

# TRUEresult

BLOOD GLUCOSE MONITORING SYSTEM

*NO  
CODING*



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CODING*

# TRUEresult

BLOOD GLUCOSE MONITORING SYSTEM

## Owner's Booklet





## Fast Test Guide

## Two simple steps

## 1 INSERT TEST STRIP



## 2 APPLY BLOOD SAMPLE



**For quick reference only, not intended as a substitute for complete instructions. Please read entire Owner's Booklet and product Instructions for Use before testing.**

**Expected Results for people without diabetes:**<sup>1</sup>

### Plasma Blood Glucose Result

Before eating	< 6.1 mmol/L
Two hours after meals	< 7.8 mmol/L

**The TRUEresult Blood Glucose Monitoring System is intended for the quantitative determination of glucose in human whole blood taken from the fingertip or forearm (capillary) or from the vein (venous). The System may not be used for neonates. The System is intended for at-home use (self-testing) and for use by Healthcare Professionals in both physicians' offices and in acute and convalescent-care bedside testing facilities in order to assist in the management of diabetes.**

## Notes:

This image shows a blank sheet of white paper with horizontal grey ruling lines. On the right side, there is a decorative blue curved border. The paper appears to be part of a notebook or a template for writing.

## INTRODUCTION

### Welcome to the TRUEresult Blood Glucose Monitoring System

#### Our Commitment to You

TRUEresult is a simple, accurate way to test whole blood glucose (sugar) level, anytime, anywhere.

Our goal is to provide quality healthcare products and dedicated customer service. For questions about TRUEresult products, please see cover for phone number.

This booklet contains all the information needed to get the most from the TRUEresult System. To start testing quickly, please see the Quick Reference Guide found inside the cover of this Owner's Booklet.



***Please read complete Owner's Booklet and all product Instructions for Use before using the System.***

<b>SYMBOLS:</b>		Control	Serial Number	① Control Level	Caution	Keep Dry
Biological Risk	Sterile			② Level	Use By Date	
③						
For Assistance Call	Attention! Read Instructions for Use.	Storage Temperature Range	Do Not Resterilise	Single Use Only		
Lot Number	For <i>in vitro</i> Diagnostic Testing Only	Authorised Representative	Date of Manufacture	Manufactured By		



## **IMPORTANCE OF BLOOD GLUCOSE MONITORING**

The more you know about diabetes, the better you will be able to take care of yourself. A Doctor or Healthcare Professional will determine target ranges for blood glucose results and how often to test. Having most results within the target ranges shows how well a treatment plan is working to control glucose levels. Keeping most results within the target ranges helps slow or stop complications of diabetes.

**NEVER** change a treatment plan without consulting with a Doctor or Healthcare Professional.

Use of the TRUEresult Blood Glucose Monitoring System in a manner not specified in this Owner's Booklet is not recommended and may affect your ability to determine true blood glucose levels.

The TRUEresult System is an *in vitro* **IVD** (outside body) quantitative system that is used for self-testing and point-of-care testing of only human whole blood. The most accurate results come from using fresh whole blood taken from the fingertip or forearm (capillary) or from the vein (venous).





## What you need to know when using the TRUEresult System:

- **Read all product instructions for use before testing.**
- Use only TRUEresult Test Strips and TRUEresult Control Solution with TRUEresult Meter.
- To help prevent false high results, wash hands before using the System to test blood, especially after handling fruit or other foods containing sugar.
- Perform Control Tests before performing a blood glucose test for the first time (see *Control Test*).
- Remove only one Test Strip at a time from vial when testing. Recap vial immediately after removing Test Strip.
- **NEVER** reuse Test Strips. **NEVER** wipe Test Strips with water, alcohol or any cleaner. **DO NOT** attempt to clean and re-use Test Strips. Reuse of Test Strips will cause inaccurate results.
- **NEVER** add a second drop of sample to Test Strip. Adding more sample to the Test Strip gives an error message.
- Venous whole blood collected in EDTA or sodium/lithium heparin blood collection tubes may be used for testing by Healthcare Professionals. Mix tube contents gently before using.





## **IMPORTANT HEALTH and SAFETY INFORMATION:**

The TRUEresult Blood Glucose Monitoring System is for one person use **ONLY. DO NOT** share your Meter or your Lancing Device with anyone, including family members. **DO NOT** use on more than one person. **DO NOT** use on more than one person. **ALL** parts of the TRUEresult Blood Glucose Monitoring System could carry blood-borne pathogens after use, even after cleaning and disinfection.<sup>2,3</sup>

For cleaning and disinfecting the Meter, see *Care, Cleaning/Disinfecting*. For cleaning and disinfecting the lancing device, see the lancing device's Instructions for Use.

We suggest cleaning the Meter when visibly dirty or if blood is on the Meter. Wash your hands thoroughly with soap and warm water after handling the Meter, lancing device, or Test Strips as contact with blood presents an infection risk.

Reuse of devices labeled for single-use may result in product contamination and patient infection.





- **DO NOT perform capillary blood glucose testing on critically ill patients.** Capillary blood glucose levels in critically ill patients with reduced peripheral blood flow may not reflect the true physiological state. Reduced peripheral blood flow may result from the following conditions (for example):<sup>4</sup>
  - ~ shock
  - ~ severe hypotension
  - ~ severe dehydration
  - ~ hyperglycaemia with hyperosmolarity, with or without ketosis.
- Do not use TRUEresult for the diagnosis of diabetes or for testing blood glucose in neonates (newborns).
- Blood concentrations of maltose > 0.37 mmol/L, maltotriose > 0.40 mmol/L and maltotetraose > 0.15 mmol/L may falsely raise glucose results.<sup>5</sup>
- Do not use TRUEresult System during a xylose absorption test. This may falsely raise glucose results.<sup>6</sup> Please check with your Doctor before using TRUEresult.
- Blood samples containing high uric acid concentration > 0.54 mmol/L at glucose levels < 13.3 mmol/L may be detected as control samples by the TRUEresult Meter.<sup>5</sup>





**FOR PATIENTS**  
**IMPORTANT HEALTH and SAFETY**  
**INFORMATION For Blood Glucose Monitoring**  
**Systems Using GDH-PQQ Enzyme:**

- **DO NOT** use the TRUEresult System to test your blood glucose if you are undergoing peritoneal dialysis (dialysis through the abdomen/stomach area).
- **DO NOT** use the TRUEresult System to test your blood glucose if you are receiving medical treatment that contains sugars such as maltose or xylose.

The treatments listed above may cause false high glucose results when testing with the TRUEresult System.<sup>6</sup>

Before using the TRUEresult System, check with your Doctor or Healthcare Professional if you think you may be receiving any of these treatments.







**FOR HEALTHCARE PROFESSIONALS**  
**IMPORTANT HEALTH and SAFETY**  
**INFORMATION For Blood Glucose Monitoring**  
**Systems Using GDH-PQQ Enzyme:**

**DO NOT** use the TRUEresult System for patients receiving the following treatments:

- Peritoneal dialysis using solutions containing icodextrin that is metabolized to maltose,
- Injections or infusions of solutions containing maltose, including some human immunoglobulin preparations,
- Xylose absorption testing,
- Intravenous solutions containing maltose,
- Any drugs that contain or metabolize to maltose or xylose.

**Using the TRUEresult System when receiving the above treatments may cause false high glucose results.<sup>6</sup> False high results may lead to inappropriate therapy, which may result in coma or death. For more information, see [www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/ucm154213.htm](http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/ucm154213.htm).**





## **TABLE OF CONTENTS**

Phone Number, Fast Test Guide,  
Expected Results..... see covers

**Introduction and Important Information .....1**

**Know the System .....10**

Meter .....10

Test Strip.....13

Control Solution .....15

**Getting Started .....16**

Quality Control Testing.....17

Automatic Self-Test.....17

Control Test .....18

How to Test Control Solution .....19

**Testing Blood .....22**

Obtaining a Blood Sample .....22

How to Test Blood Glucose .....24

Unusual Blood Glucose Test Results.....27

Ketone Test Alert.....28

TRUEresult System and Laboratory Testing...29

**Memory.....30**

View Averages (7-, 14-, and 30-day) .....30

View Results .....31





<b>Meter Set Up.....</b>	<b>32</b>
Set Ketone Test Alert .....	34
Set Testing Reminders .....	34
<b>Care, Cleaning/Disinfecting .....</b>	<b>36</b>
Meter Care .....	36
Control Solution Care.....	37
Test Strip Care .....	37
Changing Battery .....	38
<b>Troubleshooting.....</b>	<b>39</b>
Messages.....	40
<b>Technical Information .....</b>	<b>42</b>
Performance Characteristics.....	42
<b>System Specifications .....</b>	<b>46</b>
Operating Range.....	46
Chemical Composition .....	46
EMC Safety Information .....	47
<b>References.....</b>	<b>47</b>
<b>Warranty .....</b>	<b>48</b>





## KNOW THE SYSTEM

### Meter

#### Top of Meter



#### ① “ + ” Button

Increase numbers in Time/Date Set Up for Meter and Testing Reminders; turn on Testing Reminders and Ketone Test Alert; add ALT Symbol; move forward by date/time when viewing results in Memory.

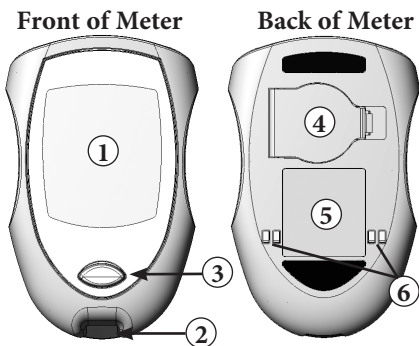
#### ② “ S ” Button

Turn Meter on to view Average values, to view results in Memory, and to access Meter Set Up.

#### ③ “ - ” Button

Decrease numbers in Time/Date Set Up for Meter and Testing Reminders; turn off Testing Reminders and Ketone Test Alert; remove ALT Symbol; move backward by date/time when viewing results in Memory.





**① Display Screen**

Shows test results, messages, user prompts, other information.

**② Test Port**

Insert TRUEresult Test Strip here.

**③ Strip Release Button**

Releases Test Strip after testing.

**④ Battery Door**

Use one non-rechargeable 3V lithium battery (#CR2032), positive (“+”) side up (see *Changing Battery*).

**⑤ Meter Label**

Contains serial number of Meter. Identifies Meter when calling for assistance.

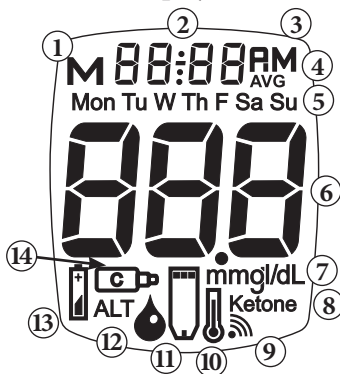
**⑥ Docking Station Contacts**

Contacts used for uploading Meter results to a computer using a Docking Station (Please call for availability).



## Meter Display

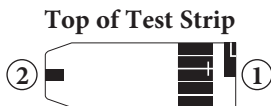
### Full Display Screen



1. Memory Symbol
2. Time, Date
3. Time is AM/PM  
(Note: Not seen if factory set to 24 hour clock.)
4. Result is from 7-, 14-, or 30-day Average
5. Day of Week
6. Test Result
7. Units of Measure  
(Note: Factory set, cannot be changed by user.)
8. Ketone Test Alert Symbol
9. Testing Reminder Symbol
10. Temperature Symbol
11. Drop Symbol - Apply blood or Control Solution
12. Alternate Site (ALT) Symbol
13. Battery Symbol
14. Control Symbol

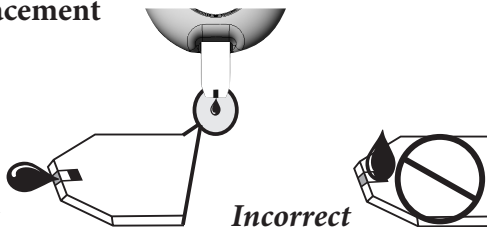


## Test Strip



- ① **Contact End** - Insert into Test Port with blocks (contacts) facing up.
- ② **Sample Tip** - Touch to top of sample (fresh, capillary or venous blood or Control Solution) *after* inserting Contact End into Meter.

## Sample Placement



- Do not touch Sample Tip to drop of sample unless Contact End is inserted into Meter.
- Do not apply blood or Control Solution to top of Test Strip.
- Do not smear or scrape drop with Test Strip.
- Do not apply more sample to the Test Strip after testing begins.
- Do not insert Sample Tip with sample into Meter for testing. May damage Meter.





## Test Strip Vial Label

①	<b>LOT</b>	L-003	
		2014/10/31	②
	①	1.7-3.4	mmol/L
	②	4.8-6.5	mmol/L
	③	13.7-18.6	mmol/L
②		May 30, 2014	

- ① **Lot Number ( )** - Used for identification when calling for assistance.
- ② **Use By Dates ( )** - Write date first opened on vial label. Discard vial and unused Test Strips if either 4 months after first opening or date printed next to on vial label has passed, whichever comes first.



*Use of Test Strips or Control Solution past the Use By Dates may give incorrect test results. Discard out-of-date products and test with new products.*

- ③ **Control Test Range** - Range of numbers in which Control Test result must fall to assure the System is working properly.

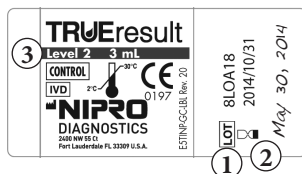








## Control Solution **CONTROL**

### Control Solution Bottle Label



- ① **Lot Number ( **LOT** )** - Used for identification when calling for assistance.
- ② **Use By Dates (  )** - Write date first opened on bottle label. Discard bottle if either 3 months after first opening or date printed next to  on bottle label has passed, whichever comes first.
- ③ **Control Solution Level (1, 2 or 3)** - Testing at least 2 levels of Control Solution is recommended. Call the number on the cover of this Booklet for information on how to obtain different levels of Control Solution.





## **GETTING STARTED**

The TRUEresult Meter comes with pre-set time, date, Ketone Test Alert and all Testing Reminders off. Before using Meter for the first time or after battery is changed, check to make sure all of the Meter pre-set functions are correct. Update any setting as needed (see *Meter Set Up*).

The Meter turns on when a Test Strip is inserted into the Test Port or when “ S ” Button is pressed and released (see *Memory* and *Meter Set Up*). Meter turns off when the Test Strip is released from the Meter, “ S ” Button is pressed and held for 20 seconds, or after 2 minutes of non-use.

Always check your supplies before using.

- Check Meter for damage (cracked Display, missing buttons, etc.). If damage is seen, do not use Meter. Call for assistance.
- Check Test Strip vial for damage (cracked vial, broken vial, etc.). Discard damaged vial and all contents (Test Strips) and use a new vial of Test Strips for testing.
- Write date first opened on Test Strip vial. Check Use By Dates (written and printed) before using any Test Strips from the vial. Do not use if 4 months after first opening (written date) or if printed Use By Date has passed.
- Check Control Solution bottle for any leaks or broken cap. Discard bottle and open a new one for testing.
- Write date first opened on Control Solution bottle label. Check Use By Dates (written and printed) before using. Do not use if 3 months after first opening (written date) or if printed Use By Date has passed.





## Quality Control Testing

To assure you are getting accurate and reliable results, TRUEresult offers two kinds of quality control tests. These tests let you know that the TRUEresult System is working properly and your testing technique is good.

### Automatic Self-Test

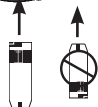
An Automatic Self-Test ensures that the Meter is working correctly.

1. Wash hands and dry thoroughly.
2. Remove one Test Strip from the Test Strip vial and insert Test Strip into the Meter.
3. Meter turns on. The full Display appears and is replaced by the time and the blinking Drop Symbol. The Meter is working correctly and is ready to perform a Control or blood test.

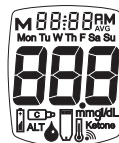
Do not use Meter if:

- The full Display does not appear (segments are missing),
- The blinking Drop Symbol does not appear, or
- An error message appears in the Display.

See *Troubleshooting* or call for assistance (see cover of this Booklet for phone number).



Contacts Facing Up



Full Display





## Control Test

The Control Test checks that the System is working correctly and testing technique is good. Use **ONLY** TRUEresult Control Solution to perform Control Tests. Perform Control Tests:

- For practice before using the System for the first time,
- When opening a new vial of Test Strips,
- Occasionally as a vial of Test Strips is used,
- If a Test Strip vial has been left opened or left in extreme heat, cold, or humidity,
- Whenever a check on performance of the System is needed,
- If results seem unusually high or low,
- If Meter damage is suspected (Meter was dropped, crushed, wet, etc.).

Performing Control Tests with more than one level of Control Solution is recommended to ensure that the System is working properly. Three levels of TRUEresult Control Solution are available. Contact place of purchase or use the number on the cover of this Booklet for more information on how to obtain different levels of Control Solution.



*Ranges printed on Test Strip vial label are for Control Test results only and **are not** suggested levels for your blood glucose. Do not drink Control Solution.*





## How to Test Control Solution

Use **ONLY** TRUEresult Control Solution with the TRUEresult Meter.

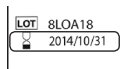
1. Check supplies. See *Getting Started*.
2. Allow Control Solution, vial of Test Strips and Meter to adjust to room temperature (20°C-25°C).

**Note:** *Running a Control Test at temperatures outside the range listed above may cause Control Solution to read as a blood test.*

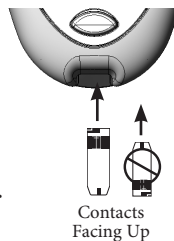
3. Wash hands. Dry thoroughly.
4. Gently swirl or invert Control Solution bottle to mix. **DO NOT SHAKE!**
5. Remove one Test Strip from vial. Close Test Strip vial immediately. Use Test Strip quickly after removal from vial.

**Note:** *If Test Strip has been out of the vial too long before testing, an error message appears upon insertion of the Test Strip into the Meter. Release and discard old Test Strip. Use new Test Strip for testing.*

6. Insert Test Strip into Meter. Meter turns on and shows blinking Drop Symbol and time. Do not remove Test Strip.

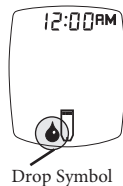


LOT	L-003
	2014/10/31
①	1.7-3.4 mmol/L
②	4.8-6.5 mmol/L
③	13.7-18.6 mmol/L
(May 30, 2014)	





7. With cap removed, turn Control Solution bottle upside down. Gently squeeze one drop of Control Solution onto a clean tissue. Wipe off bottle tip with the tissue.



Drop Symbol

**Note:** *If Test Strip is removed before testing is finished, an error message appears. Release and discard old Test Strip. Use new Test Strip for testing.*

8. Gently squeeze a drop of Control Solution onto a small piece of unused aluminum foil or clear plastic wrap. Discard foil or plastic wrap after use.



**Note:** *Do not put drop on top of the Test Strip.*



9. With Test Strip still in Meter, touch Sample Tip to top of the drop of Control Solution. Allow drop to be drawn into Test Strip. Remove Test Strip from drop when Meter beeps. Dashes appear across the Display to show Meter is testing.



Meter testing

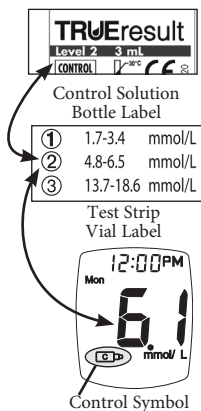
**Note:** *If Meter does not beep or begin testing soon after drawing up sample, release and discard Test Strip. Repeat test with new Test Strip. If problem persists, see Troubleshooting.*

10. After testing is finished, the result appears in the display with the Control Symbol.



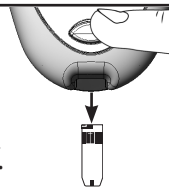
11. Compare result to Control Test Range printed on Test Strip vial label for Control Solution Level you are using.

If result is in range, System can be used for testing blood. If result does not fall within range, repeat test using a new Test Strip.



*If result is still outside range after a second Control Test, System should not be used for testing blood. Call for assistance (see cover for phone number).*

12. After result is shown, Strip Release Button flashes. Hold Meter with Test Strip pointing down. Press Strip Release Button to release and discard Test Strip in appropriate container. Meter turns off. Recap Control Solution bottle tightly.



**Note:** *Removing Test Strip before result displays cancels the test. An error message appears and the result is not stored in Memory. Retest with a new Test Strip and do not remove before result is displayed.*



## TESTING BLOOD

### Obtaining a Blood Sample

Refer to lancing device's Instructions for Use for detailed instructions.



*The lancing device is for single patient use ONLY. For cleaning/disinfecting your lancing device see Lancing Device Care in the lancing device's Instructions for Use. Wash your hands thoroughly with soap and warm water after handling the Meter, lancing device, or Test Strips. Contact with blood presents an infection risk.*

- **NEVER** share lancets or lancing device.
- Lancets are for single use only. Do not reuse lancets.
- To help prevent false high results, wash hands before using the System to test blood, especially after handling fruit or other foods containing sugar.

### From Fingertip

1. Prepare fingertip by washing hands in warm, soapy water. Rinse well. Dry thoroughly.
2. Place end of lancing device equipped with lancet against tip of finger. Lance fingertip.
3. Set lancing device aside. To help blood drop form, lower hand to waist level, gently massage finger from palm to fingertip. Allow blood drop to form before attempting to apply to Test Strip.
4. Recap and remove used lancet from lancing device. Discard used lancet into appropriate container.



**Note:** *Treat used Test Strips and lancets as a biological risk. Dispose used Test Strips and lancets in appropriate container.*







## From Forearm

**Note:** *Some lancing devices include a special end cap for alternate site testing. Check lancing device's Instructions for Use.*

1. Select area to be lanced. Wash with soap and warm water, rinse and dry thoroughly.
2. Rub area vigorously or apply a warm dry compress to increase blood flow.
3. Place end of lancing device equipped with lancet firmly against forearm. Press trigger button. Apply firm pressure on lancing device for 10 seconds. Allow blood drop to form before attempting to apply to the Test Strip.
4. Recap and remove lancet from lancing device. Discard used lancet into appropriate container.



## Important Notes Regarding Forearm Testing<sup>7</sup>

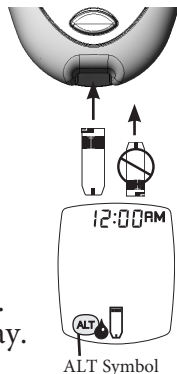
- Check with your Doctor or Healthcare Professional to see if forearm testing is right for you.
- Results from forearm are not always the same as results from fingertip.
- Use fingertip instead of forearm for more accurate results:
  - Within 2 hours of eating, exercise, or taking insulin,
  - If your blood sugar may be rising or falling rapidly or your routine results are often fluctuating,
  - If you are ill or under stress,
  - If your forearm test results do not match how you feel,
  - If your blood sugar may be low or high,
  - If you do not notice symptoms when blood sugar is low or high.





## How to Test Blood Glucose

1. Check supplies. See *Getting Started*.
2. Wash hands (and forearm for alternate site testing). Rinse well and dry thoroughly.
3. Remove one Test Strip from vial. Close vial immediately. Use Test Strips quickly after removal from vial.
4. With Meter off, insert Test Strip Contact End (blocks facing up) into Meter. Meter turns on and shows the Drop Symbol in the Display. Keep Test Strip in Meter until testing is finished.



### ---Alternate Site Testing---

To mark test as alternate site (forearm) result, press “+” Button. ALT Symbol appears in the Display. Press “-” Button to remove ALT Symbol.

**Note:** *If Test Strip has been out of the vial too long before testing, an error message appears upon insertion of the Test Strip into the Meter. Release and discard old Test Strip. Use new Test Strip for testing.*





5. Lance fingertip or forearm. Allow drop to form (see *Obtaining a Blood Sample*).
6. With Test Strip still in Meter, touch Sample Tip to top of blood drop and allow blood to be drawn into Test Strip. Remove from blood drop immediately after the Meter beeps and dashes appear across Meter Display.



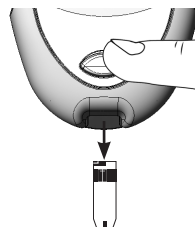
**Note:** *If Meter does not beep or begin testing soon after touching blood drop to Sample Tip, discard Test Strip. Repeat test with new Test Strip and new blood drop. If problem persists, see Troubleshooting.*

7. After the test is finished, result is displayed with date and time. The Strip Release Button flashes. Record result in log book.





8. Hold Meter with Test Strip pointing down. Press Strip Release Button to discard Test Strip in the appropriate container.



**Note:** *Removing Test Strip before result displays cancels the test. An error message appears and result is not stored in Memory. Retest with a new Test Strip and do not remove before result is displayed.*

9. Meter turns off. Result is stored in Memory with day, date and time.

**Note:** *Treat used Test Strips and lancets as a biological risk. Dispose used Test Strips and lancets in appropriate container.*





## Unusual Blood Glucose Test Results

If you have symptoms of low or high glucose, check your blood glucose immediately. If your result does not match the way you feel, repeat test. If your results still do not match the way you feel, call your Doctor or Healthcare Professional.

- Low blood glucose (hypoglycaemia) symptoms may be trembling, sweating, intense hunger, nervousness, weakness, and trouble speaking.
- High blood glucose (hyperglycaemia) symptoms may be intense thirst, a need to urinate often, a dry mouth, vomiting and headache.

Meter reads blood glucose levels from 1.1-33.3 mmol/L.



If blood test result is less than 1.1 mmol/L, “Lo” appears in Meter Display.

If blood test result is greater than 33.3 mmol/L, “Hi” appears in Meter Display.

**ALWAYS** repeat test to confirm Low (“Lo”) and High (“Hi”) results. If results still display “Lo” or “Hi”, call your Doctor or Healthcare Professional **immediately**.

**Note:** “Lo” results are included in the Average as 1.1 mmol/L. “Hi” results are included as 33.3 mmol/L.





## Ketone Test Alert

If blood glucose test result is greater than 13.3 mmol/L, and Ketone Test Alert is turned on, “Ketone” appears in Display with glucose result (see *Set Ketone Test Alert*).



Ketone Test Alert



*When the Ketone Test Alert Symbol is shown, it does not mean that ketones have been detected in blood. Perform a ketone test per the health plan as prescribed by the Doctor or Healthcare Professional.*





## **TRUEresult System and Laboratory Testing**

The most accurate results come from using fresh, capillary whole blood from the fingertip or forearm. Venous whole blood collected in EDTA or sodium/lithium heparin blood collection tubes may be used for testing by Healthcare Professionals. Mix tube contents gently before using.

When comparing results between TRUEresult and a laboratory system, perform a TRUEresult blood test within 30 minutes of laboratory test. Diabetes experts have suggested that 95% of glucose meter results should agree within 0.83 mmol/L of a laboratory method when the glucose concentration is less than 5.55 mmol/L, and within 15% of a laboratory method when the glucose concentration is 5.55 mmol/L or higher.<sup>8</sup> If the patient has recently eaten, fingerstick results from the TRUEresult System can be up to 3.9 mmol/L higher than venous laboratory results.<sup>9</sup>





## MEMORY

### **View Averages (7-, 14-, and 30-Day)**

The Averages feature allows you to view the average of all blood glucose results within a 7-, 14-, and 30-day period. Results marked as Control Test results are not included in the Averages.

**Note:** *If a Control Test is performed outside the recommended testing temperature (see How to Test Control Solution), the Control Solution may read as a blood test and be included in the Averages.*

Start with Meter off. Press and release “S” Button. Display scrolls through 7-, 14-, and 30-Day Average values.

**Note:** *If there are no Average values, three dashes are displayed for 7-, 14-, and 30-day Averages.*



7-Day Average



14-Day Average



30-Day Average



No Average



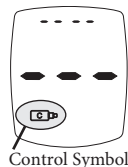
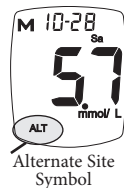




## View Results

Memory stores 500 total blood and Control Test results, which are displayed from most recent to oldest. When the Memory is full, the oldest result is replaced with the newest result.

1. Press and release “ S ” Button. Meter displays 7-, 14-, and 30-day Averages.
2. Press and release “ S ” Button again to view most recent result in Memory. If there are no results in Memory, dashes appear with the Memory Symbol.
3. Press “ + ” Button and release to advance to the next result. Press “ + ” Button to scroll forward through blood results or “ - ” Button to scroll backwards through blood results.
  - Test results marked as alternate site display **ALT** Symbol.
  - Control Test results display the Control Symbol. If no Control Test has been done Display shows dashes and the Control Symbol.
  - Test results above 13.3 mmol/L display Ketone Test Alert Symbol, when Ketone Test Alert is turned on during Meter Set Up.





## METER SET UP

Meter Set Up is to be used if changes need to be made to the pre-set time and date, to turn on the Ketone Test Alert and Testing Reminders, or if settings need to be reset because of battery change.

**Note:** *Meter turns off after 2 minutes of non-use.*

*If Meter turns off at any time during Set Up, all settings are saved. The Meter takes you back to Step #1.*



1. Press and hold “ S ” Button until the full Display is shown and a tone sounds (around 5 seconds). Release “ S ” Button.



2. The hour flashes. Press the “ + ” Button to scroll up the hour or the “ - ” Button to scroll down the hour. Release “ + ” or “ - ” Button when the correct hour displays.

Like many alarm clocks, to set the hours for “AM” or “PM”, the hours must scroll until the correct hour with “AM” or “PM” displays. Press “ S ” Button and release to save the hour and go to the next step.



**Note:** *Clock is factory set for either 12 hour or 24 hour clock. This feature cannot be changed.*





3. The minutes flash. Slowly press the “ + “ Button to scroll minutes up or the “ - “ Button to scroll minutes down. Release “ + “ or “ - “ Button when the correct minutes are displayed. Press “ S “ Button and release to save the minutes and go to the next step.



4. The month (number) flashes. Slowly press and release the “ + “ Button to increase the month and the “ - “ Button to decrease the month. Press and release “ S “ Button to save the month and go to the next step.



5. Slowly press and release the “ + “ Button to increase the day and the “ - “ Button to decrease the day. Press and release “ S “ Button to save the day and go to the next step.



6. Slowly press and release the “ + “ Button to increase the year or the “ - “ Button to decrease the year. Press and release the “ S “ Button to save the year.



**Note:** Day of the week (Mon, Tue, Wed, Thu, Fri, Sat, Sun) self-adjusts when month, day or year are changed.



**Note:** Meter beeps every time a setting is confirmed (“ S ” Button is pressed).





## Set Ketone Test Alert

7. After setting year, press “+” Button or “-” Button to turn Alert on or off. Press “S” Button to set and go to the Testing Reminders.



## Set Testing Reminders

Up to four Testing Reminders per day may be set. Reminder sounds at set time for 10 seconds.

To set the Testing Reminders:

8. After pressing “S” Button to set Ketone Test Alert, Display shows first Reminder setting (A-1). Press “+” (on) or “-” (off) Button to turn Reminder on or off.



9. If “on” is chosen, press “S” Button. The hour flashes. Press the “+” Button to scroll up the hour or the “-” Button to scroll down the hour. Release “+” or “-” Button when the correct hour displays. Like many alarm clocks, to set the hours for “AM” or “PM”, the hours must scroll until the correct hour with “AM” or “PM” displays. Press “S” Button and release to save the hour and go to the minutes set up.



If “off” is chosen and the “S” Button is pressed, the Meter goes to the next Testing Reminder.





10. The minutes flash. Press “ + ”  
or “ - ” Button to set the minutes.  
Press “ S ” Button to set.



11. Turn Reminders on and repeat setting the time  
for next 3 Reminders (if needed).



12. Press and hold “ S ” Button when  
finished to turn off Meter. Meter  
turns off after 2 minutes of non-use.

**Note:** *If Testing Reminders  
are set, the Testing  
Reminder Symbol  
appears in all Displays.*



Testing  
Reminder Symbol

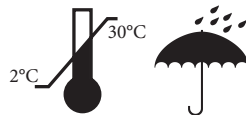




## **CARE, CLEANING/DISINFECTING**

### **Caring for TRUEresult**

- Store System (Meter, Control Solution, Test Strips) in Carrying Case to protect from liquids, dust and dirt.
- Store in a dry place at 2°C-30°C (room temperature).
- **DO NOT REFRIGERATE OR FREEZE.**



### **Meter Care**

- Do not keep meter in an area where it may be crushed (i.e. back pocket, drawer, bottom of bag, etc.).

Cleaning removes blood and soil, disinfecting removes infectious agents.

### **To Clean the Meter:**

- Clean the Meter when visibly dirty or if blood is on the Meter.
- Never put Meter in liquids or allow any liquids to enter the Test Port.
- Wipe Meter with a clean, lint-free cloth dampened with 70% Isopropyl alcohol.
- Let Meter air dry thoroughly before using to test.
- Do not use bleach to clean the Meter.

For assistance call the phone number on the cover of the Owner's Booklet.



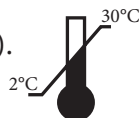


## Control Solution Care

- Write date opened on Control Solution label. Discard if either 3 months after first opening or after date printed next to  on bottle label has passed, whichever comes first.

- Store at 2°C-30°C (room temperature).


**DO NOT REFRIGERATE  
OR FREEZE.**



- After use, wipe bottle tip clean and recap tightly.

## Test Strip Care

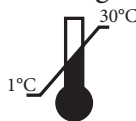
- Store Test Strips in original vial only. Do not transfer old Test Strips to new vial or store Test Strips outside of vial.

- Write date opened on Test Strip vial. Discard unused Test Strips from vial if either 4 months after first opening or after date printed next to  on vial label has passed, whichever comes first. Use of Test Strips past either date may give incorrect results.

- Close vial immediately after removing Test Strip.

- Store in a dry place below 30°C (room temperature).

**DO NOT REFRIGERATE  
OR FREEZE.**



- Do not reuse Test Strip. **NEVER** wipe Test Strips with water, alcohol or any cleaner. **DO NOT** attempt to clean and re-use Test Strips. Reuse of Test Strips will cause inaccurate results.
- Do not bend, cut or alter Test Strips in any way.

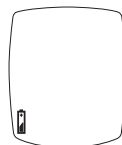




## Changing Battery

A low battery displays Battery Symbol while continuing to function.

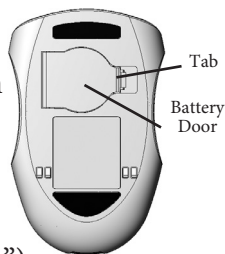
A dead battery displays Battery Symbol, beeps, and then turns off.



Low

To replace battery:

1. Lift tab on Battery Door.
2. Turn Meter over, tap gently on the palm of your other hand to loosen and remove battery.
3. Discard old battery into appropriate container.
4. Insert new battery, positive (“+”) facing up. Close Battery Door.



**Note:** Use non-rechargeable 3V lithium battery (#CR2032).

5. Press “S” Button to turn Meter on and check time, date, and Testing Alerts and Reminders (see *Meter Set Up*). If Meter does not turn on, check that battery was installed properly. If not, remove and reinsert battery and turn Meter on by pressing “S” Button. Call for assistance if problem persists.



**Batteries might explode if mishandled or incorrectly replaced. Do not dispose of battery in fire. Do not take apart or attempt to recharge battery. Dispose according to local/country specific regulations.**







## **TROUBLESHOOTING**

### ***1) After inserting Test Strip, Meter does not turn on.***

<b>Reason</b>	<b>Action</b>
Test Strip inserted upside down or backwards	Remove Test Strip. Re-insert correctly.
Test Strip not fully inserted	Remove Test Strip. Re-insert Test Strip fully into Meter.
Test Strip Error	Repeat with new Test Strip.
Dead or no battery	Replace battery.
Battery in backwards	Battery positive (“+”) side must face up.
Meter Error	Call for assistance.

### ***2) After applying sample, test does not start/ Meter does not beep or begin testing.***

<b>Reason</b>	<b>Action</b>
Sample drop too small	Repeat test with new Test Strip and larger drop.
Sample applied after two minute shut-off	Repeat test with new Test Strip. Apply sample within 2 minutes of inserting Test Strip.
Problem with Test Strip	Repeat with new Test Strip.
Problem with Meter	Call for assistance.








**For assistance, see cover for phone number.**












## Messages

<u>Display</u>	<u>Reason</u>	<u>Action</u>
	<b>Temperature Error</b> • <b>Too Cold/ Too Hot</b>	Move Meter and Test Strips to area between 10°C-40°C; wait 10 minutes for System to reach room temperature before testing.
	<b>Sample Not Detected or Using Wrong Test Strip</b>	Retest with new Test Strip and larger sample.
	<b>Used Test Strip or Test Strip Outside of Vial Too Long</b>	Repeat with new Test Strip. Make sure sample is touched to edge of Test Strip (not top). If error persists, call for assistance.
	<b>Meter Error</b>	Call for assistance.
	<b>Test Strip Error, Very high blood glucose result (higher than 33.3 mmol/L)</b>	Retest with new Test Strip. If error persists, call for assistance. If you have symptoms such as fatigue, excess urination, thirst, or blurry vision follow your healthcare professional's advice for high blood glucose.





## Messages *(continued)*

<u>Display</u>	<u>Reason</u>	<u>Action</u>
	<b>Test Strip Removed During Test</b>	Retest with new Test Strip. Make sure result is displayed <u>before</u> removing Test Strip.
	<b>Memory Error</b>	Result was not recorded in Memory. Retest with a new Test Strip. If error persists, call for assistance.
	<b>Communication Error</b>	Call for assistance.
	<b>Low or Dead Battery</b>	Low: About 50 tests can be done before battery dies. Dead: Battery Symbol appears and beep sounds before Meter turns off. Change the battery.
 	<b><u>Out of Range</u></b>  <b>High Results</b> > 33.3 mmol/L  <b>Low Results</b> < 1.1 mmol/L	 Retest with new Test Strip. If result is still “Hi” (High) or “Lo” (Low) contact Doctor <b><i>immediately.</i></b>

*If error message still appears, any other error message appears, or troubleshooting does not solve the problem, call for assistance.*





### Performance Characteristics<sup>5</sup>

**Precision:** Precision describes the variation between results. There are two types of precision results measured, repeatability (using blood) and intermediate precision (using control solution).

**Repeatability:** N=100

Mean (mmol/L)	2.4	4.5	7.8	11.8	19.0
SD (mmol/L)	0.08	0.12	0.23	0.43	0.60
%CV	3.0	2.6	2.9	3.7	3.2

**Intermediate Precision:** N=100

Mean (mmol/L)	2.6	6.4	17.9
SD (mmol/L)	0.11	0.15	0.48
%CV	4.3	2.3	2.7

**System Accuracy:** Diabetes experts have suggested that 95% of glucose meter results should agree within  $\pm 0.83$  mmol/L of the medical laboratory values at glucose concentrations below 5.55 mmol/L and within  $\pm 15\%$  of the medical laboratory values at glucose concentrations at or above 5.55 mmol/L. The tables below show how often healthcare professionals (HCP) and users achieve these goals using capillary fingertip and forearm blood samples when glucose results are not fluctuating. The laboratory reference instrument is the Yellow Springs Instrument (YSI) Model 2300.





### For Healthcare Professionals

100% of TRUEresult fingertip values performed by healthcare professionals (HCP) fell within 0.83 mmol/L of the YSI results at glucose levels < 5.55 mmol/L and within 15% at glucose levels  $\geq$  5.55 mmol/L.

#### Fingertip Samples (HCP vs. YSI) for glucose concentrations < 5.55 mmol/L

Within $\pm$ 0.28 mmol/L	Within $\pm$ 0.56 mmol/L	Within $\pm$ 0.83 mmol/L
136/180 (76%)	180/180 (100%)	180/180 (100%)

#### Fingertip Samples (HCP vs. YSI) for glucose concentrations $\geq$ 5.55 mmol/L

Within $\pm$ 5%	Within $\pm$ 10%	Within $\pm$ 15%
297/420 (71%)	408/420 (97%)	420/420 (100%)

#### Fingertip Samples for glucose concentrations between 1.1-33.3 mmol/L

Within $\pm$ 0.83 mmol/L or $\pm$ 15%
600/600 (100%)

**Parkes Error Grid:** 100% of individual fingertip glucose measured values performed by healthcare professionals fell within Zone A of the Parkes Error Grid (PEG).

98% of TRUEresult forearm values performed by healthcare professionals (HCP) fell within 0.83 mmol/L of the YSI results at glucose levels < 5.55 mmol/L and within 15% at glucose levels  $\geq$  5.55 mmol/L.

#### Forearm Samples (HCP vs. YSI) for glucose concentrations < 5.55 mmol/L

Within $\pm$ 0.28 mmol/L	Within $\pm$ 0.56 mmol/L	Within $\pm$ 0.83 mmol/L
14/28 (50%)	22/28 (79%)	28/28 (100%)

#### Forearm Samples (HCP vs. YSI) for glucose concentrations $\geq$ 5.55 mmol/L

Within $\pm$ 5%	Within $\pm$ 10%	Within $\pm$ 15%
35/72 (49%)	59/72 (82%)	70/72 (97%)

#### Forearm Samples for glucose concentrations between 1.1-33.3 mmol/L

Within $\pm$ 0.83 mmol/L or $\pm$ 15%
98/100 (98%)

**Parkes Error Grid:** 100% of individual forearm glucose measured values performed by healthcare professionals fell within Zone A of the Parkes Error Grid (PEG).





### Venous Blood

100% of TRUEresult venous values performed by healthcare professionals (HCP) fell within 0.83 mmol/L of the YSI results at glucose levels < 5.55 mmol/L and within 15% at glucose levels  $\geq$  5.55 mmol/L.

#### Venous Samples (HCP vs. YSI) for glucose concentrations < 5.55 mmol/L

Within $\pm$ 0.28 mmol/L	Within $\pm$ 0.56 mmol/L	Within $\pm$ 0.83 mmol/L
24/27 (88.9%)	27/27 (100%)	27/27 (100%)

#### Venous Samples (HCP vs. YSI) for glucose concentrations $\geq$ 5.55 mmol/L

Within $\pm$ 5%	Within $\pm$ 10%	Within $\pm$ 15%
51/73 (69.9%)	73/73 (100%)	73/73 (100%)

#### Venous Samples for glucose concentrations between 1.1-33.3 mmol/L

Within $\pm$ 0.83 mmol/L or $\pm$ 15%
100/100 (100%)

**Parkes Error Grid:** 100% of individual venous glucose measured values performed by healthcare professionals fell within Zone A of the Parkes Error Grid (PEG).

### For Consumers

100% of TRUEresult fingertip values performed by users fell within 0.83 mmol/L of the YSI results at glucose levels < 5.55 mmol/L and within 15% at glucose levels  $\geq$  5.55 mmol/L.

#### Fingertip Samples (User vs. YSI) for glucose concentrations < 5.55 mmol/L

Within $\pm$ 0.28 mmol/L	Within $\pm$ 0.56 mmol/L	Within $\pm$ 0.83 mmol/L
24/26 (92%)	26/26 (100%)	26/26 (100%)

#### Fingertip Samples (User vs. YSI) for glucose concentrations $\geq$ 5.55 mmol/L

Within $\pm$ 5%	Within $\pm$ 10%	Within $\pm$ 15%
48/74 (65%)	67/74 (91%)	74/74 (100%)

#### Fingertip Samples for glucose concentrations between 1.1-33.3 mmol/L

Within $\pm$ 0.83 mmol/L or $\pm$ 15%
100/100 (100%)

**Parkes Error Grid:** 100% of individual fingertip glucose measured values performed by users fell within Zone A of the Parkes Error Grid (PEG).





98% of TRUEresult forearm values performed by users fell within 0.83 mmol/L of the YSI results at glucose levels < 5.55 mmol/L and within 15% at glucose levels  $\geq$  5.55 mmol/L.

**Forearm Samples (User vs. YSI) for glucose concentrations < 5.55 mmol/L**

Within $\pm$ 0.28 mmol/L	Within $\pm$ 0.56 mmol/L	Within $\pm$ 0.83 mmol/L
15/28 (54%)	21/28 (75%)	26/28 (93%)

**Forearm Samples (User vs. YSI) for glucose concentrations  $\geq$  5.55 mmol/L**

Within $\pm$ 5%	Within $\pm$ 10%	Within $\pm$ 15%
35/72 (49%)	62/72 (86%)	72/72 (100%)

**Forearm Samples for glucose concentrations between 1.1-33.3 mmol/L**

Within $\pm$ 0.83 mmol/L or $\pm$ 15%
98/100 (98%)

**Parkes Error Grid:** 100% of individual forearm glucose measured values performed by users fell within Zone A of the Parkes Error Grid (PEG).

**User Performance Evaluation:** A study evaluating glucose values from fingertip capillary blood samples obtained by 100 lay persons showed the following results:

100% within  $\pm$  0.83 mmol/L of the medical laboratory values at glucose concentrations below 5.55 mmol/L and 100% within  $\pm$  15% of the medical laboratory values at glucose concentrations at or above 5.55 mmol/L.





## **SYSTEM SPECIFICATIONS**

**Result Range:** 1.1-33.3 mmol/L

**Sample Size:** Minimum 0.5 microlitre (0.5 µL)

**Sample:** Fresh capillary whole blood, venous blood drawn in EDTA or heparin blood collection tubes, or Control Solution.

**Test Time:** Results in as little as 4 seconds

**Result Value:** Plasma values

**Assay Method:** Electrochemical

**Power Supply:** One 3V lithium battery  
#CR2032 (non-rechargeable)

**Battery Life:** Approximately 2146 tests or 1.5 years

**Automatic shut-off:** After two minutes of non-use

**Weight:** 47 grams

**Size:** 89 x 55 x 17 mm

**Memory Size:** 500 glucose results

### **Operating Range (Meter & Test Strips):**

**Relative Humidity:** 10-90% (Non-condensing)

**Temperature:** 10°C-40°C

**Haematocrit:** 20-60%

**Altitude:** 3094 metres

**Note:** Use within specified environmental conditions only.

### **Chemical Composition**

**TRUEresult Test Strips:** Glucose dehydrogenase-PQQ (*Acinetobacter calcoaceticus*), mediators, buffers and stabilisers.

**TRUEresult Control Solution:** Water, d-glucose, buffers, viscosity enhancing agent, salts, dye and preservatives.







## EMC Safety Information

This meter meets the electromagnetic immunity requirements as per ISO 15197:2013 Annex A. It meets the electromagnetic emissions requirements as per EN 61326 series. Interference from the meter to other electronically driven equipment is not anticipated. The electromagnetic environment should be evaluated prior to operation of the device.

Do not use the meter in a very dry environment, especially one in which synthetic materials are present. Do not use the meter close to sources of strong electromagnetic radiation, as these may interfere with the proper operation.

## REFERENCES

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## **TRUEresult Limited Lifetime Warranty**

Nipro Diagnostics (UK) Limited provides the following Warranty to the original purchaser of the TRUEresult Blood Glucose Meter:

- 1) Nipro Diagnostics (UK) Limited at the time of purchase. If the meter is ever inoperative, Nipro Diagnostics (UK) Limited will replace the Meter with an equivalent Meter, at its option, at no cost to the purchaser. Failure of the meter due to abuse or use not in accordance with the instructions for use is not covered by this Warranty.
- 2) This Warranty does not include the battery supplied with the Meter.
- 3) Do not take the Meter apart. This action will void the Warranty and cause the Meter to display false results.
- 4) The duration of any implied Warranty, including any implied Warranty of merchantability or fitness for a particular purpose shall be limited to the lifetime in use with the original user in accordance with any state law to the contrary.
- 5) Nipro Diagnostics (UK) Limited disclaims liability for incidental or consequential damages for breach of any expressed or implied Warranty, including any implied Warranty of merchantability or fitness for a particular use with respect to the Meter. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply.
- 6) This Warranty gives the user specific legal rights, and the user may also have other rights which vary state to state.

Your Nipro Diagnostics (UK) Limited Customer Care Representative will be able to provide detailed information regarding procedures for returning your Meter, if necessary.

E4IGB03 Rev. 30

