



Telephone: + 27 (0)11 791 0025
Facsimile: + 27 (0)86 551 0832
e-Mail: johan@anjotech.co.za



VetScan i-STAT 1 Analyzer

Results To Go.

The VetScan i-STAT 1 delivers accurate blood gas, electrolyte, chemistry and hematology results in minutes from 2-3 drops of whole blood in a completely portable, handheld package – making it the ideal solution for critical care situations, hospital operating room monitoring, exotic animals and research needs at the point of care.

Most importantly, the VetScan i-STAT 1 provides the additional information needed to monitor chronic disease patients, evaluate pre-anesthetic patients and provide diagnostic specialty testing information for the ill patient in the exam or treatment room.

Features & Benefits

- Small sample size – 95 μ L or less
 - Perfect when small sample sizes are required such as for the anemic kitten or the fractious cat
-

- Most results in 2 minutes
- Real-time, laboratory quality results within minutes
- Accurate and reliable
- Allows you to make quick and confident treatment decisions
- Features a Cardiac Troponin I Cartridge
- Broad and expanding range of tests with one platform
- Lightweight, portable, easy to use
- Prior patient results available in the exam room or in the field

VetScan i-STAT 1 Specifications

Dimensions	Width	7.68 cm (3.035 in)
	Length	23.48 cm (9.245 in)
	Depth	7.24 cm (2.85 in)
Weight	650 grams (22.9 oz) with rechargeable batteries	
	635 grams (22.4 oz) with disposable batteries	
Power	Two 9-volt lithium batteries or rechargeable battery	
Calibration	Factory: electronic, mechanical, thermal, pressure	
Memory/Clock Backup Power	Lithium battery	
Display	Dot matrix supertwist liquid crystal	
Communication Link	Infrared light-emitting diode (LED)	

Operating Temperature 16 - 30 °C (61 - 86 °F) for VetScan i-STAT cartridge testing

Transport Temperature -10 - 46 °C (14 - 115 °F)

Relative Humidity 90% (maximum) non-condensing

Barometric Pressure 300 - 1000 mmHg

Laser Scanner Complies with U.S. 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser Notice No. 50, dated July 26, 2001.
EN 60825-1:1994 + A1:2002 + A2:2001
IEC 60825-1:1993 + A1:1997 + A2:2001

Simple Operation

You can now get a full range of diagnostic applications in the palm of your hand, in 3 easy steps.



1 Fill cartridge to fill line.



2 Insert cartridge.



3 Read results in 2 minutes.

Cartridges

[View our chart of VetScan i-STAT Cartridges](#)

CG4+



i-STAT CG4+ Cartridge

This cartridge provides the following analytes – pH, $P\text{CO}_2$, HCO_3^- , TCO_2 , Base Excess, $P\text{O}_2$, $s\text{O}_2$, Lactate

Available in 10 and 25 count packages

CG8+



i-STAT CG8+ Cartridge

This cartridge provides the following analytes – Hct, Hgb, iCa, Glu, Na, K, pH, $P\text{CO}_2$, HCO_3^- , TCO_2 , Base Excess, $P\text{O}_2$, $s\text{O}_2$

Available in 10 and 25 count packages



i-STAT G Cartridge

This cartridge provides the following analyte – Glu

Available in 10 and 25 count packages

Crea



i-STAT Crea Cartridge

This cartridge provides the following analyte – Crea

Available in 10 count packages

E3



i-STAT E3+ Cartridge

This cartridge provides the following analytes – Hct, Hgb, Cl, Na, K

Available in 10 and 25 count packages

* Chloride test on the E3+ cartridge is only available on the VetScan i-STAT 1 analyzer.

6+



i-STAT 6+ Cartridge

This cartridge provides the following analytes – Hct, Hgb, BUN, Glu, Cl, Na, K

Available in 10 and 25 count packages

CHEM8+



i-STAT CHEM8+ Cartridge

This cartridge provides the following analytes – Hct, Hgb, BUN, Crea, iCa, Glu, Cl, Na, K, TCO₂, Anion Gap

Available in 10 and 25 count packages

EC8+



i-STAT EC8+ Cartridge

This cartridge provides the following analytes – Hct, Hgb, BUN, Glu, Cl, Na, K, pH, PCO₂, HCO₃, TCO₂, Anion Gap, Base Excess

Available in 10 and 25 count packages

Act Celite

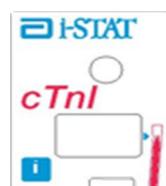


i-STAT ACT Celite Cartridge

This cartridge provides the following analyte – ACT

Available in 10 and 25 count packages

Cardiac 1 Troponin



i-STAT Cardiac 1 Troponin Cartridge

This cartridge provides the following analyte – cTnI

Available in 10 and 25 count packages

VetScan i-STAT FAQ

1. What technology does the VetScan i-STAT1 utilize?

Electrochemistry. Measurement is accomplished using electrochemical sensing technologies. A group of thin film electrodes located at the top of a cartridge are coated with chemically sensitive films. These coated sensors react to small changes caused by chemical reactions in the sample.

The sensors are either potentiometric, measuring changes in the electric potential, amperometric, measuring changes in electric current, or conductometric measuring changes in conductivity. The concentration of the analyte is determined by measuring the difference in signal from the calibrant and the sample. This difference in signal is then converted to the specific concentration units for the analyte using the analyzer's internal processor.

2. What kinds of tests can be run on the VetScan i-STAT1 instrument?

The VetScan i-STAT1 offers a variety of disposable, single-use cartridges (10) including tests for acid/base analysis, blood gases, chemistry, hematology, electrolytes, and some specialty tests like Lactate, ACT, and Cardiac Troponin I. These cartridges are configured with parameters that can give a clear patient's condition depending on the clinical situation.

3. What type of sample is used?

Whole blood.

4. What is the shelf-life of the VetScan i-STAT1 cartridges?

The cartridges are manufactured with 5-11 months shelf life, depending on the stability of the analytes in each cartridge.

5. What species does the VetScan i-STAT1 have reference ranges for?

Cat, dog, and horse. These ranges are available in the user guide provided with the analyzer.

6. What analytes on the VetScan i-STAT1 system are measured and which are calculated?

Measured: Hematocrit (Hct), Blood Urea Nitrogen (BUN), Creatinine (Crea), Ionized Calcium (iCa), Glucose (Glu), Chloride (Cl), Sodium (Na), Potassium (K), pH, Partial pressure of carbon

dioxide (PCO_2), Partial pressure of oxygen (PO_2), Oxygen saturation (sO_2), Lactate, Activated Clotting time with Celite® activator (ACT), Cardiac Troponin I (cTnl)

Calculated: Hemoglobin (Hb), Bicarbonate (HCO), Total carbon dioxide concentration (TCO_2), Anion gap (AnGap), Base Excess (BE)

7. Does the VetScan i-STAT1 require calibration?

No. Calibration is performed each time a cartridge requiring calibration is used, automatically. During the first part of the testing cycle, the calibrant solution is released from its foil pack and is positioned over the sensors. The signals produced by the sensors' responses to the calibrant solution are measured. The calibration adjusts the offset of the stored calibration curve.

8. Does the VetScan i-STAT1 require a lot of maintenance?

No, not at all. Only maintenance required for the VetScan i-STAT is a software update every 6 months.

9. Do I need to run controls for the VetScan i-STAT1?

No. A series of automatic quality checks are performed during each test cycle. When there is a quality check failure, a message is displayed with the cause and corrective action. The quality checks detect improper environmental conditions, analyzer function, cartridge filling, cartridge function, and sensor function.

If running an external control is part of your standard lab practices, controls are available for purchase from Abaxis. Target values can be found here: <http://abbottpointofcare.com>.

10. Why does the VetScan i-STAT1 have software updates?

The VetScan i-STAT1 System is designed to eliminate operator influence on delivered results. Due to the continuous manufacturing process improvements to the VetScan i-STAT1 System, it is necessary to update standardization values from time to time to maintain long-term consistency of performance. These updates are equivalent to manually adjusting calibration on a traditional laboratory analyzer.

New CLEW software—delivered twice a year on a CD-ROM re-establishes these standardization values and incorporates refinements to the internal quality monitoring system. New JAMS application software allows the VetScan i-STAT1 to recognize any newly launched cartridge types and to perform any newly launched feature.

11. Can I connect the VetScan i-STAT1 to an external computer?

Yes. This can be accomplished by using the Central Data Station (CDS) software and the downloader provided in the VetScan i-STAT1 Starter Kit. The CDS can be used to save

results onto a computer and get them into a Microsoft Excel file. Contact Abaxis technical support with questions regarding the CDS.

12. How much blood is required to run an VetScan i-STAT1 cartridge?

17–95 µL, depending on the cartridge used.

13. If the VetScan i-STAT1 instrument is exposed to extreme heat or cold, will it still produce reliable results?

Operating temperature for VetScan i-STAT 1 cartridge testing is 16–30 °C (61–86 °F). If it is out of this range, please take proper steps to get this analyzer back to this temperature range.

14. Where do I store the VetScan i-STAT1 cartridges?

All VetScan i-STAT1 cartridges should be refrigerated at 2–8 °C (35–46 °F). Once removed from the refrigerator, cartridges can be stored at room temperature (18–30 °C or 64–86 °F) for up to two weeks. Once a cartridge has been warmed to room temperature, do not return it to the refrigerator.

15. Do the cartridges require warm-up before use?

Allow five minutes for an individual cartridge – or one hour for a box of 25 cartridges – to reach room temperature before use if taken from refrigerator.

16. Can the VetScan i-STAT1 results be transmitted to my lab management software?

This depends on the practice management software that you use. Check with your software vendor for updates/details.

17. Can I print my results from the VetScan i-STAT1?

Yes. Results can be printed from the VetScan i-STAT1 using the portable Martel Printer that is included in the VetScan i-STAT1 Starter Kit. The printer can receive data directly from the analyzer via infrared transmission or through a data cable connected to a Downloader. The printer is battery powered and can be recharged from a power adapter that is included.

18. Ok, the VetScan i-STAT1 is portable, how long do the 9V batteries last?

Two 9 volt lithium batteries will provide power for approximately 400 chemistry cartridges. They are available for purchase from Abaxis.

19. How many result records can the VetScan i-STAT1 store?

The maximum number of records will depend on your handheld customization settings, but the VetScan i-STAT1 will store at least 1,000 records.

20. Why test for Cardiac Troponin I?

Measurements of Cardiac Troponin I are useful in the diagnosis, treatment and monitoring of conditions causing myocardial damage in veterinary patients. Examples include hypertrophic, dilated and unclassified cardiomyopathy, subaortic stenosis and gastric dilation–volvulus.