i·sens

Owner's Booklet

VetMate™ 🐾

Blood Glucose Monitoring System

VetMate 🐾

150 mg/dL

09:24 12:37 PM

🐕 Dogs	🐈 Cats

Calibrated for dogs & cats
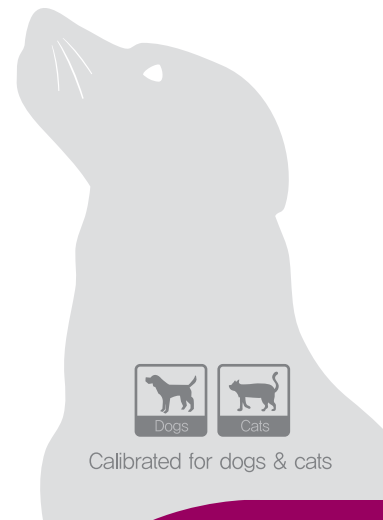
GDH-FAD

Used Strip Ejector

Auto Backlighted LCD

Welcome to the VetMate Blood Glucose Monitoring System

Thank you for choosing the VetMate Blood Glucose Monitoring System. The system provides you with safe, fast, and convenient blood glucose *in vitro* (i.e., outside the body) diagnostic monitoring. You can obtain accurate results of your dog/cat in just 5 seconds with a small (0.4 μL) blood sample.

Table of Contents

Important Information: Read This First!

For optimum safety and benefits, please read the entire manual contents before using the system.

Intended Use:
VetMate Blood Glucose Test Strips are for use with VetMate Blood Glucose Meters to quantitatively measure glucose in capillary and venous whole blood samples drawn by veterinarians or veterinary surgeons for the management of diabetes in cats and dogs.

Meaning of Symbols Used:

$C\epsilon$	CE Mark
⚠	Cautions for safety and optimum product use
📖	Consult instructions for use
🗑	Do not discard this product with other household-type waste
⧖	Use by (unopened or opened test strip vial)
🏭	Manufacturer
⊗	Do not reuse
SN	Serial number

🌡	Temperature limitations
LOT	Batch code
EC REP	Authorised representative

- The VetMate Blood Glucose Monitoring System is intended for use in monitoring glucose samples taken from the dog or cat.
- Glucose in blood samples reacts with the chemical in the test strip to produce a small electrical current. The VetMate Meter detects this electrical current and measures the amount of glucose in the blood sample.
- The VetMate Blood Glucose Meter is designed to minimise code related errors in monitoring by using the no-coding function.
- The VetMate Blood Glucose Meter should be used only with the VetMate Test Strips.
- An abnormally high or low red blood cell count (hematocrit level over 65 % or below 15 %) may produce inaccurate results.

If you need assistance, please contact your authorised i-SENS sales representative or visit www.i-sens.com for more information.

Specifications

Product specifications

Measurement range	20–600 mg/dL (1.1–33.3 mmol/L)
Sample size	Minimum 0.4 µL
Test time	5 seconds
Sample type	Fresh capillary whole blood, Fresh venous whole blood
Calibration	Plasma-equivalent
Assay method	Electrochemical
Battery life	3,000 tests
Power	Two 3.0 V lithium batteries (disposable, type CR2032)
Memory	500 test results
Size	92 x 52 x 21 mm
Weight	55 g (with batteries)

Operating ranges

Temperature	5–45 °C (41–113 °F)
Relative humidity	10–90 %
Hematocrit	15–65 %

Storage and transport conditions

Temperature	Meter (with battery)	0–50 °C (32–122 °F)
	Test strip	1–30 °C (34–86 °F)
	Control solution	8–30 °C (46–86 °F)
Relative humidity	Test Strip	10–90 %

VetMate Blood Glucose Monitoring System

VetMate Blood Glucose Monitoring System includes the following items:

- VetMate Blood Glucose Meter
- Owner's Booklet
- Quick Reference Guide
- Batteries

VetMate Blood Glucose Monitoring System may include the following items:

- VetMate Blood Glucose Test Strips
- Lancets
- Lancing Device
- Logbook
- Carrying Case

- Check all the components after opening the VetMate Blood Glucose Monitoring System package. The exact contents are listed on the main box.
- The USB cable for data management software can be ordered separately. Please contact your authorised i-SENS sales representative.

Replacing the Batteries

The VetMate meter comes with two 3.0 V lithium batteries. Before using the meter, check the battery compartment and insert batteries if empty. When the ▬+▬ symbol appears on the display while the meter is in use, the batteries should be replaced as soon as possible. The test results may not be saved if the batteries run out.

Step 1

Make sure the meter is turned off. Push the cover in the direction of the arrow to open the battery compartment.
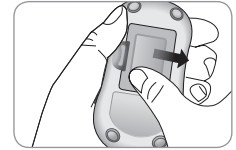
Step 2

Remove the used batteries one at a time. Slip your index finger under the battery to lift and pull out as shown. Insert two new batteries with the + side facing up and make sure the batteries are inserted firmly.
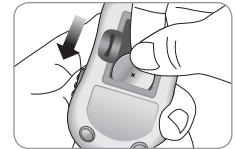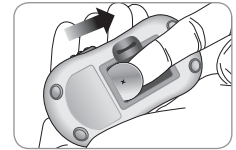
Step 3

Place the cover on the battery compartment. Push it down until you hear the tab click into place.
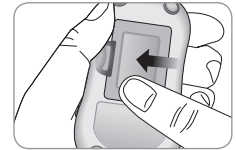
Note: Removing the meter batteries will not affect the stored results. However, you may need to reset the meter settings. See pages 15–20.

Caring for the System

Use a soft cloth or tissue to wipe the meter exterior. If necessary, dip the soft cloth or tissue in a small amount of alcohol.
Do not use organic solvents such as benzene, acetone, or any household and industrial cleaners that may cause irreparable damage to the meter.

Caution:

• Do not expose the meter to direct sunlight, heat, or excessive humidity for an extended period of time.

• Do not let dirt, dust, blood, or water enter into the meter's test strip port.

• Do not drop the meter or submit it to strong shock.

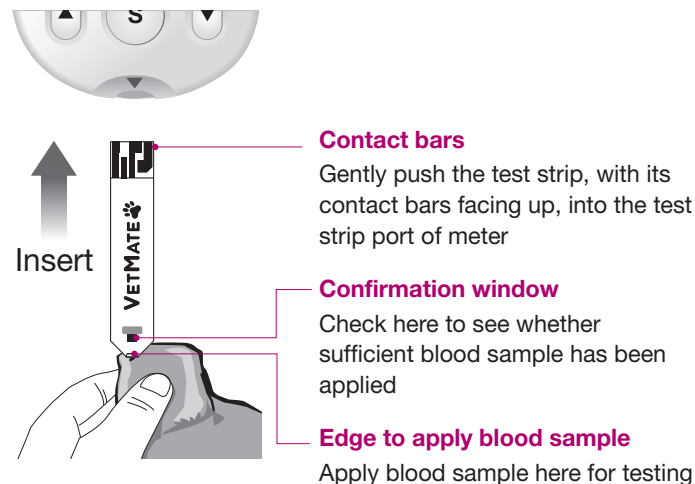• Do not try to fix or alter the meter in any way.

• Avoid getting any liquid or moisture in the test strip vial. This can affect the test strips and cause inaccurate test results.

• Do not apply samples other than capillary, venous whole blood or control solution to the test strip.

• Strong electromagnetic radiation may interfere with the proper operation of this device. Keep the device away from sources of strong electromagnetic radiation, especially when measuring your pet's blood glucose.

• Keep the meter in a cool and well ventilated place.

• Store all the meter components in the carrying case to prevent loss and help keep the meter clean.

Disposal of the meter

If you need to throw your meter away, you should follow existing policies and procedures of your own country or region. For information about correct disposal, please contact your local council or authority. If you need assistance, contact your authorised i-SENS sales representative or visit *www.i-sens.com*.

VetMate Blood Glucose Test Strip

The VetMate Blood Glucose Monitoring System measures blood glucose quickly and accurately. It automatically absorbs the small blood sample applied to the narrow edge of the strip.

Insert

Contact bars
Gently push the test strip, with its contact bars facing up, into the test strip port of meter

Confirmation window
Check here to see whether sufficient blood sample has been applied

Edge to apply blood sample
Apply blood sample here for testing

Warning!

- Apply fresh whole capillary blood to the test strip. Fresh venous whole blood may also be used only if drawn by veterinarian/veterinary surgeon.
- Fresh venous whole blood specimens containing the anticoagulants EDTA and Heparin is acceptable. Iodoacetate or fluoride/oxalate are not recommended.
- Do not reuse test strips.
- Do not use test strips past the expiration or discard date.
- Test strips in new, unopened vials and test strips in vials that have been opened can be used up until the expiration date printed on the test strip box and vial label if the test strips are used and stored according to its storage and handling methods.
- Store test strips in a cool and dry place at a temperature between 1–30 ˚C (34–86 °F).
- Keep test strips away from direct sunlight or heat and do not freeze.
- Store test strips only in their original vial.
- Close the vial tightly after taking out a test strip for testing and use the strip immediately.
- Handle test strips only with clean and dry hands.
- Avoid getting any liquid or moisture in the test strip vial. This can affect the test strips and cause inaccurate test results.
- Do not apply samples other than capillary, venous whole blood or control solution to the test strip.
- Do not bend, cut, or alter test strips in any way.
- For detailed storage and usage information, refer to the VetMate test strip package insert.

Caution:
- Keep the meter and testing supplies away from young children or pets.
- Drying agents in the vial cap may be harmful if inhaled or swallowed and may cause skin or eye irritation.
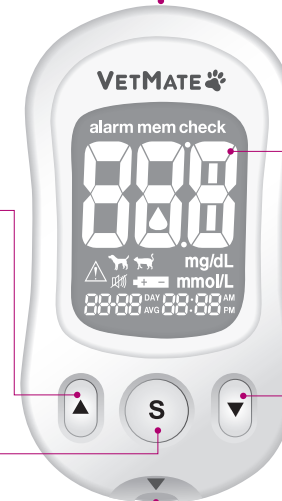
Data Port
Used to transfer data from the meter to a computer with a cable

▲ Button
Selects or changes information

S Button
Turns the meter on/off and confirms menu selections

Display
Show results and messages

Ejection Button
Slide down to discard the used test strips

▼ Button
Selects or changes information

Test Strip Port
Insert test strip here

Note:
- The unit of measurement is fixed and it cannot be changed by the user.
- The USB cable for data management software can be ordered separately. Please contact your authorised i-SENS sales representative.

VetMate Blood Glucose Meter Display

Display Segment Check

It is recommended to check if the display screen on the meter matches the illustration below every time the meter turns on. Do not use the meter if the display screen does not exactly match the illustration as the meter may show incorrect results.

mem
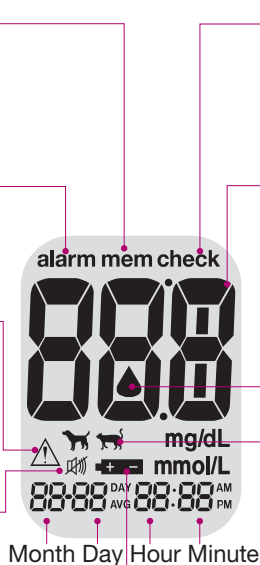Appears when test results stored in the memory are displayed

alarm
Appears when the time alarm has been set

Hypoglycemia symbol
Appears when the test result is below the pre-set hypoglycemic level

Mute symbol
Appears only when the sound is set to OFF

Month Day Hour Minute

Battery symbol
Indicates meter battery is running low and needs to be replaced

check
Appears when the control solution test results are saved or displayed

Test results

Blood insertion symbol
Indicates the meter is ready for the application of a drop of blood or control solution

Animal symbol
Shows the animal (dog/cat) mode

Setting Up the System

Press and hold the **S** button for 3 seconds to enter SET mode. After all settings are finished, press and hold the **S** button for 3 seconds to turn off the meter.
Press the ▲ or ▼ button to reach the accurate value. Press and hold the ▲ or ▼ button to scroll faster.

Adjusting the Date and Time

Step 1 Entering SET Mode

Press and hold the **S** button for 3 seconds. After all the segments flash across the screen, 'SET' will be displayed on the screen. Press the **S** button again to go to the next step.

Step 2 Setting the Year

Press ▲ or ▼ to adjust until the correct year appears. After setting the year, press the **S** button to confirm your selection and go to the next step.

Step 3 Setting the Month

A number indicating the month will blink on the bottom left corner of the screen.
Press the ▲ or ▼ button until the correct month appears. Press the **S** button to confirm your selection and go to the next step.

Step 4 Setting the Date

Press the ▲ or ▼ button until the screen displays the correct date. Press the **S** button to confirm the date and go to the next step.
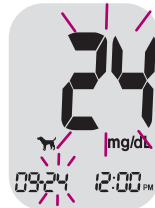
**Step 5** Setting the Time Format

The meter can be set in the AM/PM 12-hour or the 24-hour clock format. Press the ▲ or ▼ button to select a format. The AM•PM symbol is not displayed in the 24-hour format.
After selecting the format, press the **S** button to go to the next step.

Step 6 Setting the Hour

Press the ▲ or ▼ button until the correct hour appears. After the hour is set, press the **S** button to go to the next step.
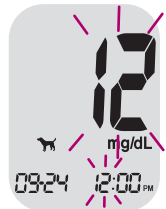
Step 7 Setting the Minute

Press the ▲ or ▼ button until the correct minute appears. After setting the minute, press the **S** button to go to the next step.
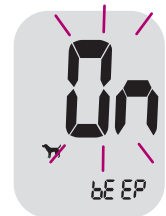
Setting the Sound On/OFF

Step 8

On pressing the ▲ or ▼ button, the screen will display On or OFF. Press the **S** button to confirm the selection.

The meter will beep in the following instances if set to On:
• When the test strip is inserted in the meter,

- When the blood or control solution sample is absorbed into the test strip and the test starts,
- When the test result is displayed,
- When you press the **S** or ▲ button to turn on the meter,
- When it is time for a preset blood glucose test.

If the sound is set to OFF, none of the sound functions will work. After setting the sound, press the **S** button to go to the next step.

Note: The 🔇 symbol is displayed only when the sound is set to OFF.

Setting VET Mode (Animal Mode)

Step 9

In this setting, VET Mode can be selected; dogs or cats.
On pressing the ▲ or ▼ button, the screen will display the 🐕 or 🐈 symbol. Press the **S** button to confirm the setting.


Turning on the Hypoglycemia (HYPo) Indicator

Step 10

In this setting, the hypoglycemia (possible low blood sugar) level can be selected.
'HYPo' will be displayed with the ⚠ symbol. On pressing the ▲ or ▼ button, the screen will display 'On' or 'OFF'. Press the **S** button when 'On' appears to set the hypoglycemia level. Press the ▲ or ▼ button until the desired hypoglycemia level between 20 and 90 mg/dL (1.1 and 5.0 mmol/L) appears. Press the **S** button to confirm the level and go to the next step.
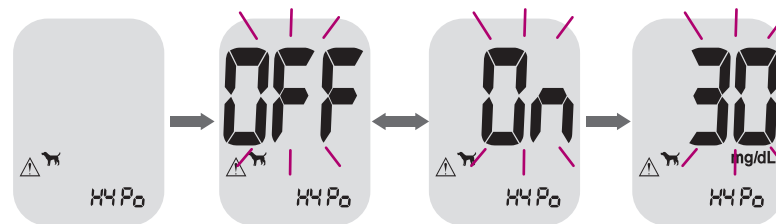
If you do not want to set the indicator, press the **S** button while the screen displays 'OFF'.

Caution: Before setting the hypoglycemia level, ask your veterinarian/ veterinary surgeon to help you decide what the hypoglycemia level is.

## Setting the 'Test Result Reset' (Deleting the saved test results)

In this setting, the test results saved in the meter can be deleted. Please note that if you select 'YES', the saved test results will be deleted and cannot be restored.

'dEL' and 'no 1' will be displayed on the screen. Press ▼ to switch between 'YES' or 'no'. Press ▲ to select a desired dog (no 1-4) or cat (no 1-4) to delete the saved test results.
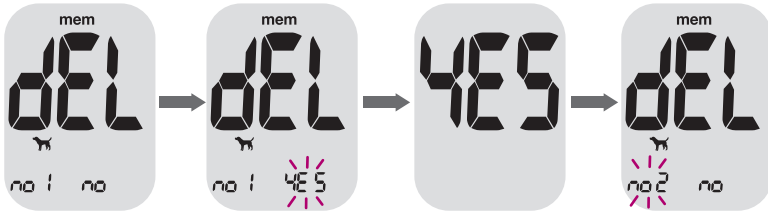
To delete all the saved test results, press the ▲ button until the 🐕 and 🐈 symbols, and 'ALL' appear on the screen. Press the ▼ button until 'YES' appears on the screen. When 'YES' blinks, press the **S** button. All the saved test results will be deleted from the meter. Refer to the process shown in the figure below.
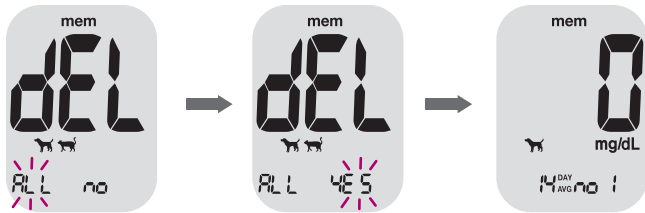
If you do not want to delete the results, press the **S** button while the screen displays 'no'. Then, the screen will return to step 2. See page 15.

Checking the System

You may check the meter and test strips using the VetMate Glucose Control Solution (control A and/or B). The VetMate Control Solution contains a known amount of glucose and is used to check that the meter and the test strips are working properly. The test strip vials have VetMate Control Solution ranges printed on their labels. Compare the result displayed on the meter to the VetMate Control Solution range printed on the test strip vial. Before using a new meter or a new vial of test strips, you may conduct a control solution test following the procedure on page 22–23.

Note:
- Use only the VetMate Control Solutions.
- Check the expiration date printed on the bottle. When you first open a control solution bottle, record the discard date (date opened plus 3 months) in the space provided on the label.
- Make sure the meter, test strips, and control solution are at room temperature before testing. Control Solution tests must be done at room temperature (20–25 ˚C, 68–77 ˚F).
- Before using the control solution, shake the bottle. discard the first few drops and wipe the tip clean.
- Close the control solution vial tightly and store at a temperature between 8–30 ˚C (46–86 ˚F).

You may do a control solution test:
- When you want to practice the test procedure using the control solution instead of blood,
- When using the meter for the first time,
- Whenever you open a new vial of test strips,
- If the meter or test strips do not function properly,
- If your pet's behaviors are inconsistent with the blood glucose test results and you feel that the meter or test strips are not working properly,
- If you drop or damage the meter.

Caution: If all the results you get on testing three times continuously are within the range printed on the test strip vial, the meter and test strips are working properly and you may use them for the blood glucose test.
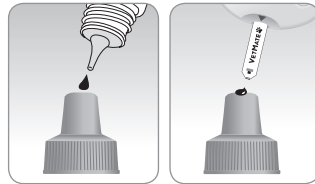
Control Solution Testing

Step 1

Insert a test strip into the meter's test strip port, with the contact bars facing upwards.

Gently push the test strip into the port until the meter beeps. Be careful not to bend the strip while pushing it in. The ▲ symbol will be displayed on the screen.
When pressing and holding the ▲ button for
3 seconds, the control solution testing will be ready.

check

no l
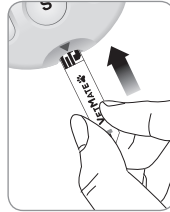
Step 2

Shake the VetMate Control Solution bottle before each test.
Remove the cap and squeeze the bottle to discard the first drop. Then wipe the tip with a clean tissue or cloth. After the ▲ symbol appears on the display, apply the solution to the narrow edge of the test strip until the meter beeps. Make sure the confirmation window fills completely.

Note: The meter may switch off if the control solution sample is not applied within 2 minutes of the ▲ symbol appearing on the screen. If the meter turns off, remove the strip, reinsert, and start from step 1.
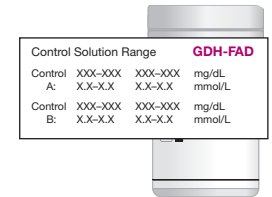
Step 3

A test result will appear after the meter counts down from 5 to 1.
When 'check' is displayed, the result is stored in the meter's memory but it is not included in the averages.

check

150 mg/dL

09:24 12:37 PM

Step 4

Compare the result displayed on the meter to the range printed on the test strip vial.
The result should fall within the range.
Used strips should be discarded safely in disposable containers.

Control Solution Range		GDH-FAD
Control A:	XXX–XXX XXX–XXX	mg/dL
	X.X–X.X X.X–X.X	mmol/L
Control B:	XXX–XXX XXX–XXX	mg/dL
	X.X–X.X X.X–X.X	mmol/L

Caution:
• If the results are not within the range on the test strip vial, the meter and test strip may not work properly. Then, stop using the meter and contact the authorised i-SENS sales representative.
• The range printed on the test strip vial is for the VetMate Control Solution only. It does not have any connection to the blood glucose level of your dog/cat.
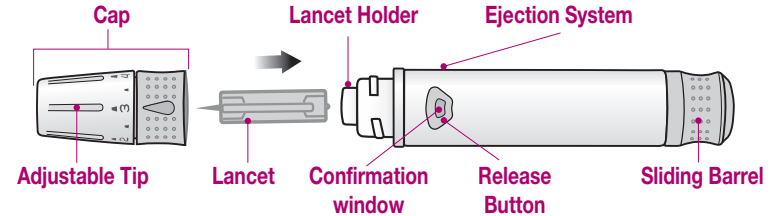
Comparing the Control Solution Test Results

The test result of each control solution should be within the range printed on the label of the test strip vial. Repeat the control solution test if the test result falls outside of the range. Out of range results may occur in the following situations:

Situations	Do This
• When the control solution bottle was not shaken well, • When the meter, test strip, or the control solution were exposed to high or low temperatures, • When the first drop of the control solution was not discarded or the tip of the bottle was not wiped clean,	Repeat the control solution test by referring to the **Note** on page 21.
• When the control solution is past the expiration date printed on the bottle, • When the control solution is past its discard date (the date the bottle was opened plus three (3) months), • When the control solution is contaminated.	Discard the used control solution and repeat the test using a new bottle of control solution.

If results continue to fall outside the range printed on the test strip vial, the VetMate Test Strip and Meter may not be working properly. Do not use your system and contact i-SENS sales representative.

Note: The VetMate Control Solution can be purchased separately. Please contact your authorised i-SENS sales representative.

Using the Lancing Device

You will need a lancing device in order to collect a blood sample. You may use the lancing device included in the VetMate Blood Glucose Monitoring System or any other medically approved lancing device.

Cap   Lancet Holder   Ejection System

Adjustable Tip   Lancet   Confirmation window   Release Button   Sliding Barrel

• Use a soft cloth or tissue to wipe the lancing device.
  If necessary, a small amount of alcohol on a soft cloth or tissue may be used.

Caution: To avoid infection when drawing a sample, do not use a lancet more than once, and:
  • Do not use a lancet that has been used by other dogs/cats.
  • Always use a new sterile lancet.
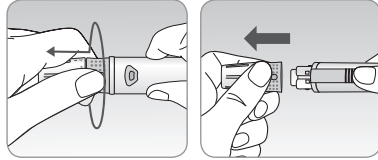 • Keep the lancing device clean.

Preparing the Lancing Device

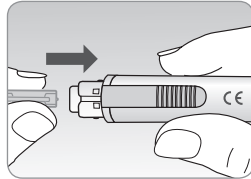Wash your hands and sample site with soap and warm water. Rinse and dry thoroughly.

Step 2

Unscrew and remove the lancing device tip.

Step 3

Firmly insert a new lancet into the lancet holder. Hold the lancet firmly. Gently twist to pull off protective disk. Save disk to recap lancet after use. Replace lancing device tip.


Step 4

The lancing device has six puncture depth settings (0 for a shallow puncture, 5 for a deeper puncture). Choose a depth by rotating the top portion of the adjustable tip until the desired number aligns with the arrow. A beginning setting of three (3) is recommended.
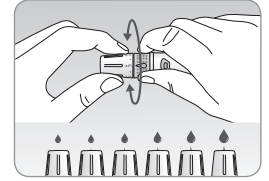
Step 5

To cock the lancing device, hold the body of lancing device in one hand and pull the sliding barrel with the other hand. The device is loaded when you feel a click and the load confirmation window turns red.
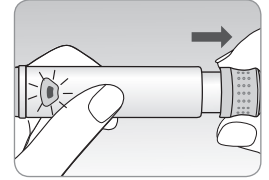

Preparing the Meter and Test Strip

Step 6

Insert a test strip with the contact bars facing upwards into the meter's test strip port. Push the strip in gently until the meter beeps. Be careful not to bend the test strip. The ▲ symbol will appear on the screen.

Step 7

In this step, VET mode can be selected; dogs or cats. You can change the pet type between dogs and cats by pressing the ▼ button for 3 seconds. Press the ▲ or ▼ button to select a number for your dog or cat. Test results of up to 4 different dogs and cats can be distinguished by selecting numbers between 1-4 in this step.

▲button

▼button

Press and hold the ▼ button.

▲button

▼button
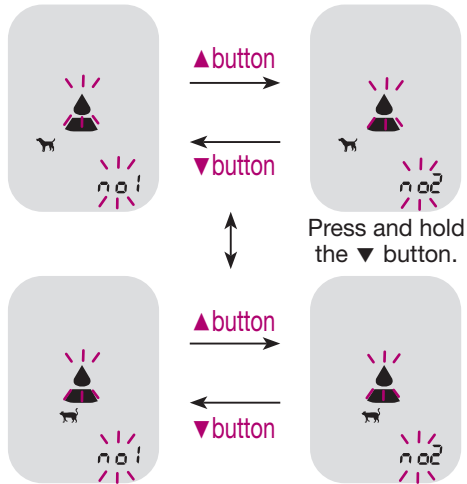
Applying Blood Sample

Step 8

Obtain a blood sample using the lancing device. Place the device against the test site: the marginal ear vein in both cats and dogs; paw pad in cats and dogs; leg callus, usually dogs; inner or outer lip, dogs only. Press the release button. Remove the device from the sample site. Wait a few seconds for a blood drop to form. A minimum volume of 0.4 microliter is needed to fill the confirmation window (actual size of 0.4 µL : ●).

Note: Petroleum jelly may be applied prior to lancing the site. This can help the blood to form into a droplet and avoid spilling into the hair.

Step 9

After the ⬒ symbol appears on the screen, apply the blood sample to the narrow end of the test strip till the meter beeps. If the confirmation window is not filled in time because of abnormal viscosity (thickness and stickiness) or insufficient volume, the Er4 message may appear. It is recommended to place the test strip vertically into the blood sample site as shown below.
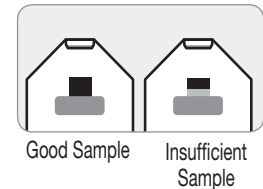

Good Sample   Insufficient Sample

Step 10

The test result will appear after the meter counts down from 5 to 1. The result will be automatically stored in the meter's memory. Gently apply pressure to the test site with sterile gauze or cotton wool to help stop the blood flow.

Step 11

Slide the ejection button to discard the used strips safely in disposable container.
If the test strip is removed after the test result is displayed, the meter will automatically switch off after 3 seconds.
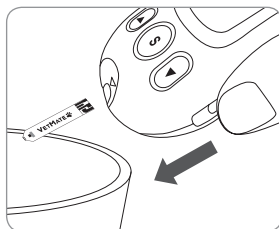
Discarding Used Lancets

Step 1

Unscrew the lancing device tip.
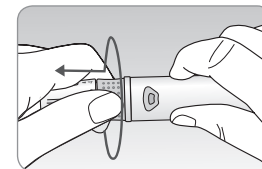
Step 2

Stick the lancet into the saved protective disk. Push the lancet ejector forward with the thumb and simultaneously pull out the sliding barrel to dispose of the used lancet in a proper biohazard container.

HI and Lo Messages

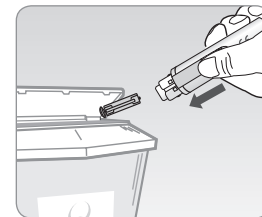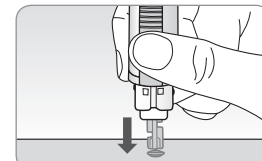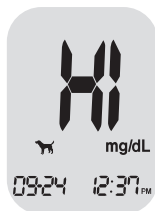The meter displays results between 20 and 600 mg/dL (1.1 and 33.3 mmol/L) 'HI' appears when the blood glucose level is greater than 600 mg/dL (33.3 mmol/L) and indicates severe hyperglycemia (much higher than normal glucose levels).
If 'HI' is displayed again upon retesting, please contact your veterinarian/veterinary surgeon immediately.

Lo Message

'Lo' appears when a test result is less than 20 mg/dL (1.1 mmol/L) and indicates severe hypoglycemia (very low glucose levels). If 'Lo' is displayed again upon retesting, please contact your veterinarian/veterinary surgeon immediately.
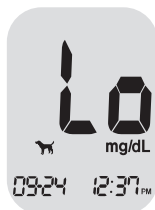
Note: Please contact your authorised i-SENS sales representative if such messages persist even though your pet does not have hyperglycemia or hypoglycemia.

Target Blood Glucose Ranges

Consult a veterinarian/veterinary surgeon for the target glucose values for each animal.

| Reminders
Time of day | Target ranges from veterinarian/
veterinary surgeon |
| --- | --- |
| | |
| | |
| | |
| | |
| | |

Unexpected Values : Low or high blood glucose readings can indicate a potentially serious medical condition. If your pet's result is unusually high or low, or do not match the way your pet behaves, repeat the test with a new test strip. If the reading is inconsistent with the symptoms or if the blood glucose result is less than 60 mg/dL (3.33 mmol/L) for dogs and less than 70 mg/dL (3.89 mmol/L) for cats[1] or higher than 180 mg/dL (10 mmol/L) for dogs and higher than 200 mg/dL (11.11 mmol/L) for cats[2], contact your veterinarian/veterinary surgeon.

Reference
1. Edward F, Nelson RW, Reusch C, Scott-Moncrieff JC Canine & Feline Endocrinology. 4th Ed. St. Louis (MO): Saunders; 2015.
2. Rucinsky R, et al. AAJA Diabetes Management Guidelines for Dogs and Cats. J Am Anim Hosp Assoc 2010;46:215-224.

Meter Memory

The VetMate meter can save up to 500 glucose test results with time and date. If the memory is full, the oldest test result will be deleted and the latest test result will be stored. The meter calculates and displays the averages of total test results from the last 14 days.

Viewing Averages Stored in Memory

Step 1

Press the ▲ or **S** button to turn the meter on. The current date and time will be displayed at the bottom of the screen for 2 seconds.
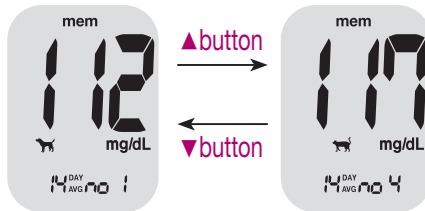A 14-day average value for your dog assigned to 'no 1' will be followed.

Step 2

Press the ▲ button to scroll through the 14-day average values of pets assigned to each number.
Press the ▼ button to scroll back through the averages see previously.

▲button

▼button

Viewing Test Results

Step 1

Press the ▲ or **S** button to turn the meter on.
The current date and time will be displayed on the bottom of the screen for 2 seconds. A 14-day average value for your dog assigned to 'no 1' will be followed.

Step 2

Use the ▼ button to scroll through the test results, starting from the most recent and ending with the oldest.
Press the ▲ button to return to the result seen previously.
The test results will be displayed with the dates and time following selected numbers (no 1–no 4).
After checking the stored test results, press the **S** button to turn off the meter.

▼button

▲button
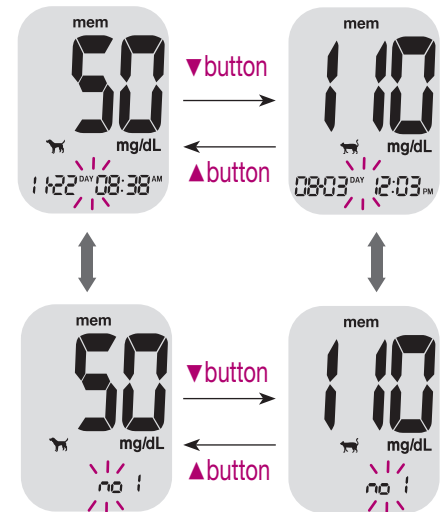
▼button

▲button

Setting the Alarm Function

Five time-set alarms (alarm 1–5) can be set in the VetMate meter:

Setting the Time Alarms (alarm 1–5)

Step 1

Without inserting a test strip, press the ▲ and **S** buttons simultaneously for 3 seconds to enter time alarm mode. 'alarm 1' will be displayed while 'OFF' blinks on the screen.
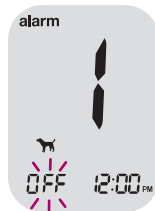
Step 2

On pressing the ▼ button, 'alarm 1' is set and 'On' is displayed on the screen. Press the ▼ button again to cancel 'alarm 1' and 'OFF' will blink on the screen.
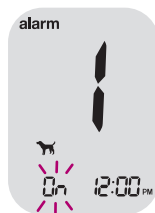
Step 3

Press the ▲ button to adjust the time of 'alarm 1'.
A number representing the time will blink on the screen. Press the ▼ button to set the time.

Step 4

On pressing the ▼ button , the number indicating the minute will start blinking. Press the ▼ button to set the minute.
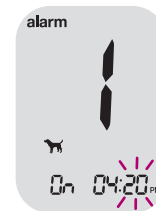
Step 5

Press the **S** button to finish and to go to 'alarm 2' mode.
Repeat steps 2 to 5 to set the remaining time alarms (alarm 2–5).

Step 6

Press the **S** button for 3 seconds to finish and turn the meter off.

Understanding Error Messages

Er 1	A used test strip was inserted. > *Repeat the test with a new test strip.*
Er2	The blood or control solution sample was applied before the ▲ symbol appeared. > *Repeat the test with a new test strip and wait until the ▲ symbol appears before applying the blood or control solution sample.*
Er 3	The temperature during the test was out of the operating range. > *Move to an area where the temperature is within the operating range (5–45 ℃ /41–113 ℉) and repeat the test after the meter and test strips have reached a temperature within the operating range.*
Er4	The blood sample has abnormally high viscosity or insufficient volume. > *Repeat the test with a new test strip.*

Er5	A non-VetMate test strip was used. Test strip was not inserted properly. > *Repeat the test with a VetMate test strip. Gently push the test strip into the test strip port with the contact bars facing upwards until the meter beeps.*
Er6	There is a problem with the meter. > *Do not use the meter. Contact your authorised i-SENS sales representative.*
Er8	An electronic error occurred during the test. > *Repeat the test with a new test strip. If the error message persists, contact your authorised i-SENS sales representative.*

Note: If the error messages persist, contact your authorised i-SENS sales representative.

General Troubleshooting

Problem	Troubleshooting
The display is blank even after inserting a test strip.	• Check whether the test strip is inserted with the contact bars facing upwards. Check if the strip has been inserted completely into the test port. • Check whether the batteries are inserted with the + side facing upwards. • Replace the batteries.
The test does not start even after applying the blood sample on the strip.	• Check if the confirmation window is filled completely. • Repeat the test with a new test strip.
The test result does not match your expectation.	• Repeat the test with a new test strip. • Check the validity period of the test strip. • Check if the strip has passed the discard date. • Perform control solution test.

Note: If the problem is not resolved, please contact your authorised i-SENS sales representative.

Performance Characteristics

System Accuracy and Measurement Precision

VetMate Blood Glucose Monitoring Systems are calibrated to yield results equivalent to plasma glucose concentrations.

Accuracy: The accuracy of the VetMate Blood Glucose Monitoring Systems was assessed by comparing blood glucose results obtained by patients with those obtained using a YSI Model 2300 Glucose Analyzer, a laboratory instrument. The following results were obtained by diabetic patients at clinic centers.

For dogs

Slope	1.0341
Y-Intercept	-3.3029 mg/dL (-0.18 mmol/L)
Correlation coefficient (r)	0.9928
Number of measurements	882
Range tested	28.2–382.3 mg/dL (1.57–21.2 mmol/L)

Accuracy results for glucose concentration < 100 mg/dL (5.55 mmol/L)

Within ±5 mg/dL (Within ±0.28 mmol/L)	Within ±10 mg/dL (Within ±0.56 mmol/L)	Within ±15 mg/dL (Within ±0.83 mmol/L)
124/306 (40.5 %)	241/306 (78.8 %)	294/306 (96.1 %)

Accuracy results for glucose concentration ≥ 100 mg/dL (5.55 mmol/L)

Within ±5 %	Within ±10 %	Within ±15 %
346/576 (60.1 %)	521/576 (90.5 %)	575/576 (99.8 %)

Accuracy results for glucose concentration between 28.2 mg/dL (1.57 mmol/L) and 382 mg/dL (21.2 mmol/L)

Within ±15 mg/dL (Within ±0.83 mmol/L) and Within ±15 %
869/882 (98.5 %)

For cats

Slope	1.0533
Y-Intercept	-4.9766 mg/dL (-0.28 mmol/L)
Correlation coefficient (r)	0.9935
Number of measurements	600
Range tested	28.9–496.3 mg/dL (1.6–27.6 mmol/L)

Accuracy results for glucose concentration < 100 mg/dL (5.55 mmol/L)

Within ±5 mg/dL (Within ±0.28 mmol/L)	Within ±10 mg/dL (Within ±0.56 mmol/L)	Within ±15 mg/dL (Within ±0.83 mmol/L)
114/210 (54.3 %)	189/210 (90 %)	209/210 (99.5 %)

Accuracy results for glucose concentration ≥ 100 mg/dL (5.55 mmol/L)

Within ±5 %	Within ±10 %	Within ±15 %
204/390 (52.3 %)	331/390 (84.9 %)	386/390 (99 %)

Accuracy results for glucose concentration between 28.9 mg/dL (1.6 mmol/L) and 496.3 mg/dL (27.57 mmol/L)

Within ±15 mg/dL (Within ±0.83 mmol/L) and Within ±15 %
595/600 (99.2 %)

PRECISION: Precision studies were performed in a laboratory using the VetMate BGM Systems.

For dogs

Within Run Precision			
Interval 1. 30-50 mg/dL (1.7–2.8 mmol/L)	36.9 mg/dL (2.05 mmol/L)	SD = 2.3 mg/dL (0.1 mmol/L)	–
Interval 2. 51-110 mg/dL (2.8–6.1 mmol/L)	60.1 mg/dL (3.34 mmol/L)	SD = 4.2 mg/dL (0.2 mmol/L)	–
Interval 3. 111-150 mg/dL (6.2–8.3 mmol/L)	123.7 mg/dL (6.87 mmol/L)	SD = 3.3 mg/dL (0.2 mmol/L)	CV = 2.6 %
Interval 4. 151-250 mg/dL (8.4–13.9 mmol/L)	187.6 mg/dL (10.4 mmol/L)	SD = 8.5 mg/dL (0.5 mmol/L)	CV = 4.5 %
Interval 5. 251-400 mg/dL (13.9–22.2 mmol/L)	286.9 mg/dL (15.9 mmol/L)	SD = 11.2 mg/dL (0.6 mmol/L)	CV = 3.9 %

For cats

Within Run Precision			
Interval 1. 30-50 mg/dL (1.7–2.8 mmol/L)	34.6 mg/dL (1.92 mmol/L)	SD = 2.7 mg/dL (0.1 mmol/L)	–
Interval 2. 51-110 mg/dL (2.8–6.1 mmol/L)	64.9 mg/dL (3.60 mmol/L)	SD = 2.6 mg/dL (0.1 mmol/L)	–
Interval 3. 111-150 mg/dL (6.2–8.3 mmol/L)	134.2 mg/dL (7.45 mmol/L)	SD = 4.4 mg/dL (0.2 mmol/L)	CV = 3.3 %
Interval 4. 151-250 mg/dL (8.4–13.9 mmol/L)	191.1 mg/dL (10.6 mmol/L)	SD = 8.6 mg/dL (0.5 mmol/L)	CV = 4.5 %
Interval 5. 251-400 mg/dL (13.9–22.2 mmol/L)	304.6 mg/dL (16.9 mmol/L)	SD = 12.2 mg/dL (0.7 mmol/L)	CV = 4.0 %

For dogs and cats

Between Run Precision			
Interval 1. 30-50 mg/dL (1.7–2.8 mmol/L)	42.2 mg/dL (2.34 mmol/L)	SD = 2.3 mg/dL (0.1 mmol/L)	–
Interval 2. 96-144 mg/dL (5.3–8.0 mmol/L)	121.5 mg/dL (6.75 mmol/L)	SD = 4.7 mg/dL (0.3 mmol/L)	CV = 3.9 %
Interval 3. 280–420 mg/dL (15.5–23.3 mmol/L)	357.8 mg/dL (19.9 mmol/L)	SD = 9.8 mg/dL (0.5 mmol/L)	CV = 2.7 %

Influence Quantities

Packed Cell Volume (Hematocrit)

Packed cell volume evaluation was conducted in various hematocrit levels. The range of hematocrit levels within the acceptance criteria is 15–65 %.

Interferences

The effect of various interfering substances was evaluated in whole blood samples. The presence of the following substances within the given concentrations does not affect blood glucose measurements. Higher concentrations of the substances shown below may cause inaccurate blood glucose results.

No.	Interferent	Concentration
1	Acetaminophen (paracetamol)	20 mg/dL
2	Ascorbic acid	3 mg/dL
3	Bilirubin	20 mg/dL
4	Cholesterol	500 mg/dL
5	Creatinine	30 mg/dL
6	Dopamine	13 mg/dL

No.	Interferent	Concentration
7	EDTA	180 mg/dL
8	Galactose	60 mg/dL
9	Gentisic acid	50 mg/dL
10	Glutathione (Red)	92 mg/dL
11	Heparin	8000 U/dL
12	Ibuprofen	50 mg/dL
13	Icodextrin	1094 mg/dL
14	L-Dopa (L-3,4-dihydroxyphenylalanine)	5 mg/dL
15	Maltose	1000 mg/dL
16	Methyl-DOPA	1.5 mg/dL
17	Pralidoxime Iodide (PAM)	25 mg/dL
18	Salicylate	70 mg/dL
19	Tolbutamide	100 mg/dL
20	Tolazamide	100 mg/dL
21	Triglycerides	3300 mg/dL
22	Uric acid	25 mg/dL
23	Xylose	6.5 mg/dL in dogs
		5.9 mg/dL in cats

Warranty Information

Manufacturer's Warranty

i-SENS, Inc. warrants that the VetMate meter shall be free of defects in material and workmanship in normal use for a period of five (5) years. The meter must have been subjected to normal use. The warranty does not cover improper handling, tampering, use, or service of the meter. Any claim must be made within the warranty period.

i-SENS will, at its discretion, repair or replace a defective meter or meter part that is covered by this warranty. As a matter of warranty policy, i-SENS will not reimburse the consumer's purchase price.

Obtaining Warranty Service

To obtain warranty service, you must return the defective meter or meter part along with proof of purchase to your nearest i-SENS sales or customer service representative.