

# TRUE METRIX<sup>®</sup> PRO

Professional Monitoring  
Blood Glucose System

(using TRUE METRIX<sup>®</sup> PRO Test Strips with GDH-FAD Enzyme)



## Comprehensive Resource Guide for Healthcare Professionals

(Policies, Processes, and Procedures)

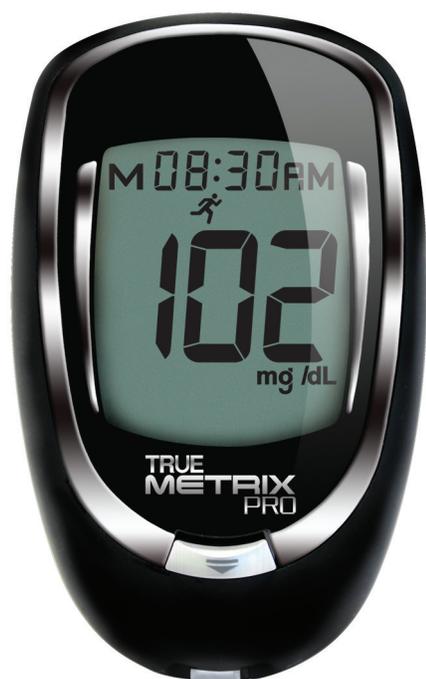
Information in this guide is specific for healthcare professionals using the TRUE METRIX<sup>®</sup> PRO Professional Monitoring Blood Glucose System\* in a multiple-patient clinical setting.

For assistance please call:  
Customer Care 1-800-803-6025  
[www.trividiahealth.com](http://www.trividiahealth.com)

TRUE  
METRIX<sup>®</sup>  
PRO

 **TRIVIDIA**  
HEALTH<sup>™</sup>

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# Introduction

# Introduction

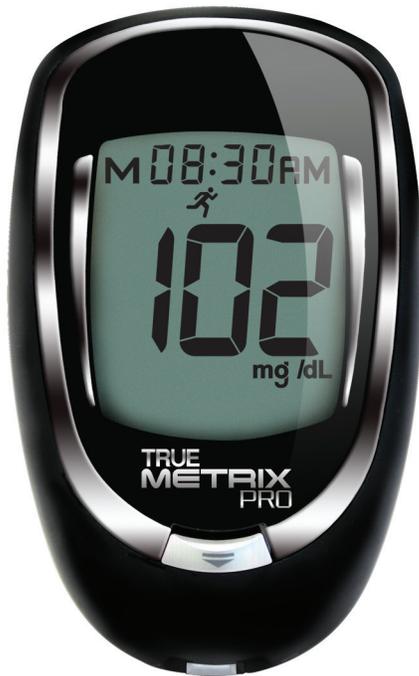
The purpose of this document is to provide you with specific manufacturer's information on using the TRUE METRIX<sup>®</sup> PRO System in a multiple-patient, clinical use setting. The information includes manufacturer's processes and procedures for:

- Understanding system intended use, safety information and testing method.
- Reviewing System components and key design features.
- Examining clinical white papers on proven product performance.
- Reviewing limitations of use including physiological and pharmacological interfering substances.
- Performing the blood glucose testing process using various specimens.
- Reviewing processes for Quality Control Testing, product maintenance, system operating temperature and storage ranges.
- Selecting diabetes data management options for data retrieval and management.
- Training program for your staff focused on safe use of the product in a clinical setting.

Most clinical sites already have clearly defined policies and procedures that address bedside blood glucose testing, safety, quality control, clinical evaluations and other processes. This document is intended to be an adjunct to already established policies and procedures within a facility and not as a replacement for the policies and procedures.

Blood glucose levels may be affected by use of certain medications. Please be aware when taking the following types of medications, actual blood glucose may be higher or lower than expected. Per FDA Drug Safety Communications<sup>1</sup>, these types of medications include: Fluoroquinolone Antibiotics, Sodium-glucose Inhibitors, Hormone medication and Cholesterol medication.

## Intended Use Statement



The TRUE METRIX® PRO 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 is not to be used for neonates. The system is intended for multiple-patient use in professional healthcare settings.

# Safety



Healthcare professionals should adhere to standard precautions and disinfection procedures when handling or using this device. ALL parts of the TRUE METRIX® PRO Blood Glucose Monitoring System are considered potentially infectious and capable of transmitting blood-borne pathogens.<sup>2,3</sup> Only use auto-disabling, single-use lancing devices with this product.



- NEVER re-use test strips. NEVER wipe test strips with water, alcohol, or any cleaner.
- DO NOT attempt to remove blood or control solution sample from test strips or clean test strips and re-use. Reuse of test strips will cause inaccurate results.
- NEVER add a second drop of sample to the test strip. Adding more sample gives an error message.

A point-of-care blood testing device, such as a blood glucose meter, should be used only on one patient and not shared. If dedicating one blood glucose meter to a single patient is not possible, the meter must be properly cleaned and disinfected after every use following the guidelines found in System Maintenance and Cleaning and Disinfection sections of this Resource Guide.

Clean and disinfect the meter after each use to prevent the transmission of blood-borne pathogens. Healthcare professionals should wear gloves when cleaning and disinfecting the meter. Wash hands after taking off gloves. Contact with blood presents a potential infection risk. A new pair of gloves should be worn before testing each patient.

**Note:** Clean to remove blood or soil from the surface of your meter and disinfect. Disinfecting removes most but not all possible infectious agents (bacteria or virus) from the meter, including blood-borne pathogens.

## To Clean and Disinfect the Meter

1. Wash hands thoroughly with soap and water. Wear a clean pair of gloves.
2. Make sure meter is off and a test strip is not inserted. With ONLY PDI Super Sani Cloth Wipes (EPA\* reg. no. 9480-4), rub the entire outside of the meter using 3 circular wiping motions with moderate pressure on the front, back, left side, right side, top and bottom of the meter. Repeat as needed until all surfaces are visibly clean. Discard used wipes. (\*Environmental Protection Agency.)
3. Using fresh wipes, make sure that all outside surfaces of the meter remain wet for 2 minutes. Make sure no liquids to enter the Test Port or any other opening in the meter.

Super Sani-Cloths may be purchased at the following places:

- Amazon.com
- Officedepot.com or visit your local Office Depot store
- Walmart.com

4. Let meter air dry thoroughly before using to test.
5. Verify that the system is working properly by performing an Automatic Self-Test.

**Note:** Other disinfectants have not been tested. The effect of other disinfectants used interchangeably has not been tested with the meter. Use of disinfectants other than Super Sani Cloth Wipes may damage meter.

**Note:** Super Sani Cloth Wipes have been tested on the meter for a total of 10,950 cleaning and disinfecting cycles, which is equal to cleaning and disinfecting the meter 10 times per day for a 3 year period. The use life of the meter is 3 years.

# Safety Cont.

## System Safety Information and Electromagnetic Compatibility

The TRUE METRIX PRO meter was tested and found to comply with the electromagnetic emission and immunity requirements as specified in IEC60601-1-2 Edition 4.0. The meter's electromagnetic emission is low. The TRUE METRIX PRO has met the following requirements of 60601-1-2, Edition 4:

EMC Test	Compliance Information
Radiated Emissions	CISPR 11 Class B limits
Conducted Emissions Voltage	Not applicable
Radiated RF EM Fields	10v/m, 80 MHz – 2.7 GHz, 80% AM at 1 kHz
Proximity fields from RF wireless communications equipment	Per table 8.10
Power Frequency Magnetic Fields	30 A/m, 50 Hz and 60 Hz
Electrical Fast Transients / Bursts	Not applicable
Surges	Not applicable
Conducted Disturbances induced by RF fields	Not applicable
Voltage Dips and Voltage Interruptions	Not applicable
Electrostatic Discharge	+/-8kV contact ; +/-15kV air discharges.

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

Do not use electrical equipment, including antennas, closer than 12 inches to any part of the TRUE METRIX PRO meter, including cables specified by the manufacturer.

### Blood Glucose Monitoring System Components

- TRUE METRIX PRO Self Monitoring Blood Glucose Meter
- TRUE METRIX PRO Self Monitoring Blood Glucose Test Strips
- TRUE METRIX Control Solution
- Lancing Device • Single Use Lancet

Kit may contain one or more of the components above. To obtain components, call 1-800-803-6025, Monday –Friday, 8AM-8PM EST.

Other accessories may negatively affect EMC performance. No adverse events to the Patient and Operator are anticipated due to electromagnetic disturbances because all electrical components of the TRUE METRIX PRO meter are fully enclosed.

# System Specifications

## Meter Specifications

**Result Range:** 20-600 mg/dL

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

**Sample Type:** Fresh capillary whole blood from the finger or forearm, venous whole blood collected in sodium heparin blood collection tubes only, or control solution

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

**Result Value:** Plasma equivalent values

**Assay Method:** Amperometric

**Reference Method:** Yellow Springs Instrument Glucose oxidase reagent

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

**Battery Life:** Approximately 1,000 tests or 1 year

**Automatic Shut-Off:** After two minutes of non-use

**Weight:** 1.66 ounces

**Size:** 3.44" x 2.16" x 0.69"

**Memory Size:** 500 glucose and control results

## Operating Conditions

**System Operating Range (meter & test strips):**

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

**Temperature:** 41°F-104°F

**Hematocrit:** 20%-70%

**Altitude:** Up to and including 10,200 feet

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

## Chemical Composition

**TRUE METRIX® PRO Test Strips:** Glucose dehydrogenase-Flavin adenine dinucleotide (GDH-FAD) (*Aspergillus sp.*), mediators, buffers and stabilizers.

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

**Note:** Material Safety Data Sheets can be found in the Appendix.

# CLIA Requirements

Self-testing and point-of-care testing of blood glucose has been classified by the Clinical Laboratory Improvement Amendments (CLIA) as a waived test. CLIA requires all entities that perform even one test, including waived tests, [on materials derived for the human body for the purpose of providing information for the diagnosis, prevention or treatment of any disease or impairment of, or the assessment of the health of, human beings] to meet certain Federal requirements. If an entity performs tests for these purposes, it is considered under CLIA to be a laboratory and must register with the CLIA program.

Waived laboratories must meet the following requirements:

- Complete the Clinical Laboratory Improvement Amendments of 1988 (CLIA) Application for Certification. Form CMS-116.
- Pay applicable certificate fees biennially.
- Follow manufacturer's test instructions, including instructions for Quality Control, maintenance, and storage instructions.

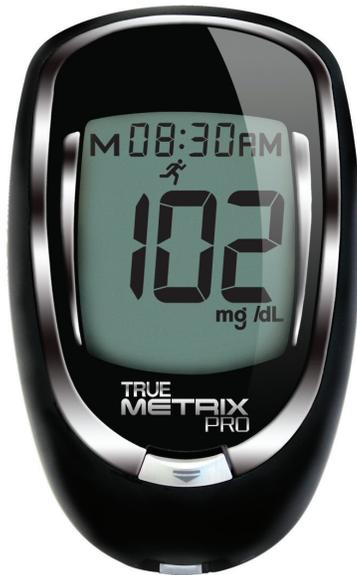
Upon approval of Form CMS-116, a Certificate of Waiver is forwarded to the laboratory.

For more information on the CLIA program, see <http://www.cms.hhs.gov/CLIA/>.

To access the FDA CLIA database, please see: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfCLIA/search.cfm>.

# System Components

# System Components



Meter



Test Strip Vial



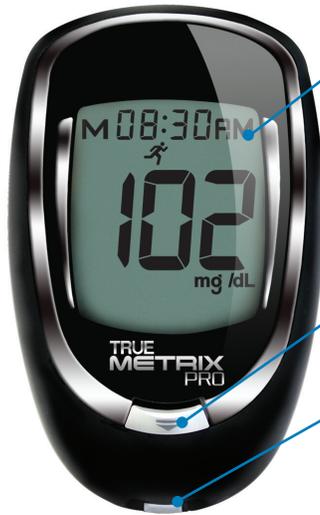
Test Strips



Control Solution

# Meter Key Features

## Front of Meter



### Display Screen

Shows test results, messages, user prompts, information

### Strip Release Button

Releases test strip after testing for disposal

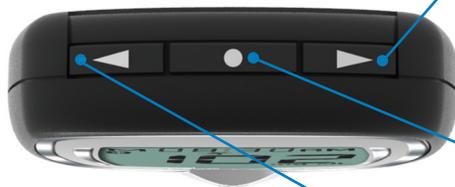
### Test Port

Insert TRUE METRIX<sup>®</sup> PRO Test Strip here, contact blocks facing up

### “▶” Button

Increase numbers in Meter Set Up; add ALT Symbol; move forward by date/time when viewing results and Averages in Memory; scroll through Event Tags to mark results (if feature on); turn on Event Tags, Ketone Test Alert and Test Reminders during Meter Set Up

## Top of Meter



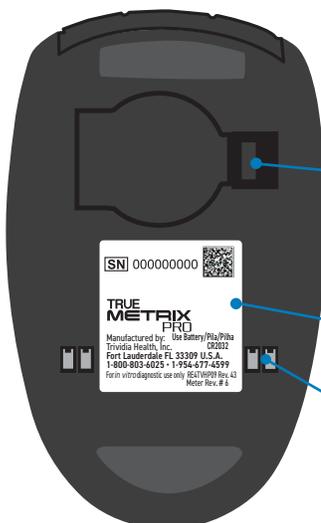
### “•” Button

Turn meter on to view Average values, to view results in Memory, to access Meter Set Up, and turn on Event Tags in Meter Memory

### “◀” Button

Decrease numbers in Meter Set Up; remove ALT symbol; move backward by date/time when viewing results and Averages in Memory

## Back of Meter



### Battery Door

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

### Meter Label

Contains serial number of meter

### Data Contacts

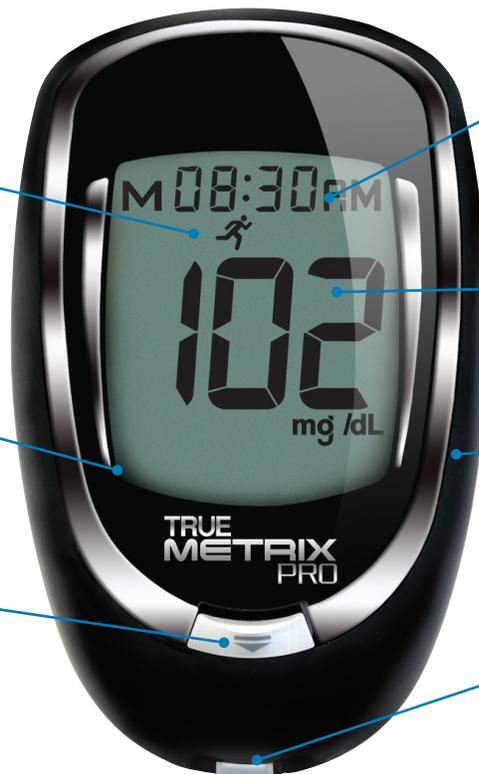
Connects meter with computer via docking station for data upload

# Meter Design

**Event Tagging**  
helps identify trends associated with blood glucose results

**High quality bezel**  
for exclusive look; scratch resistant

**Strip Release Button**  
safely releases test strip without user coming in contact with contaminated test strip



**Alternating time/date**  
for convenient tracking and trending of data

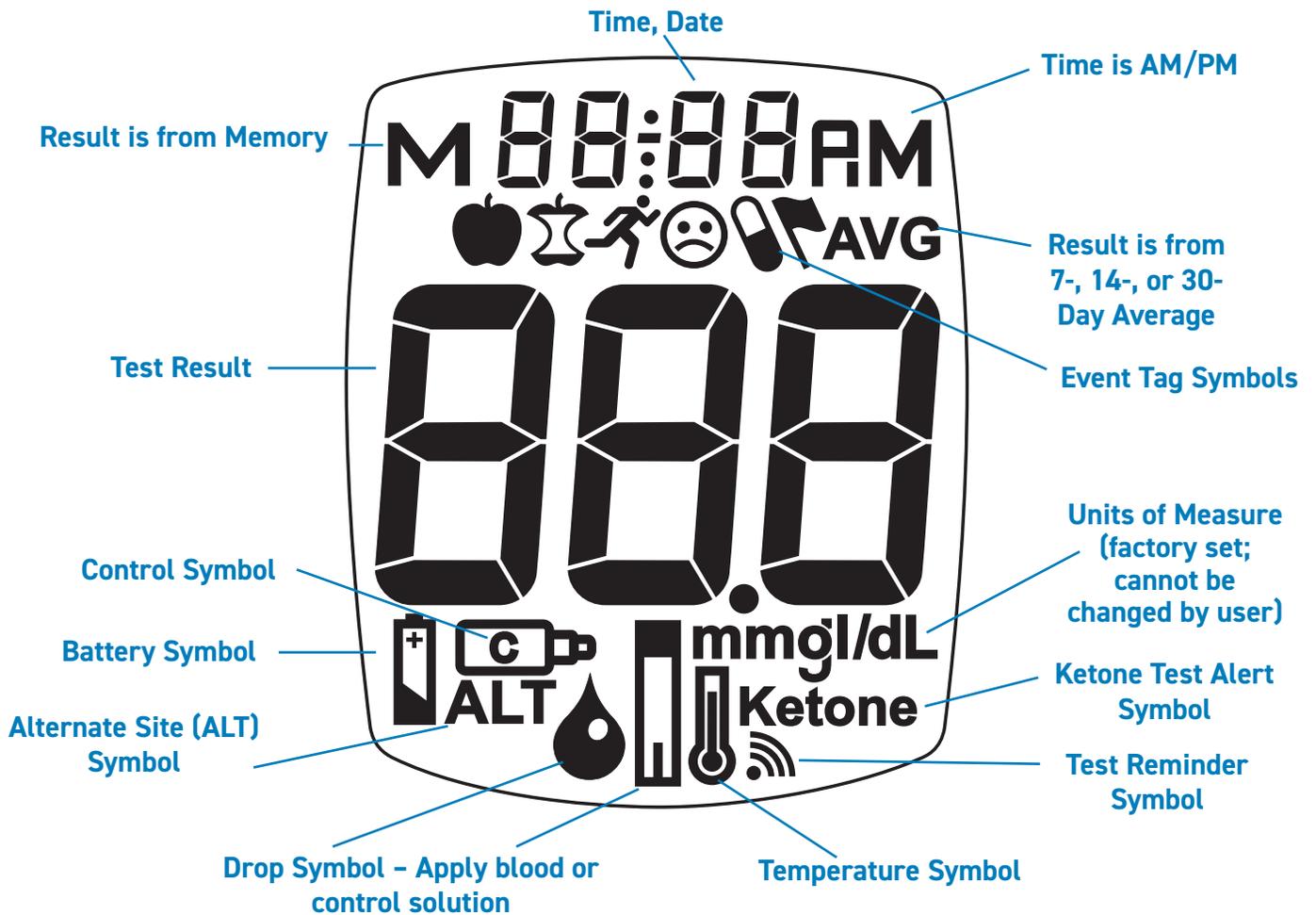
**Large display**  
and digits for easy legibility

**Elegant black**  
soft touch surround material/coating for easy grip of meter

**Test strip guide**  
for easy test strip insertion

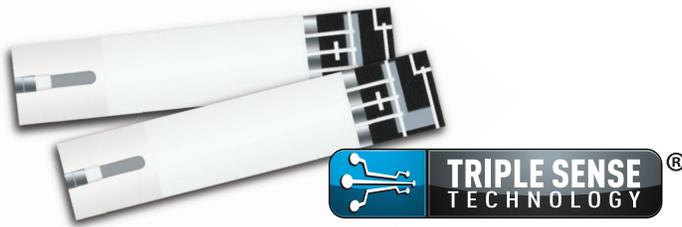
# Meter Display Screen

## Full Display Screen



# Test Strip Design

## TRUE METRIX® PRO Test Strips – Featuring TRIPLE SENSE TECHNOLOGY®



No Coding Technology eliminates the need for coding of the meter.

- Code is assigned during manufacturing process
- Code is printed onto contacts on end of test strip
- Meter reads code on insertion

Advanced technologies – the meter, a complex algorithm, chemistry and electrodes – on the test strip work together as part of the TRUE METRIX® PRO system to produce accurate results.

Featuring TRIPLE SENSE TECHNOLOGY®, the system provides proven accuracy and confidence in results.

### DETECT

#### Sample Environment

- An electrode pair on the test strip detects hematocrit
- An internal unit in the meter detects temperature

#### Sample Size

- System triggers proper fill detection eliminating errors due to improper sample size

#### Control

- Detects control solution and automatically identifies results in memory for accurate data trending



### ANALYZE

#### Environmental and Physiological Factors

- Every system analyzes the testing environment for hematocrit and temperature, which could impact or influence the accuracy of results
- Testing outside of specified operating temperature range is marked by an error code – eliminating incorrect results



### CORRECT

#### Hematocrit/Temperature Variables

- Employs a Proprietary Dynamic Adaptive Algorithm, which incorporates:
  - Active hematocrit correction
  - Temperature compensation
- Combined, this algorithm corrects results based on the testing environment
- Ensures proven accuracy and confidence in results



# Control Solution

## What Is Control Solution?

Control solution is a red liquid containing a known amount of glucose.

## Test Principle:

Use control solution instead of blood to make sure your system is working.

## Storage and Handling:

Control solution must be stored upright, tightly sealed, at 36°F-86°F, room temperature.

**DO NOT REFRIGERATE OR FREEZE**

## 3 Levels of Control Solution



- Use **ONLY** TRUE METRIX® Control Solution to perform Control Tests.

## Control Test

Use **ONLY** TRUE METRIX® Control Solution to check the performance of the system. It is important to perform control tests with more than one level of control solution to assure that the system is working properly and testing technique is good. Three levels of TRUE METRIX® Control Solution (Levels 1-3) are available. Call 1-800-803-6025 for assistance in obtaining different levels of control solution.

Control Test(s) should be performed:

- Before using the system for the first time.
- For practice to ensure that testing technique is good.
- When opening a new vial of test strips.
- If results seem unusually high or low based on the patient's condition.
- If test strip vial has been left open or exposed to extreme heat, cold or humidity.
- Whenever a check on the performance of the system is needed.
- If meter damage is suspected (meter was dropped, crushed, wet, etc.).



Ranges printed on the test strip vial label are for Control Test results only and are not to be used for management of patient's blood glucose. **DO NOT** drink control solution.



# Clinical Information

# Performance Characteristics<sup>5</sup> for Healthcare Professionals

## Introduction

The International Organization for Standardization (ISO) develops standards in response to an identified need in the community that will eventually be suitable for implementation on as broad a basis as possible. ISO developed the standard for blood glucose monitoring performance – 15197:2003 – based on a consensus of professionals around the world.<sup>4</sup> It is recognized as the standard in many countries.

Standard Reference Results	ISO Bias Limit	Criteria for Accuracy
Less than 75 mg/dL	± 15 mg/dL from laboratory reference result	95% of all results
Greater than or equal to 75 mg/dL	± 20% from laboratory reference result	

Clinical data obtained by healthcare professionals on the TRUE METRIX<sup>®</sup> PRO Blood Glucose Monitoring System exceeded the minimum accuracy criteria for ISO 15197:2003.

### Accuracy:

TRUE METRIX<sup>®</sup> PRO accuracy was assessed against the Yellow Springs Instrument. Studies were conducted at 3 clinical sites by healthcare professionals;

100% of healthcare professionals (HCP) TRUE METRIX<sup>®</sup> PRO fingertip values fell within 15 mg/dL of the YSI results at glucose level <75 mg/dL and within 20% at glucose levels ≥ 75 mg/dL.

### Fingertip Capillary Blood < 75 mg/dL (HCP finger vs. YSI)

±5 mg/dL	2/3 = 66.7%
±10 mg/dL	3/3 = 100%
±15 mg/dL	3/3 = 100%

### Fingertip Capillary Blood ≥ 75 mg/dL (HCP finger vs. YSI)

±5%	46 / 97 = 47.4%
±10%	76 / 97 = 78.4%
±15%	95 / 97 = 97.9%
±20%	97 / 97 = 100%

100% of TRUE METRIX<sup>®</sup> PRO forearm values fell within 15 mg/dL of the YSI results at glucose levels <75 mg/dL and within 20% at glucose levels ≥ 75 mg/dL

### Forearm Capillary Blood < 75 mg/dL (HCP forearm vs. HCP finger)

±5 mg/dL	2/4 = 50%
±10 mg/dL	3/4 = 75%
±15 mg/dL	4/4 = 100%

### Forearm Capillary Blood ≥ 75 mg/dL (HCP forearm vs. HCP finger)

±5%	37/96 = 38.5%
±10%	63/96 = 65.6%
±15%	91/96 = 94.8%
±20%	96/96 = 100%

# Performance Characteristics<sup>5</sup> for Healthcare Professionals cont.

The TRUE METRIX<sup>®</sup> PRO System was also tested by healthcare professionals at a research center. The data was compared to parallel results obtained on a Yellow Springs Instrument (YSI). The table below shows how often TRUE METRIX<sup>®</sup> PRO Blood Glucose System venous values obtained by healthcare professionals achieve the accuracy goals.

Venous samples drawn into sodium heparin anticoagulant tubes.

## Venous Blood < 75 mg/dL

Within ±5 mg/dL	5/6 = 83.3%
Within ±10 mg/dL	6/6 = 100%
Within ±15 mg/dL	6/6 = 100%

## Venous Blood ≥ 75 mg/dL

Within ±5%	20/106 = 18.9%
Within ±10%	60/106 = 56.6%
Within ±15%	101/106 = 95.3%
Within ±20%	106/106 = 100%

## Precision (Repeatability):

Precision describes the variation between results. Precision results were performed in a laboratory.

### Blood (Within Lot): N=100

Mean (mg/dL)	44	89	150	199	329
SD (mg/dL)	1.8	3.6	4.9	7.3	9.6
CV%	4.1	4.0	3.3	3.7	2.9

### Control Solution: N=100

Mean (mg/dL)	33	105	306
SD (mg/dL)	1.6	3.8	10.3
CV%	4.8	3.6	3.4

# Limitations of Use

- Please read all product Instructions for Use carefully before referencing or using this guide.
- Use only TRUE METRIX® PRO Blood Glucose Test Strips and TRUE METRIX® Control Solution with the TRUE METRIX® PRO Meter.
- Do not leave test strips or control solution where the storage temperature printed on vial label may be exceeded.
- Perform control tests **before** performing a blood glucose test for the first time (See the Quality Control Testing section of this Resource Guide).
- Perform control tests with more than one level of control solution. Three levels of TRUE METRIX® Control Solution are available for control tests. Contact place of purchase or call for assistance to obtain control procedure/policy.
- TRUE METRIX® PRO is an in vitro (outside the body) quantitative system that is used for multiple-patient use testing of human whole blood only.
- The most accurate results are obtained using fresh, capillary whole blood from the fingertip or forearm. Venous whole blood drawn using only sodium heparin tubes may be used. Mix well before use.
- Do not use venous whole blood collected in sodium fluoride (grey top) vacutainer tubes for testing, as this may cause false low results.
- Capillary blood from the forearm may be used. Check with the doctor or healthcare professional to see if forearm testing may be used for glucose testing on the patient. Results from the forearm are not always the same as results from the fingertip. Use fingertip instead of forearm:<sup>6</sup>
  - Within 2 hours of eating, exercise, or taking insulin;
  - If the patient's blood glucose may be rising or falling rapidly or their results often fluctuate;
  - If the patient is ill or under stress;
  - If the glucose result may be low or high;
  - If symptoms of low or high glucose levels are not evident.
- Alternate site (forearm) testing should not be used to calibrate continuous glucose monitors (CGMs).
- Alternate site (forearm) testing should not be used for insulin dose calculations.
- Do not use for the diagnosis of or screening for diabetes mellitus or for measuring blood glucose in newborns.
- When comparing results between TRUE METRIX® PRO and a laboratory system, TRUE METRIX® PRO blood tests should be performed within 30 minutes of laboratory test. If a patient has recently eaten, fingerstick results from the TRUE METRIX® PRO System can be up to 70 mg/dL higher than venous laboratory results.<sup>6</sup> Diabetes experts have suggested that glucose meters should agree within 15 mg/dL of a laboratory system when the glucose concentration is less than 75 mg/dL, and within 20% of a laboratory system when the glucose concentration is 75 mg/dL or higher.<sup>4</sup>
- The device has not been validated for use in the critically ill. 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>8</sup>
  - shock,
  - severe hypotension,
  - severe dehydration,
  - hyperglycemia with hyperosmolarity, with or without ketosis.
- Testing at altitudes up to and including 10,200 feet will not affect accurate results.<sup>5</sup>
- Hematocrit levels between 20% and 70% will not affect accurate results.<sup>5</sup>
- Do not use the TRUE METRIX® PRO System during a xylose absorption test. This may falsely raise glucose results. Please check with patients doctor before using the TRUE METRIX® PRO System.
- Do not use the TRUE METRIX® PRO System if blood concentrations of ascorbic acid are → 2 mg/dL.
- Do not use the TRUE METRIX® PRO System if blood concentrations of uric acid → 5 mg/dL.

# Interference Testing

Interference testing was performed using the concentrations recommended by Clinical and Laboratory Standards Institute (CLSI) procedure EP7-A2; Interference Testing in Clinical Chemistry; Approved Guideline—Second Edition.<sup>9</sup> Potential interferents were added to whole blood samples at 10 to 50-fold concentrations depending on solubility characteristics. Where no recommendation was given, the potential interferents were added at concentrations higher than normal or therapeutic ranges. Blood samples containing each of the potential interferents were tested concurrently with control blood samples containing no added potential interferents. All blood samples originated from normal healthy donors. The highlighted interferents below are listed as interferents in the Owner's Booklet and Test Strip Instructions For Use.

Potential Interferent	Normal/Therapeutic Concentrations	High/Toxic Concentrations	Concentrations Determined That Will Affect Meter Glucose Results
Acetaminophen	2.0 mg/dL	30 mg/dL	-----
Acetone	2.0 mg/dL	20 mg/dL	-----
Ascorbic Acid	1.5 mg/dL	6.0 mg/dL	2 mg/dL
Bilirubin	1.0 mg/dL	15 mg/dL	-----
Caffeine	1.25 mg/dL	6.0 mg/dL	-----
Cholesterol	150 mg/dL	250 mg/dL	-----
Creatinine	1.5 mg/dL	5.0 mg/dL	-----
Dopamine	0.03 mg/dL	0.1 mg/dL	-----
EDTA	0.1 mg/dL	360 mg/dL	-----
Ethanol	150 mg/dL	400 mg/dL	-----
Fluoride, Sodium	0.05 mg/dL	429 mg/dL	108 mg/dL
Galactose	5.0 mg/dL	15 mg/dL	-----
Gentistic acid	0.4 mg/dL	1.8 mg/dL	-----
Glipizide	0.1 mg/dL	0.2 mg/dL	-----
Glutathione	0.15 mg/dL	10 mg/dL	-----
Hemoglobin	150 mg/dL	1400 mg/dL	-----
Heparin, Lithium	0.675 U/mL	31.7 U/mL	-----
Heparin, Sodium	0.675 U/mL	31.7 U/mL	-----
Ibuprofen	4 mg/dL	50 mg/dL	-----
Icodextrin	-----	20 mg/dL	-----
L-Dopa	1.3 mg/dL	4.0 mg/dL	-----
Maltose	125 mg/dL	250 mg/dL	-----
Maltotetraose	30 mg/dL	70 mg/dL	-----
Maltotriose	90 mg/dL	180 mg/dL	-----
Metformin	0.4 mg/dL	4.0 mg/dL	-----
Methyl-Dopa	0.42 mg/dL	1.5 mg/dL	-----
Naproxen Sodium	7.5 mg/dL	50 mg/dL	-----
PAM	1.0 mg/dL	21 mg/dL	-----
Salicylic acid	2.0 mg/dL	70 mg/dL	-----
Tetracycline	0.35 mg/dL	1.5 mg/dL	-----
Tolazamide	2.5 mg/dL	5.0 mg/dL	-----
Tolbutamide	8.1 mg/dL	64 mg/dL	-----
Triglyceride	150 mg/dL	1000 mg/dL	-----
Uric acid	3 mg/dL	9.0 mg/dL	5 mg/dL
Xylose	5.0 mg/dL	58 mg/dL	7 mg/dL

# Meter Setup & Quality Control Testing

# Meter Setup

Meter Setup is to be used if changes need to be made to the time and date, Event Tags, Ketone Test Alert, or if settings need to be reset because of battery change.

**Note:** Setting up the time, date, Event Tags, Ketone Test Alert and Test Reminders may not be suitable for a multiple-patient use of the system. Check with the facility procedures and policies before performing Set Up.

**Note:** If the meter turns off at any time during Set Up, go back to Step #1 under Meter Set Up and begin again.



1. Press and hold “.” Button until the full display is shown and a tone sounds (around 10 seconds). Release “.” Button. Meter goes into Set Up.

## Set Up of Time and Date

2. The hour flashes. To change, press “▶” or “◀” Button on top of the meter to select the hour. Like many alarm clocks, to set “AM” or “PM”, scroll through the hours until “AM” or “PM” appears in the Display. Press “.” Button to set.
3. The minutes flash. To change, press “▶” or “◀” Button to select the minutes. Press “.” Button to set.
4. The month (number) flashes. To change, press “▶” or “◀” Button to select the month. Press “.” Button to set.
5. The day (number) flashes. To change, press “▶” or “◀” Button to select the day. Press “.” Button to set.
6. The year flashes. To change, press “▶” or “◀” Button to select the year. Press “.” Button to set.

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

# Meter Setup cont.

## Set Event Tags, Ketone Alert and Test Reminders

Meter comes with Event Tags, Ketone Test Alert and all Test Reminders turned off.

**Note:** If the meter turned off at any time during Set Up, go back to Step #1 under Meter Set Up and begin again.

### Event Tags

Event Tags are used to mark a test result that was taken during a specific event.

1. After setting the year, press "▶" or "◀" Button to turn Event Tags on or off. Press "." Button to set. The meter goes to set Ketone Test Alert.



Event Tags may be used after each blood glucose result. Event Tags are as follows:

Before meal – test was taken just before a meal,



After meal – test was taken 2 hours after the start of a meal,



Exercise – test was taken during or after exercise,



Medications – medication taken may have affected test result,



Sick – test was taken when sick,



Other – any other reason that the test is unique or different in some way (example: stress, drinking alcohol).



### Ketone Test Alert

When a blood glucose result is over 240 mg/dL, the Ketone Test Alert is a reminder to check the patient's ketones per the treatment plan prescribed by the doctor or diabetes healthcare professional.



2. Press "▶" or "◀" Button to turn Alert on or off. Press "." Button to set. Meter goes to set Test Reminder.



When a Ketone Test Alert is shown in the meter display, it does not mean that ketones have been detected in the patient's blood. Perform a ketone test per the treatment plan, as prescribed by their Doctor or Diabetes Healthcare Professional.

### Test Reminder

Up to four Test Reminders per day may be set. Reminder sounds at set time for 10 seconds. Meter comes with all Test Reminders off. To set the Test Reminders:

1. After pressing "." Button to set Ketone Test Alert, Display shows first Reminder setting (A-1). To turn Reminder on, press "◀" Button. Press "▶" Button to turn Reminder back to off. Press "." Button to set. Meter goes to next Test Reminder.
2. When "on" is chosen, press "." Button. The hour flashes. Press "▶" or "◀" Button to set the hour. To set AM/PM, scroll (press "◀" or "▶" Button) until "AM" or "PM" is next to correct time. Press "." Button to set.
3. The minutes flash. Press "▶" or "◀" Button to set the minutes. Press "." Button to set. Meter goes to the next Test Reminder.
4. Turn Reminders on and repeat setting the time for next 3 Reminders (if needed).



Test Reminder



### Exit Setup

Press and hold "." Button until meter turns off. Meter also turns off after 2 minutes of non use. Set-up choices are saved.

**Note:** If Test Reminders are set, the Alert Symbol appears in all Displays. If battery dies or is replaced, Ketone Test Alert and Test Reminders may have to be reset.

# Quality Control Testing

Quality Control Testing is used to detect errors that may occur due to test system errors, product defects, adverse environmental conditions and variance in operator performance. Ongoing Quality Control Testing is also used to detect any performance issues of the system over time. Facility Quality Control Testing Policy and Procedure should adhere to the manufacturer's instructions for use and regulatory guidelines.

TRUE METRIX® PRO is a no-coding system, which means the meter does not have to be coded to each lot of test strips. To assure accurate and reliable results, TRUE METRIX® PRO offers two kinds of Quality Control Tests. These tests ensure that the TRUE METRIX® PRO System is working properly and the user's testing technique is good.

## 3 Levels of Control Solution



- Use **ONLY** TRUE METRIX® Control Solution to perform Control Tests.
- Write date opened on control solution label. Discard if either 3 months after first opening or after the date printed next to the EXP on the bottle label has passed, whichever comes first.



- Control Test ranges are printed on the TRUE METRIX® PRO Test Strip vial label.

# Quality Control Testing cont.

## Automatic Self-Test

An Automatic Self-Test is performed by the meter each time a test strip is inserted correctly into the Test Port.

Insert a test strip into Test Port. The meter is working properly if:



~ the full Display appears, then



~ the time appears in the upper part of the Display, and then,

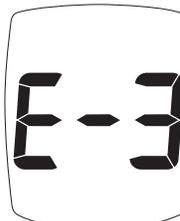


~ the Drop Symbol begins to blink.

If an error message appears in the Display, the meter will not perform a test. See Troubleshooting or call for assistance.



**If any segments are missing in the Display when meter is first turned on, do not use the meter for testing.**



## Control Test

Use **ONLY TRUE METRIX®** Control Solution to check the performance of the system. It is important to perform Control Tests with more than one level of control solution to assure that the system is working properly and testing technique is good. Three levels of TRUE METRIX® Control Solution (Levels 1-3) containing known amounts of glucose are available.



Control Test(s) should be performed:

- Before using the system for the first time.
- For practice to ensure that testing technique is good.
- When opening a new vial of test strips.
- If results seem unusually high or low based on the patient's condition.
- If strip vial has been left open or exposed to extreme heat, cold or humidity.
- Whenever a check on the performance of the system is needed.
- If meter damage is suspected (meter dropped, crushed, wet, etc.).



**Ranges printed on the test strip vial label are for Control Test results only and are not to be used for management of patients' blood glucose. DO NOT drink control solution.**

# Quality Control Testing cont.

## How to Perform a Control Test

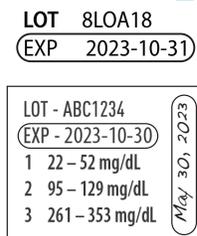
Use the Quality Control Record Form located in the Appendix D, or the form provided by your facility, to record Control Test results.

1. Allow control solution, vial of test strips and meter to adjust to room temperature .
2. Check dates on control solution label and test strip vial label.

- Write date first opened on control solution bottle.
- Do not use control solution if 3 months past written opened date or after EXP date printed on control solution bottle label, whichever comes first.
- Do not use test strips 4 months past written opened date or after EXP date printed on test strip vial label, whichever comes first.
- Discard out-of-date products and use new products.

3. Gently swirl or invert control solution to mix. **DO NOT SHAKE!**
4. Remove one test strip from vial. Close test strip vial immediately. Use test strip quickly after removal from vial.
5. Insert test strip into Test Port. Meter turns on.

**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. Wait until Drop Symbol appears in Display. Keep test strip in meter until testing is finished.

**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.

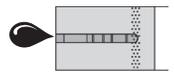


7. With cap removed, turn control solution bottle upside down. Gently squeeze one drop of control solution onto a clean tissue. Wipe off bottle tip with the tissue.



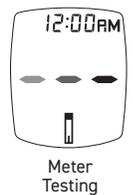
8. Gently squeeze a drop of control solution onto a small piece of unused aluminum foil or clear plastic wrap. Dispose after use.

9. With test strip still in meter, touch edge of Sample Tip to top of control solution. Allow drop to be drawn into test strip. Remove test strip from drop when meter beeps.

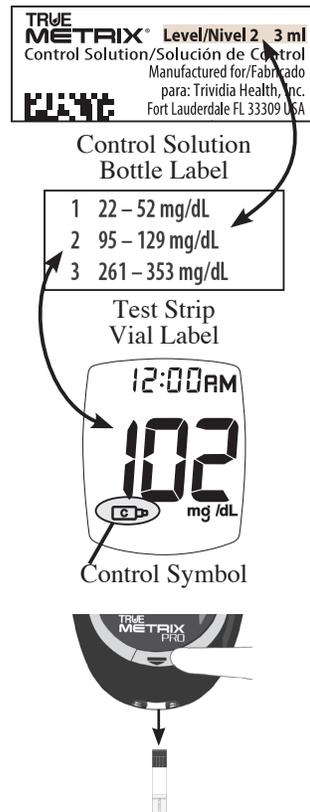


10. Dashes appear across the Display to show meter is testing.

**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 the Troubleshooting section of this Resource Guide.



# Quality Control Testing cont.



11. Compare result to Control Test range printed on test strip vial label for level of control solution 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.

**Note:** Control Test result shows the Control Symbol in the Display.



**If Control Test result is outside range, test again. If result is still outside range, the system should not be used for testing blood. Call for assistance.**

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.

**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.



# Blood Glucose Testing

# Blood Glucose Testing

## Type of Blood Sample Information

Fresh, capillary whole blood from the fingertip or forearm is the recommended sample to be used for testing blood glucose. Capillary forearm sampling must not be used when the blood glucose levels are rapidly changing (see Obtaining a Capillary Forearm Blood Sample below). Venous blood samples may also be used for testing on the TRUE METRIX® PRO Blood Glucose Monitoring System. If using venous blood for testing, careful consideration must be taken when collecting and handling the venous sample (see Obtaining a Venous Blood Sample below). Follow the facility policy and procedure for obtaining samples for testing blood glucose levels. Always wear clean gloves prior to testing to decrease risk of direct contact with blood.

- Never use arterial or neonatal blood samples.
- Never use clotted blood, plasma or serum as a sample for testing on the meter.

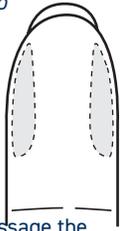
## How to Perform a Blood Glucose Test

The TRUE METRIX® PRO is a no-coding system, which means the meter does not have to be coded to each lot of test strips.

Use test strips quickly after removal from test strip vial. Test strips that have been left out of the vial too long will give an error message. If error message displays, release and discard the old test strip and test with a new test strip.

1. To obtain a blood sample for blood glucose testing refer to your facility approved methods and our recommendations listed in the table below. Follow the facility's established policy and procedure for handling blood and biohazard safety (contaminated biological materials and sharps).

**Note:** A new pair of gloves should be worn before obtaining a blood sample. Contact with blood presents an infection risk.

Obtaining a Capillary Fingertip Blood Sample	Obtaining a Capillary Forearm Blood Sample	Obtaining a Venous Blood Sample
<ol style="list-style-type: none"> <li>1. Wash hands and put on a new pair of gloves.</li> <li>2. Select subject's fingertip. Clean area with soap and warm water, rinse or use an approved disinfectant to clean the area. Dry thoroughly.</li> </ol> <p><b>Note:</b> Do not squeeze the fingertip for the blood sample. This will damage the surrounding tissues and the fluid can dilute the blood sample.</p>  <ol style="list-style-type: none"> <li>3. To help blood drop form, lower the hand to a level below the heart and gently massage the finger from palm to fingertip.</li> <li>4. Lance subject's fingertip.</li> <li>5. Allow the blood drop to form before attempting to apply the test strip.</li> <li>6. Discard all biohazard materials into appropriate container.</li> <li>7. Wash hands after taking off gloves.</li> </ol>	<p><b>Note:</b> Results from the forearm are not always the same as results from the fingertip. Use fingertip instead of forearm.<sup>6</sup></p> <ul style="list-style-type: none"> <li>• Within 2 hours of eating, exercise, or taking insulin.</li> <li>• If the subject's blood glucose may be rising or falling rapidly or their results often fluctuate.</li> <li>• If the subject is ill or under stress.</li> <li>• If the glucose result may be low or high.</li> <li>• If symptoms of low or high glucose levels may not be evident.</li> </ul> <ol style="list-style-type: none"> <li>1. Wash hands and put on a new pair of gloves.</li> <li>2. Select subject's forearm area. Clean area with soap and warm water, rinse or use an approved disinfectant to clean the area. Dry thoroughly.</li> <li>3. Rub area vigorously or apply a warm, dry compress to increase blood flow.</li> <li>4. Lance subject's forearm.</li> <li>5. Allow the blood drop to form before attempting to apply the test strip.</li> <li>6. Discard all biohazard materials into appropriate container.</li> <li>7. Wash hands after taking off gloves.</li> </ol>	<p><b>Note:</b> Do not collect venous specimens from the arm that has an active intravenous infusion site. Do not collect samples from an indwelling line that has an intravenous infusion.<sup>10</sup></p> <ol style="list-style-type: none"> <li>1. Clean site for venipuncture with soap, water or cleansing agent. Dry thoroughly.</li> <li>2. Always collect sample into test tubes containing only sodium heparin.</li> </ol> <p><b>Note:</b> Do not use, serum, clotted blood, or plasma for testing on meter.</p> <ol style="list-style-type: none"> <li>3. If using venous blood for testing on a laboratory device, it must be used within 30 minutes of laboratory test. Mix well before use.</li> </ol> <p><b>Note:</b> Do not use sodium fluoride blood collection tubes. This may cause a false low glucose results.</p>

# Blood Glucose Testing cont.

1. Check Meter time and date before each glucose test. With meter off, press and hold the “•” Button until the full Display is shown and a series of beeps sound. Release “•” Button.

2. Check dates on test strip vial being used. Do not use test strips 4 months past written opened date or after date printed on test strip vial label, whichever comes first.

LOT - ABC1234	May 30, 2023
EXP - 2023-10-30	
1 22 – 52 mg/dL	
2 95 – 129 mg/dL	
3 261 – 353 mg/dL	

If time and date are incorrect, see Meter Set Up to set the correct time and date.

3. Remove one test strip from vial. Close vial immediately. Use test strips quickly after removal from vial.

**Note:** Test strips that have been left out of the vial too long before use will give an error message. If error message displays, release and discard the old test strip and test with a new test strip.

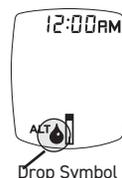
4. With meter off, insert test strip Contact End (blocks facing up) into Test Port. Meter turns on. Keep test strip in meter until testing is finished.

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

**Note:** Removing the test strip before the result is displayed cancels the test. An error message appears and result is not stored in memory. Retest with a new test strip and do not remove the test strip from the meter before the result is displayed.



5. Wait until the Drop Symbol appears in the Display.



6. Obtain the blood sample. Allow drop to form (refer to step one).

7. With test strip still in meter, touch Sample Tip of test strip to top of blood drop from sample obtained in Step 1 and allow blood to be drawn into test strip. Remove Sample Tip from blood drop immediately after the meter beeps and dashes appear across meter Display.



**Note:** If meter does not beep and show dashes in the Display soon after touching the sample to the Sample Tip, release and discard the test strip. Repeat the test with a new test strip and a new sample. If problem persists, see the Troubleshooting section of this Resource Guide.

8. After the test is finished, result is displayed. The Strip Release Button flashes. Record result as required by your facility.
9. Hold the meter with the test strip pointing down. Press the Strip Release Button to release and discard the test strip into the appropriate container. Meter turns off. Result is stored in Memory with date and time.



10. Discard all biohazard materials into appropriate container. Wash hands after taking off gloves.



**Used test strips and lancets are considered biohazardous. Dispose used test strips and lancets in approved biohazard container.**

11. Record the result as required by your facility.

**Note:** If blood glucose test result is greater than 240 mg/dL and the Ketone Test Alert is turned on, the Ketone Test Alert Symbol appears in the Display with the result. Test ketones per the treatment plan. The Ketone Test Alert may be turned on or off during Setup.



**When a Ketone Test Alert Symbol appears, it does not mean that ketones have been detected in patient's blood. The Ketone Test Alert is a reminder to perform a ketone test as prescribed in the treatment plan.**

# Diabetes Data Management Capabilities

# Memory

**Note:** The use of Memory features (Averages, test results) may not be suitable for multiple-patient use of the system. Check with the facility procedures/policy before use.

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

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

1. Start with meter off. Press and release “.” Button. Display scrolls through 7-, 14-, and 30-day Average values.



7-Day Average



14-Day Average



30-Day Average

2. Meter turns off after 2 minutes if no buttons are pressed.

**Note:** If a Control Test is performed outside the recommended testing temperature (See the Quality Control Testing section of this Resource Guide), the control solution may read as a blood test and be included in the Averages.

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



No Average

## View Results

Memory stores 500 results. When the Memory is full, the oldest result is replaced with the newest result.

1. Press and release “.” Button. Meter displays 7-, 14-, and 30-day Averages.

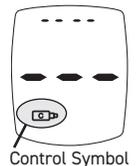
2. Press and release “.” Button again to view most recent Control Test result in Memory. If there are no results in Memory, dashes appear with the Memory Symbol.

3. Press “▶” Button and release to advance to the most recent blood test. Press “▶” Button to scroll forward through blood results or “◀” Button to scroll backwards through 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 240 mg/dL display Ketone Test Alert Symbol, when Ketone Test Alert is turned on during meter Set Up.



# System Maintenance

# Troubleshooting

## Troubleshooting

The following is a brief guide for Troubleshooting the most common errors when using TRUE METRIX® PRO. If any problems arise that cannot be resolved by using the guide or the Display Messages, please call for assistance.

### 1. After inserting test strip into Test Port, meter does not turn on.

Test strip is inserted upside down or backwards.

- Remove test strip. Re-insert test strip correctly.

Test strip not fully inserted.

- Remove test strip. Re-insert test strip fully into meter.

Test strip error.

- Remove test strip. Repeat with new test strip.

Dead or no battery.

- Replace battery.

Battery in backwards.

- Check placement of battery. Battery positive (“+”) side must face up.

Meter error.

- Call for assistance.

### 2. After applying the sample to the test strip, test does not start/meter does not begin testing.

Sample drop too small.

- Repeat test with a new test strip and a larger sample drop.

Sample applied after two minute automatic shut-off of meter.

- Repeat test with a new test strip and apply sample within 2 minutes of inserting test strip.

Problem with test strip.

- Repeat test with a new test strip.

Problem with meter.

- Call for assistance.

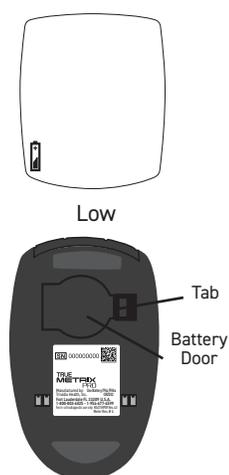
# Troubleshooting Display Messages

## Display Messages

Display	Reason	Action
	<b>Invalid Hematocrit</b>	Repeat with new test strip, using capillary whole blood from the finger or forearm or venous whole blood collected with sodium heparin blood collection tube. If error persists, call for assistance.
	<b>Temperature Error Too Cold/Too Hot</b>	Move meter and test strips to area between 41°F-104°F; wait 10 minutes for System to reach room temperature before testing.
	<b>Sample Not Detected or Using Wrong Test Strip</b>	Retest with new TRUE METRIX® PRO Test Strip and larger sample.
	<b>Used Test Strip, Test Strip outside of vial too long, Sample on top of Test Strip.</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 600mg/dL</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.
	<b>Test Strip Removed During Test</b>	Retest with new test strip. Make sure result is displayed before removing test strip.
	<b>Communication Error</b>	Call for assistance.
	<b>Low or Dead Battery</b>	<b>Low:</b> About 50 tests can be done before battery dies. <b>Dead:</b> Battery Symbol appears and beeps before meter turns off.
	<b>WARNING!! Out of Range - High Results &gt; 600 mg/dL</b>	 <b>WARNING!!</b> Retest with new test strip. If result is still "Hi" (High) or "Lo" (Low) contact Doctor immediately. 
	<b>Out of Range - Low Results &lt; 20 mg/dL</b>	
	<b>Broken Display</b>	Do not use meter for testing. Call 1-800-803-6025.

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

# Battery Replacement



## Battery Replacement

A low battery displays Battery Symbol while continuing to function. A dead battery displays Battery Symbol, beeps, and then turns off. To replace battery:

1. Lift tab on Battery Door.
2. Turn meter over, while holding meter in one hand with Battery Door facing down, tap gently on the palm of your other hand to loosen and remove battery.
3. Discard the old battery in an appropriate container.
4. Insert new battery with positive (“+”) side facing up. Close Battery Door.
5. Press “•” 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 “•” Button. Call for assistance if problem persists.



**Battery 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 regulations.**



**Battery is not rechargeable. If you have a cable or a cradle for downloading results to a computer, DO NOT plug the USB cable end into an electrical outlet. Trying to recharge the battery or power the meter by plugging into an electrical outlet will cause meter to catch on fire or melt.**

# Cleaning and Disinfection



If system is to be used on multiple patients, cleaning and disinfection of the meter should be done between patients.

Healthcare professionals should wear gloves when cleaning the meter. Wash hands after taking off gloves as contact with blood presents a risk of infection.

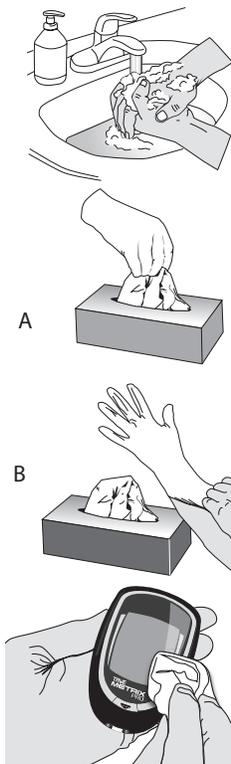


Cleaning removes blood and soil from the meter. Disinfecting removes most, but not all possible infectious agents (bacteria or virus) from the meter, including blood-borne pathogens.

- Clean and disinfect immediately after getting any blood on the meter or if meter is dirty.
- Meter should be cleaned and disinfected between patients.
- Clean and disinfect the meter before allowing anyone else to handle them.
- Do not clean the meter during a test.

## To Clean and Disinfect the Meter:

1. Wash hands thoroughly with soap and water. Wear a clean pair of gloves.
2. Make sure meter is off and a test strip is not inserted. With ONLY PDI Super Sani Cloth Wipes EPA\* reg. no. 9480-4, rub the entire outside of the meter using 3 circular wiping motions with moderate pressure on the front, back, left side, right side, top and bottom of the meter. Repeat as needed until all surfaces are visibly clean. Discard used wipes. (\*Environmental Protection Agency.)



Using fresh wipes, make sure that all outside surfaces of the meter remain wet for 2 minutes.

**NEVER** put meter in liquids or allow any liquids to enter the test port.

3. Let meter air dry thoroughly before using to test.
4. Verify that the system is working properly by performing an Automatic Self-Test.
5. Properly dispose of gloves and wipes after cleaning. Wash hands after removing gloves.

**Note:** Other disinfectants have not been tested. The effect of other disinfectants used interchangeably has not been tested with the meter. Use of disinfectants other than Super Sani Cloth Wipes may damage meter.

**Note:** Super Sani Cloth Wipes have been tested on the meter for a total of 10,950 cleaning and disinfecting cycles, which is equal to cleaning and disinfecting the meter 10 times per day for a 3 year period. The use life of the meter is 3 years.

Stop using the meter and Call Customer Care for assistance at 1-800-803-6025 if:

- Meter display appears cloudy or any display segments are missing,
- Markings on meter, including back meter label, are coming off or are missing,
- Buttons are hard to push on the meter or do not work,
- Unable to insert test strip into Test Port,
- Automatic Self-Test gives an error message.



# System Storage

## TRUE METRIX® PRO System

- Store the system (meter, control solution, test strips) in carrying case to protect from liquids, dust and dirt.
- Do not keep meter in an area where it may be crushed (i.e. back pocket, drawer, bottom of bag, etc.).
- Store the system in a dry place at room temperature (40°F-86°F) at 10%-80% relative humidity. **DO NOT FREEZE.**
- Allow System to sit at room temperature for 10 minutes before testing

## TRUE METRIX® PRO Test Strips

- Store test strips in original vial only. Do not transfer old test strips into new vial or store test strips outside of vial.
- Write the date first opened on test strip vial. Discard unused test strips from vial if either 4 months after first opening or after date printed next to EXP on vial label has passed, whichever comes first. Use of test strips past expiration dates may give incorrect results. Discard out of date test strips and use new test strips.
- Close test strip vial immediately after removing one test strip.
- Store the system in a dry place at room temperature (40°F-86°F) at 10%-80% relative humidity. **DO NOT FREEZE.**
- Do not reuse test strips.
- Do not bend, cut or alter test strips in any way.

## TRUE METRIX® Control Solution

- Write the date first opened on control solution bottle label. Discard if either 3 months after first opening or after date printed next to EXP on vial label has passed, whichever comes first.
- After use, wipe bottle tip using a clean, dry cloth and recap tightly.
- Store at temperatures between, 36°F-86°F. **DO NOT FREEZE.**

# Training Program

# Training Program

## TRUE METRIX® PRO Professional Blood Glucose Monitoring System Training Certification Program

Trained and competent testing personnel are essential to good quality testing and patient care. Waived testing sites are subject to a high rate of personnel turnover. Personnel should be trained and competent in each test they will perform before reporting patient results. In addition, training should include aspects of safety (including Infection Control Policies) and Quality Control. The Risk Management and Chief Medical Officer, and other persons responsible for overseeing testing should ensure that testing personnel receive adequate training and are competent to perform the procedures for which they are responsible.<sup>11</sup>

### Certificate Information

Trividia Health, Inc. provides a training certificate for the use of the TRUE METRIX® PRO Professional Monitoring Blood Glucose System for point-of-care multiple patient facilities. The Training Certificate provides a record that the person listed on the Certificate has been trained correctly in the use of the TRUE METRIX® PRO System and understands all procedures and limitations concerning the TRUE METRIX® PRO System.

### Certified Trainers and Approved Testers

Certified Trainers and Approved Testers are personnel from the facility who have received a Trainer's Certificate from Trividia Health, Inc. To obtain a Trainer's Certificate, the person must:

1. Watch and understand the TRUE METRIX® PRO How To Use Video (available online at <https://www.trividiahealth.com/products/blood-glucose-meters-test-strips/true-metrix-pro/>).
2. Read and be familiar with the entire Comprehensive Resource Guide and all product Instructions for Use (Test Strip, Control Solution, Owner's Booklet).
3. Complete the online Training Checklist and Training Test (available at <https://www.trividiahealth.com/products/blood-glucose-meters-test-strips/true-metrix-pro/>).

Upon satisfactory completion of the online test, a certificate will be generated and can be printed. Training Checklists and Certificates must be filed in the employee's file at the facility.

- CERTIFIED TRAINERS AND APPROVED TESTERS MUST BE RE-CERTIFIED EVERY 12 MONTHS.

# Training Program cont.

## TRUE METRIX® PRO Blood Glucose System Training Program Information

The training program provided online is recommended to supplement already established facility policies and procedures. It is recommended that facility personnel be trained on the TRUE METRIX® PRO Blood Glucose Monitoring System prior to performing quality control testing and testing blood samples collected from patients for the first time.

This training program includes the following documents to assist in the setup of a training session for facility personnel

- Product Training Agenda (example)
- Materials Checklist

During the training of facility personnel on the TRUE METRIX® PRO Blood Glucose Monitoring System, we also recommend including a review of the following established facility specific policies and procedures:

- Collection of capillary fingertip, capillary forearm, and venous blood samples
- Quality control testing and documentation
- Blood glucose testing and interpreting patient glucose values
- Medical Device Cleaning and Disinfection Guidelines
- Handling blood and biohazard safety (contaminated biological materials and sharps)

# Training Program cont.

## Product Training Agenda (example)

	Training Topic	Estimated Time to Complete	Source of Information
1.	Purpose of Training Overview	5 minutes	Technical Overview located in Appendix E of this Resource Guide
2.	Overview of System Components	5-10 minutes	Technical Overview located in Appendix E of this Resource Guide and the System Components section of this Resource Guide
3.	Performing Quality Control Testing	10 minutes	Technical Overview located in the Appendix E of this Resource Guide, Quality Control Testing section of this Resource Guide, and Facility Policy and Procedure on quality control
4.	Documenting and Reviewing Quality Control Results	5 minutes	Meter Setup and Quality Control Testing section of this Resource Guide, and Facility Policy and Procedure on quality control
5.	Sample Collection	10 minutes	Owner Booklet/Test Strip Instructions for Use located in Appendix B of this Resource Guide, Blood Glucose Testing section of this Resource Guide, and Facility Policy and Procedure for collection and handling of blood samples
6.	Performing Blood Glucose Testing	5-20 minutes	Technical Overview located in Appendix E of this Resource Guide, Blood Glucose Testing section of this Resource Guide, and Facility Policy and Procedure for blood glucose monitoring
7.	Interpreting Blood Glucose Results	5 minutes	Facility Policy and Procedure
8.	Interpreting Meter Display Messages/Troubleshooting	5 minutes	Technical Overview located in Appendix E of this Resource Guide and the System Maintenance section of this Resource Guide
9.	System Maintenance/Storage	5 minutes	Technical Overview located in Appendix E of this Resource Guide, System Maintenance section of this Resource Guide, and Facility Policy and Procedure on Medical Device Cleaning and Disinfection
	Total Time to Complete All Sections	55-75 minutes	

## Materials Checklist

Materials for Blood Glucose/Control Testing	Available
TRUE METRIX® PRO system(s)-we recommend one meter for every 2 participants	
TRUE METRIX® PRO test strips 1 vial (25 or 50 count) shared between every 1-2 participants	
TRUE METRIX® Control Solution (Level 1, Level 2, and Level 3 – one bottle of each level) can be shared between every 2 participants	
Auto disabling, single use lancets	
Gauze or tissue for performing blood or control testing	
Personal Protective Equipment (PPE) gloves, etc.	
Biohazard container	
Alcohol wipes	
Cleaning and disinfecting supplies if desired	
Other Training Materials	
TRUE METRIX® PRO Owners Booklet	
TRUE METRIX® PRO Test Strips Instructions for Use	
Training Checklist (available online at <a href="https://www.trividiahealth.com/products/blood-glucose-meters-test-strips/true-metrix-pro/">https://www.trividiahealth.com/products/blood-glucose-meters-test-strips/true-metrix-pro/</a> ).	
Copies of Quality Control Testing Data Form (located in Appendix D of this Resource Guide or the form provided by your facility)	
Facility Policy and Procedure for blood glucose testing and interpreting glucose results	

# References

# References

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4. International Organization for Standardization. In vitro diagnostic test systems. Requirements for blood-glucose monitoring system for self-testing in managing diabetes mellitus. Reference number ISO 15197:2003 (E). Geneva: International Organization for Standardization; 2003.
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11. Good Laboratory Practices for Waived Testing sites. [Electronic Version]. Accessed December 16, 2022 from <https://www.cdc.gov/labquality/waived-tests.html>.

# Appendix

# Appendix A

## Clinical Studies

*Note: Available for download at  
[www.trividiahealth.com](http://www.trividiahealth.com)*

# Appendix B

## Product Labeling

**Note:** *Your Distributor will provide copies of product labeling. (Owner's Booklet, Test Strip Instructions for Use and Control Solution Instructions for Use)*

# **Appendix C**

## **Safety Data Sheets**

# Test Strip – Safety Data Sheet

## Section 1: Product Information

**Product Name:** TRUE METRIX® PRO Blood Glucose Test Strips

## Section 2: Composition / Information on Ingredients

**Vial:** Silica Gel, polypropylene, polyethylene

**Test strips:** Glucose dehydrogenase-Flavin adenine dinucleotide (GDH-FAD) (*Aspergillus*, sp.), mediators, buffers and stabilizers

**Test strip Box and Package Insert:** Paper

## Section 3: Hazard Identification

No significant immediate hazards for emergency response are known.

## Section 4: Emergency First Aid Procedures

**Eye:** No first aid required.

**Skin:** No first aid required for contact with skin.

**Ingestion:** No first aid required from ingestion.

**Inhalation:** No first aid required.

## Section 5: Fire and Explosion Hazard Data

**Flash Point (Method Used):** Vial - > 232°C (450°F) (estimated), test strips - N/A

**Flammable Limits:** N/A

**General Hazard:** Solid material may burn at or above the flashpoint. If thermally decomposed, flammable/toxic gases may be released. Toxic gases will form upon combustion. Hazardous combustion products may include and are not limited to: carbon monoxide, carbon dioxide.

**Special Fire Fighting Procedures:** Use water spray to cool fire exposed surfaces and to protect personnel. Isolate “fuel” supply to fire. Extinguish the fire by cooling with water spray. Respiratory and eye protection required for fire fighting personnel.

**Unusual Fire and Explosion Hazards:** None determined.

## Section 6: Spill or Leak Procedures

**Steps to be taken in case material is released or spilled:** Contain material to prevent contamination of soil, surface water and ground water. May be slipping hazard.

## Section 7: Handling and Storage

Store at temperatures and conditions as indicated on the product label.

## Section 8: Personal Protection

**Ventilation:** Use general room ventilation.

**Respiratory Equipment:** None

**Protective Gloves:** None

**Eye Protection:** None

**Other Protective Equipment/Clothing:** None

## Section 9: Physical Data

**Appearance and odor:** Vial - vial with desiccant liner, test strips - Plastic strip with reaction area.

**pH:** N/A

**Specific Gravity:** N/A

**Boiling Point:** N/A

**Melting Point:** N/A

**Vapor Pressure:** N/A

**Evaporation Rate:** N/A

**Solubility in Water:** N/A

## Section 10: Reactivity Data

**Stability:** Stable if at storage temperature and original vial closed.

**Conditions to Avoid:** Product can oxidize and decompose at elevated temperatures. Avoid putting water inside of vial, exothermic reaction will occur. Temperatures above 149°C (300°F) may cause product degradation and self combustion.

**Substances to Avoid:** Avoid contact with strong acids and oxidizing materials.

**Hazardous Decomposition Products:** Flammable hydrocarbons.

**Hazardous Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Chronic Effects of Overexposure:** None currently known.

**Carcinogen or Suspected Carcinogen:** None of the compounds present are listed as a carcinogen or suspected carcinogen.

**Medical Conditions Aggravated by Exposure:** None currently known.

**Acute Toxicity Values:** Not applicable.

## Section 12: Ecological Information

Ecological effects of this product have not been determined.

## Section 13: Disposal

**Primary Container Type:** Vial with 50 test strips.

**Waste Disposal Method:** Each disposal facility must determine proper disposal methods to comply with local, state, and federal environmental regulations.

# Control Solution – Safety Data Sheet

## Section 1: Product Information

**Product Name:** TRUE METRIX® Control Solution – Levels 1, 2, and 3

## Section 2: Composition / Information on Ingredients

**Bottle:** Polypropylene, polyethylene

**Control Solution:** Water, d-glucose, buffers, viscosity enhancing agents, salts, dyes, and preservatives.

**Control Solution Box and Package Insert:** Paper

## Section 3: Hazard Identification

No significant immediate hazards for emergency response are known.

## Section 4: Emergency First Aid Procedures

**Eye:** Flush with copious amounts of water.

**Skin:** Flush with water.

**Ingestion:** Contact physician.

**Inhalation:** Contact physician.

## Section 5: Fire and Explosion Hazard Data

**Flash Point (Method Used):** Bottle - N/A, control solution - N/A

**Flammable Limits:** N/A

**General Hazard:** N/A

**Special Fire Fighting Procedures:** N/A

**Unusual Fire and Explosion Hazards:** None determined.

## Section 6 : Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Contain material to prevent contamination of soil, surface water and ground water. May be slipping hazard.

## Section 7 : Handling and Storage

Store at temperatures and conditions as indicated on the product label. Keep bottle tightly closed when not in use.

## Section 8 : Personal Protection

**Ventilation:** Use general room ventilation.

**Respiratory Equipment:** None.

**Protective Gloves:** None

**Eye Protection:** None

**Other Protective Equipment/Clothing:** None

## Section 9 : Physical Data

**Appearance and odor:** Bottle - plastic bottle with cap, control solution - Red liquid.

**pH:** N/A

**Specific Gravity:** N/A

**Boiling Point:** N/A

**Melting Point:** N/A

**Vapor Pressure:** N/A

**Evaporation Rate:** N/A

**Solubility in Water:** N/A

## Section 10 : Reactivity Data

**Stability:** Stable at storage temperature. Keep bottle closed when not in use.

**Conditions to Avoid:** N/A

**Substances to Avoid:** Avoid contact with strong acids and oxidizing materials.

**Hazardous Decomposition Products:** Flammable hydrocarbons.

**Hazardous Polymerization:** Will not occur.

## Section 11 : Toxicological Information

**Chronic Effects of Overexposure:** None currently known.

**Carcinogen or Suspected Carcinogen:** None of the compounds present greater than 0.1% are listed as a carcinogen or suspected carcinogen.

**Medical Conditions Aggravated by Exposure:** None currently known.

**Acute Toxicity Values:** Not applicable.

## Section 12 : Ecological Information

Ecological effects of this product have not been determined.

## Section 13 : Disposal

**Primary Container Type:** Bottle with 3 mL control solution.

**Waste Disposal Method:** Each disposal facility must determine proper disposal methods to comply with local, state, and federal environmental regulations.

# **Appendix D**

## **Forms**



# **Appendix E**

## **Proficiency Testing**

### **Information**

# Proficiency Testing Information

## TRUE METRIX® PRO Professional Blood Glucose Monitoring System Proficiency Testing Information

The objective of proficiency testing is to qualitatively determine the skill of the user of a specific product and the accuracy of the results obtained using the product. Participating laboratories receive specimens from a distributor, test the specimens and report the results back to the distributor. The results of all participants are summarized in a report that is sent to the participating laboratories. The report contains an evaluation of the individual laboratory performance as well as a comparison to a summary of results from other participating labs.

It is important to be aware that proficiency samples are not fresh blood and may behave differently on different glucose test systems. The accuracy of the result from a proficiency sample is not an indicator of the accuracy of your system when tested with fresh whole blood obtained from a patient. The proficiency testing only serves to show how your results compare to other TRUE METRIX® PRO System users. If your proficiency sample results are not within acceptable limits of other TRUE METRIX® PRO users' results, then you should investigate possible sources of testing error such as expiration date and storage conditions for the test strips. Always perform quality control testing per your facility's procedures and policies to make sure your system is working properly. The Owner's Booklet or Comprehensive Resource Guide assists you with this process.

The TRUE METRIX® PRO System is optimized to give accurate results with fresh, capillary whole blood and venous whole blood samples. Venous whole blood samples must be tested immediately or preserved in a vacutainer tube containing sodium heparin blood only (green top). This preserves the sample for approximately 30 minutes. Refer to the TRUE METRIX® PRO Owners Booklet and TRUE METRIX® PRO Test Strip Instructions for Use for further information.

Resources to learn about and obtain proficiency samples:

- College of American Pathology (CAP) [www.cap.org](http://www.cap.org)
- American Association of Bioanalysts [www.aab.org](http://www.aab.org)