14.9 mmol/L)
Hct	12% - 70% (12 - 60% for micro in Plus family and pHOx Respiratory)
BarP	400.0 - 800.0 mmHg (53.3 -106.7 kPa

Major Features:
8.4" color LCD touch screen display multilingual, automatic QC, QC statistics reports, Levey-Jennings plots, gasless calibration (no tanks or regulators), lighted automatic sampler, integral capillary adapter, USB program changer, optional CCD bar code scanner, single snap-in reagent system, arterial venous physiological shunt mode, QC data storage, ventilator settings, draw puncture site

Certifications: ISO 9001 Quality System Registration, CSA, TÜV, CE Self Declared Complies to EN 61010, EN 50081,82

Physical Specifications: Height: 15.0 in (38.1 cm)
Width: 12.0 in (30.5 cm) Depth: 15.0 in (38.1 cm)
Weight: 18 lb (8.19 kg) without reagent pack

Analytical Specifications for Imprecision (Normal Aspiration Mode):

	Within-Run Imprecision n=20 Whichever is Greater		Day-to-Day Imprecision n=20 Whichever is Greater	
Analyte	**CV%**	**SD**	**CV%**	**SD**
Na^+	1.0	1.0 (mmol/L)	1.5	1.0 (mmol/L)
K^+	1.5	0.15 (mmol/L)	3.0	0.15 (mmol/L)
Ca^{++}	2.0	0.05 (mmol/L)	4.0	0.05 (mmol/L)
Glucose	5.0	2.0 (mmol/L)	6.5	3.0 (mmol/L)
Lactate	3.0	0.3 (mmol/L)	6.0	3.0 (mmol/L)
Mg^{++1}	3.0	0.05 (mmol/L)	5.0	0.03 (for 0.1-1.0 mmol/L)
			6.0	0.03 (for 0.1-2.5 mmol/L)
Cl^-	1.5	2.0 (mmol/L)	2.5	2.0 (mmol/L)
SO_2%	N/A	1.0 %	N/A	1.5 %
PCO_2	3.0	1.0 (mmHg)	5.0	2.0 (mmHg)
PO_2 (< 400 mmHg)	3.0	1.5 (mmHg)	5.0	3.0 (mmHg)
PO_2 (> 400 mmHg)	6.0	–	10.0	–
Hct	N/A	1.0 %	N/A	1.0 Hct%
pH	N/A	0.005	N/A	0.013
Hb	2.5	0.3 g/dL	2.5	0.3 g/dL

Acceptable Samples:
Whole blood (heparinized), arterial, mixed venous, capillary, serum plasma (pHOx Plus L only)

Analysis Rate:	Stat Analysis Time	Throughput Rate
pHOx Basic	45 seconds	50/hour
pHOx Oximetry	45 seconds	50/hour
pHOx Plus	50 seconds	44/hour
pHOx Plus C	52 seconds	44/hour
pHOx Plus L	52 seconds	40/hour
pHOx Plus M[1]	115 seconds	28/hour

Sample Volume pHOx Basic:
45 microliters whole blood micro sample for pH/PCO_2/PO_2
70 microliters whole blood sample size for full panel

Sample Volume pHOx Oximetry:
45 microliters whole blood micro sample for blood gases/pH
70 microliters whole blood sample size for full panel

Sample Volume pHOx Plus:
55 microliters whole blood micro sample for blood gases/pH
115 microliters whole blood sample size for full panel

Sample Volume pHOx Plus C, Plus L, Plus M[1]:
60 microliters whole blood micro sample for blood gases/pH
125 microliters whole blood sample size for 11 test panel

Remote Control and Remote Review Option
Review Sensor Calibration Status
Initiate System Calibration
Review Reagent Cartridge Status
Initiate QC Analysis
Review QC Status
Initiate System Cleaning

Electrical Requirements: 90-264 VAC, 50/60 Hz, 200W

Interfaces: USB, RS232 serial, ASTM Standard data protocol

Temperature Thermostatting: 37°C ± 0.1°C

Printer: 52 Column thermal — Built in

FDA Labeling: *For in-vitro diagnostic use*

Calibration: User-selectable, fully automatic two-point calibration every 2, 4, or 6 hours; user-selectable, single-point calibration every 30/45 minutes or with each sample (pHOx Plus and pHOx Plus L are fixed at 30 minutes or with each sample); manual calibration initiated at any time.

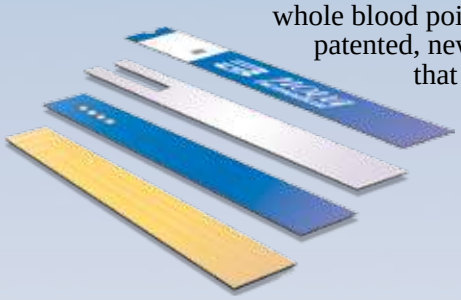
Compact POC Design

Stat Profile pHOx analyzers are the smallest instruments offering their, respective test menus. The analyzers footprint is only 31 centimeters wide by 28 centimeters deep and 38 centimeters tall (12 in x 15 in x 15 in). These analyzers weigh less than 9 kg and are easily transported on the optional pHOx Cart with an uninterruptible power supply.

1. Not available in the US

Other Nova Biomedical® Stat and Point-of-Care Products

Nova Biomedical® Multi-Well Point of Care Measuring Systems



These meter and strip based systems are lab-accurate, whole blood point-of-care analysers that incorporate patented, new Multi-Well™ biosensor technology that measure and eliminate interferences such as hematocrit, acetaminophen, ascorbic acid and uric acid that can cause erroneous results compared to other whole blood handheld meters.

Other features include:

- Easy, handheld operation
- Small whole blood samples, as little as 0.7 microliters
- Fast results, as little as 6 seconds
- No calibration coding
- Single connectivity solution
- Choice of Xpress or Connectivity meter

StatStrip® Glucose/Ketone Connectivity Meter[1]

StatStrip® Xpress Glucose/Ketone Meter[1]

StatSensor® Creatinine Meter

StatSensor® Xpress Creatinine Meter[2]

StatStrip® Lactate Meter[2]

StatSensor® Xpress Lactate Meter[2]

StatProfile® Critical Care Xpress Analysers

Nova Critical Care Xpress (CCX) analysers measure up to 20 tests from 210 microliters of whole blood, in less than 2 minutes. The CCX test menu includes blood gases, SO_2%, hemoglobin, hematocrit, electrolytes including ionized calcium and ionized magnesium, glucose, Urea/BUN, creatinine, co-oximetry.
13 models with standard test menus and custom configured models are available.

Nova Electrolyte/Chemistry Analysers

Nova Electrolyte/Chemistry Analysers offer a wide selection of models and test menus using whole blood, urine or plasma. Available tests include: Na^+, K^+,Cl^-, TCO_2,Ca^{++}, Mg^{++}, Li^{++}, TCa, Glu, BUN, Crea, Hct, and pH. Nova Electrolyte Chemistry analysers perform whole blood stats in 30 seconds, and walk-away automation with throughputs up to 400 tests per hour.

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Specifications subject to change without notice.
1. Ketone not available in the US 2. Not available in the US

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