

STAT PROFILE
Prime+VET

Critical Care Analyser

Simplified Veterinary Critical Care Testing



nova[®]
biomedical
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For Veterinary Use Only.

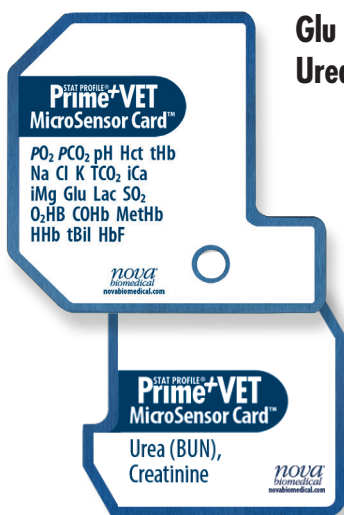


New Technologies Simplify Use and Add New Tests

Stat Profile Prime Plus VET is a comprehensive, whole blood critical care analyser that combines blood gases, electrolytes, metabolites, CO-Oximetry, and 32 calculated results in a simple, compact device. Prime Plus VET combines maintenance-free, replaceable cartridge technology for sensors and reagents with patented, new, maintenance-free, and non-lysing whole blood CO-Oximetry technology. Prime Plus VET results are produced very rapidly—a complete test menu panel in about one minute—and are combined with bidirectional connectivity and a powerful onboard data management system.

Nova MicroSensor Card™ Technology

Most comprehensive critical care menu



**PO₂ PCO₂ pH Hct tHb Na Cl K TCO₂ iCa iMg
Glu Lac SO₂% O₂Hb COHb MetHb HHb tBil HbF
Urea (BUN) Creat**

- All Prime Plus VET biosensors use proven Nova technology in a miniaturised, maintenance-free sensor card format.
- Nova MicroSensor cards combine all 22 whole blood assays including CO-Oximetry.

Important New Assays

Urea (BUN), and Creatinine

Kidney disease is common in cats and dogs. Prime Plus VET is the only veterinary critical care analyser that provides the option of urea (BUN) and creatinine testing, as well as calculated BUN/creatinine ratio.

Ionised magnesium (iMg)

Disruptions in the balance of iMg, Na, K, and iCa are common in veterinary medicine and can cause cardiac arrhythmias, reduced cardiac contraction, and cardiac arrest. Prime Plus VET is the only blood gas analyser to provide a comprehensive profile of electrolytes including iMg.

Fast Stat Results

Prime Plus VET's exceptional throughput easily handles the high sample workload of a busy practice. Prime Plus VET delivers a 22-test critical care profile in about one minute. Competitors' analysers can require up to four minutes, even with fewer tests reported.





Clot Protection

Prime Plus VET's unique Clot Block™ sample flow path protects MicroSensor cards from blood clot blockages.

New Disposable CO-Oximetry Technology Eliminates Maintenance

Prime Plus VET incorporates a new, patented multi-wavelength optical system that scans a continuous spectrum of optical wavelengths to enable a comprehensive CO-Oximetry panel without lysing the sample. The optical components in contact with blood are contained in the disposable MicroSensor Card, which is replaced every 16 days.

- Cleaning and deproteinising are completely eliminated.
- Lysing and all its required mechanical components are eliminated, along with lysing and deproteinising reagents.

This improves reliability and reduces maintenance and costs.

Individual Sensors and Calibrators Maximise Uptime

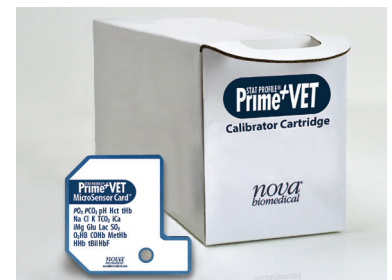
Individual MicroSensor cards and calibrator cartridges offer a significant benefit in analyser uptime compared to combined sensor/calibrator cartridge systems.

MicroSensor cards have fastest replacement time

MicroSensor cards can be replaced and calibrated in 45 minutes. Other combined systems usually take greater than one hour to calibrate and remain unstable with drift and frequent re-calibrations for two hours or longer.

Calibrator cartridges replaced in seconds

Calibrator and quality control (QC) cartridges are immediately ready to use and easily replaced in seconds. Replacing only a calibrator cartridge significantly reduces analyser downtime because it has no warm-up time, compared to the over two-hour wait for competitors' combined systems.



Individual Sensors and Calibrators Lower Costs

Individual MicroSensor cards and calibrator cartridges are a low cost alternative to the inflexibility and waste of combined sensor/calibrator cartridge systems. For example, an analyser in a high workload setting requires fewer sensor cards than calibrators, and a low volume workload setting requires the reverse. In both cases, Prime Plus VET eliminates waste and reduces overall consumable costs by using the full life of each MicroSensor Card and calibrator cartridge.

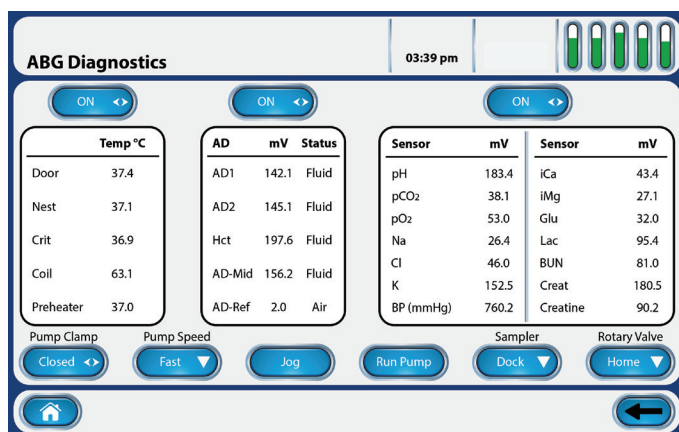
Management Reports for Patient and QC Data, Devices, and Operators

Prime Plus VET is specifically designed to meet practice management requirements by capturing animal testing, QC compliance, and operator records. A large library of reports is available including:

- Patient abnormal/critical results
- Calibration reports
- Levey-Jennings QC reports
- QC cumulative statistics
- Sample comments
- Operator certifications
- Corrective actions
- Calibrator and sensor replacements

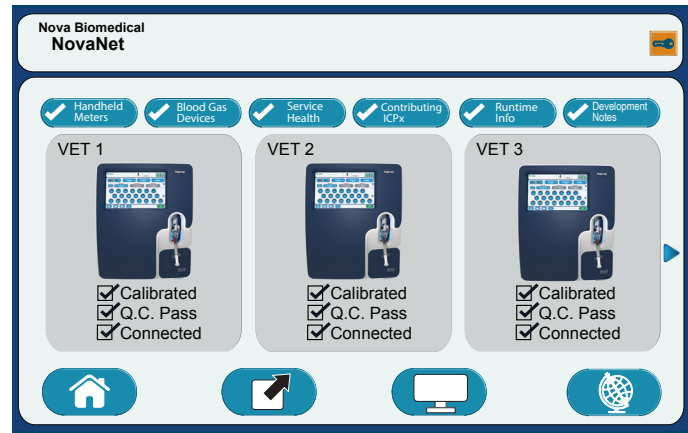
Supplemental Quality Monitoring (SQM)

Prime Plus VET provides an automated electronic quality monitoring supplement to liquid QC. SQM continuously monitors the status and performance of all analytical components (including sensors, reagents, calibrators, sample integrity, software, and electronics), providing real-time, sample-to-sample assurance of correct performance.



Remote Review and Remote Control

The NovaNet remote review and control software application runs on your network and provides information including calibration, QC, reagent, and sensor status for all connected Prime Plus VET analysers. The dashboard view allows operators to review the status of all analysers and correct for calibration or QC needs remotely.



Dashboard review

Individuals with password privileges can view a dashboard of all connected Prime Plus VET analysers from anywhere on the network.

Remote control

Key operators can remotely perform essential Prime Plus VET functions such as:

- Initiate calibration and QC cycles
- Upload or edit set-up parameters
- Assign, certify, or remove operators and privilege levels

Automated, True Liquid QC

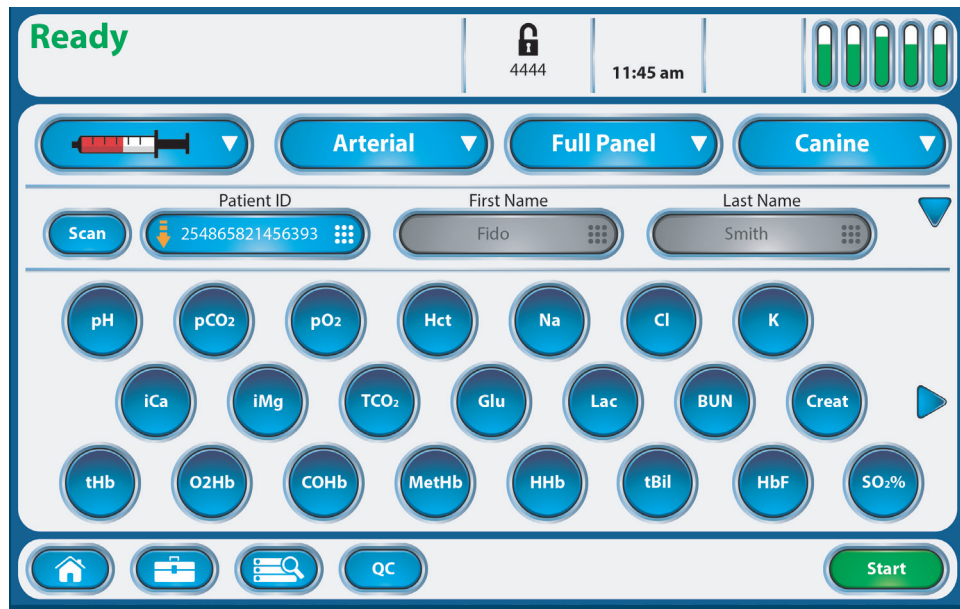
Saves time and labour

Maintaining QC is one of the most time consuming aspects of critical care testing. Prime Plus VET's fully automated, onboard liquid QC saves hours of time each week, compared to manually running controls.



Simple, Fast Operation

25-cm-wide, high definition, colour touchscreen operation

The large colour touchscreen is easy to read and operate with intuitive prompts.



Three simple steps to initiate a full 22-test profile

1. Press 
2. Scan or enter patient ID
3. Press 

Integrated barcode scanner

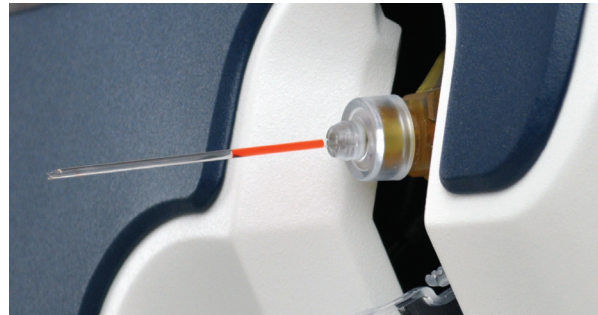
The 1D/2D barcode scanner, conveniently located within the sample port, allows for fast, error-free entry of operator and patient IDs. The optional, wireless, external barcode scanner also allows for positive patient ID, further eliminating pre-analytical error.

Safe Operation

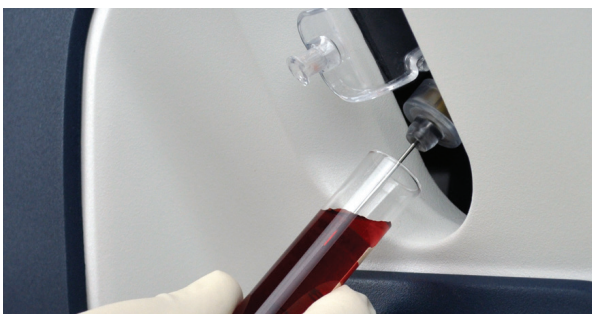
The unique design of the safety sample port protects the user from accidental contact with the analyser probe.



Syringes can be docked and sampled with hands-free operation.



Hands-free capillary sampling can be performed without adapters.



Samples can be aspirated directly from tubes, eliminating sample transfer to a syringe or capillary.



QC proficiency ampoules can be sampled without adapters.

Critical Care Tests

pH	Direct ISE
PCO ₂	Severinghaus
PO ₂	Amperometric
SO ₂ %	Optical, reflectance
Hematocrit	Conductivity/Na correction
Na	Direct ISE
K	Direct ISE
Cl	Direct ISE
TCO ₂	Calculated
iCa	Direct ISE
iMg	Direct ISE
Glucose	Enzyme/Amperometric
Lactate	Enzyme/Amperometric
Urea (BUN)	Enzyme/Amperometric
Creatinine	Enzyme/Amperometric

Methodology

Direct ISE
Severinghaus
Amperometric
Optical, reflectance
Conductivity/Na correction
Direct ISE
Direct ISE
Direct ISE
Calculated
Direct ISE
Direct ISE
Enzyme/Amperometric
Enzyme/Amperometric
Enzyme/Amperometric
Enzyme/Amperometric

Complete Management Reports

- Calibration Report
- Cartridge Log Report
- Daily Sample Log Report
- Edit Log Report
- Error Log Report
- Maintenance Log Report
- Operator Setup Report
- Patient Report
- Levey-Jennings QC Report
- QC Corrective Actions Report
- QC Data Report
- QC Statistics Report
- QC Setup Report
- Sample Audit Log Report

Monitored Interferences

sHb, sulphaemoglobin
(Measured; user alerted if abnormal, > 1.5%)

Measurement Ranges

pH	6.50 - 8.00 (H ⁺ : 316.2 - 10 nmol/L)
PCO ₂	3 - 200 mmHg (0.4 - 26.7 kPa)
TCO ₂	5 - 70 mmol/L (90 - 1260 mg/dL)
PO ₂	5 - 765 mmHg (0.66 - 102 kPa)
Hct	12% - 70%
Na	80 - 200 mmol/L
K	1 - 20 mmol/L
Cl	50 - 200 mmol/L
iCa	0.1 - 2.7 mmol/L (0.4 - 10.8 mg/dL)
iMg	0.1 - 1.5 mmol/L (.24 - 3.6 mg/dL)
Glucose	0.8 - 28 mmol/L (15 - 500 mg/dL)
Lactate	0.3 - 20 mmol/L (2.7 - 180.2 mg/dL)
Urea (BUN)	0.17 - 5.5 mmol/L (3 - 100 mg/dL)
Creatinine	10 - 660 µmol/L (0.2-12 mg/dL)
HHb	0 - 33% (0 - 0.33)
O ₂ Hb	0 - 100% (0 - 1)
MetHb	0 - 80% (0 - 0.8)
COHb	0 - 60% (0 - 0.6)
SO ₂ %	30 to 100%
O ₂ Ct	495.04 - 2952.56 µmol/L (5.6 - 33.4 mg/dL)
O ₂ Cap	495.04 - 2952.56 µmol/L (5.6 - 33.4 mg/dL)
tBil	44.2 - 3094 µmol/L (0.5 - 35 mg/dL)
HbF	0 - 92%
tHb	5 - 25 g/dL (50 - 250 g/L)
sHb	Alert > 1.5%
BarP	400 - 800 mmHg (53.3 - 106.7 kPa)

Calculated Tests

eGFR	A-aDO ₂	iCa/iMg Ratio
HCO ₃	a/A	Normalised iCa
TCO ₂	PO ₂ /FIO ₂	Normalised iMg
BE-ecf	Anion Gap	Osmolality
BE-b	SBC	Haemoglobin
A	Base Excess	O ₂ Saturation
pH/PCO ₂ /PO ₂ Corrected to Patient Temperature		
Respiratory Index (If % FIO ₂ value entered)		
Actual Bicarbonate		
Standard Bicarbonate		

CO-Oximetry Tests

HHb, deoxyhaemoglobin	O ₂ Hb, oxyhaemoglobin
MetHb, methaemoglobin	COHb, carboxyhaemoglobin
tHb, total haemoglobin	SO ₂ %, oxygen saturation
tBil, total bilirubin	HbF, foetal haemoglobin

Special Calculated Tests (CO-Oximetry Required) Tests Resolution

A-v DO ₂	0.1 mmHg (0.01 kPa)
CaO ₂	0.1 mL/dL (0.01 kPa)
CcO ₂	0.1 mL/dL (0.01 kPa)
P50	0.1 mmHg (0.01 kPa)
C(a-v)O ₂	0.1 mmHg (0.001 kPa)
CvO ₂	0.1 mmHg (0.001 kPa)
Qsp/Qt	0.1 mmHg (0.001 kPa)
O ₂ Ct	0.1 mL/dL (0.01 mL/L)
O ₂ Cap	0.1 mL/dL (0.01 mL/L)

Other Features

Full colour 25-cm touchscreen, multilingual, QC statistics, onboard data management, automatic sampler, integrated capillary adapter, optional barcode scanner, QC data storage, optional mobile cart with UPS

Sample Volume

135 µL whole blood

Operating Temperature Range

59°F-89.6°F

Physical Specifications

Height: 45.7 cm (18.2 in) Width: 35.6 cm (14.2 in)
Depth: 39.1 cm (15.5 in) Weight: 15.88 kg (35 lb)
without reagent packs

Electrical Power Requirement

< 90 Watts

Printer

Onboard thermal printer

Calibration

Fully automatic two-point calibration every two hours;
user-selectable single-point calibration every 45 minutes
or with each sample. Manual calibration initiated at any time.

Acceptable Samples

Whole blood (heparinised), arterial, venous, mixed venous,
capillary, dialysate

Communication Protocols

ASTM, HL7, or POCT01-A2 connectivity formats

Compact Size

Dimensions for Prime Plus VET, including onboard
CO-Oximetry and built-in bidirectional connectivity:

Other Nova Veterinary Products

Prime VET Analyser
Blood Gas/Electrolyte/
Metabolite Model
pH, PCO₂, PO₂, Hct, Na,
K, Cl, iCa, Glu, Lac



Prime VET Electrolyte System
Comprehensive
Electrolyte Model
Na, K, Cl, iCa, iMg



Nova VET Meter
Glucose, Ketone




StatStrip Meter
Lactate



StatSensor Meter
Creatinine, eGFR





45.7 cm
18.2 in

39.1 cm
15.5 in

35.6 cm
14.2 in

Weight:
15.88 kg (35 lb) without calibrator cartridge
19.30 kg (42.5 lb) with calibrator cartridge