



## Features

- No coding
- No maltose and oxygen errors
- GDH-FAD with HCT correction
- Three levels of control solutions
- Unique easy-to-hold design
- Test strip ejector
- Backlight illuminator
- Quick measurement in 5 seconds
- Voice guidance
- Various patient support functions
- User-friendly result indicator
- Up to 400-measurement memory
- PC connectivity
- Accessible AAA-type batteries
- Complies with new ISO standard (ISO 15197)

## Specifications (Meter)

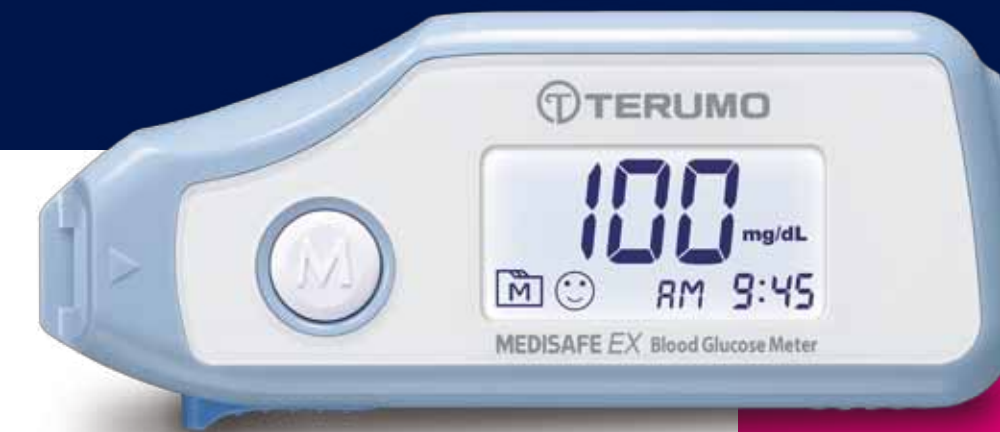
Name	MEDISAFE EX Blood Glucose Meter
Model number	TD-4119
Product code	TM4119100-02
Measurement range	10-600 mg/dL (0.5-33.3 mmol/L)
HCT range	0-70%
Enzyme	GDH-FAD + HCT correction
Measurement time	5 seconds
Sample volume	1.1 ul
Memory capacity	400 measurements
Power source	Two 1.5V AAA alkaline batteries
Operation conditions	Temperature: 10-40°C (50-104°F) Humidity: Below 85%
Dimensions (W x D x H)	108 mm x 44 mm x 21 mm
Weight	Approx. 45 g (without battery)

## Consumables

Name		Product Code
MEDISAFE EX Blood Glucose Test Strip	30 pieces per bottle	TM4119101-30
MEDISAFE EX Control Solution	Low	TM4119111-01
	Normal	TM4119112-02
	High	TM4119113-03
MEDISAFE Fine-Touch	1 piece	MS*GN02
MEDISAFE Lancet for Fine-Touch	30 pieces per box	MS*GN4530

# Blood Glucose Monitoring System MEDISAFE<sup>®</sup> EX

## All about convenience



MEDISAFE EX Blood Glucose Meter



MEDISAFE EX Blood Glucose Test Strip



MEDISAFE EX Control Solution (Low/Normal/High)



MEDISAFE Fine-Touch



Lancet for Fine-Touch



Distributor

**TERUMO CORPORATION**  
44-1, 2-chome, Hatagaya, Shibuya-ku Tokyo 151-0072, Japan  
Phone: 81-3-3374-8111 Fax: 81-3-3374-8196

**Terumo (Thailand) Co., Ltd.**  
#1206, 12th Floor 54 B.B. Building  
Asoke Rd. (Sukhumvit 21),  
Kwaeng Klongtoeynua, Khet  
Wattana, Bangkok 10110, Thailand  
Phone:+66-2-260-7020  
FAX:+66-2-260-7019

**Terumo Singapore Pte. Ltd.**  
300 Beach Road, #32-06 The  
Concourse, Singapore 199555  
Phone:+65-6-291-3603  
FAX:+65-6-291-2696

**Terumo Corporation  
Dubai Branch**  
AL MASRAF Tower, 22nd Floor,  
P.O.Box 20291 Dubai, U.A.E.  
Phone:+971-4-2212220  
FAX:+971-4-2213330

**PT. Terumo Indonesia**  
Wisma KEIAI 5th Floor JL. Jend.  
Sudirman KAV. 3 Jakarta 10220,  
Indonesia  
Phone:+62-21-572-4071  
FAX:+62-21-572-4072

**TERUMO Vietnam  
Medical Equipment Co., Ltd.**  
International Centre 17 Ngo  
Quyten str., Unit 05, 6th Floor  
Hanoi, Vietnam  
Phone:+84-4-3936-1643  
FAX:+84-4-3936-1641

**Terumo Marketing  
Philippines Inc.**  
Unit 3203 A&B, West Tower  
The Philippines Stock Exchange  
Centre Exchange Road, Ortigas  
Center, Pasig City, Philippines  
Phone:+63-2-632-1674  
FAX:+63-2-632-7966

**TERUMO Vietnam Medical  
Equipment Co., Ltd  
Ho Chi Minh City Branch**  
Room 505, 5th floor Hoang Anh  
Satomec Office Building, 7/1 Thanh  
Thai Str., Ward 14, District 10,  
HCMC  
Phone:+84-8-3866-9263  
FAX:+84-8-3866-9261

**Terumo Malaysia Sdn. Bhd.**  
Suite C405, 4th Floor, Centre Tower  
Wisma Conspant 1 No. 2, Jalan SS 16/4  
47500 Subang Jaya Selangor Darul  
Ehsan, Malaysia  
Phone:+60-3-5880 8898  
FAX:+60-3-5880 8891

**Terumo Medical  
(Shanghai) Co., Ltd.**  
Rm.901, Zhongshan Expo Plaza, 666  
Huaihai Road West, Changning,  
Shanghai 200052, China  
Phone:+86-21-6237-1155  
FAX:+86-21-6237-1150

®: Registered Trademark.  
Manufactured by TERUMO CORPORATION in Japan.  
©: TERUMO CORPORATION, June 2013

Printed in Japan.  
TM2E-713KL-0(6.13)A

# Reliable results every time

## No coding

You can start to use the test strip simply. There is no need for bothersome coding, meaning that measurements are always precise.

## No maltose and oxygen errors

Compared with glucose oxidase (GOD) with electrode, which catalyzes reactions that directly involve molecular oxygen, GDH-FAD can avoid interference from variations of oxygen in the blood sample. Based on this advantage, the GDH-FAD test strip can be applied for capillary, venous, and arterial blood samples.

Strip Enzyme	Blood Sample Type				HCT Range
	Artery	Vein	Capillary	Dialysis Patient with Maltose	
GDH-FAD with HIC	●	●	●	●	0 - 70%
GDH-FAD	●	●	●	●	20 - 60%
GOD with electrode			●	●	20 - 60%

The advantageous HCT interference correction and medication interference correction are proven to be prime technology that delivers the ultimate accuracy testing for measurements.

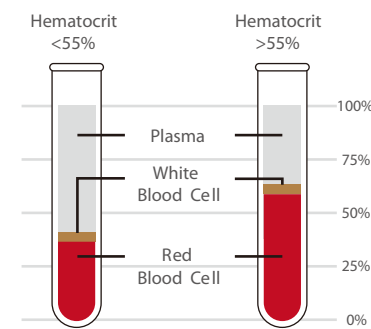
### Substrate Specificity

	Glucose dehydrogenase (FDA dependent)	Glucose oxidase	Glucose dehydrogenase (NAD dependent)	Glucose dehydrogenase (PQQ dependent)
D-Glucose	100	100	100	100
D-Galactose	0	0	0	35
D-Mannose	0	3	10	34
Mannose	0	0	0	109
Sucrose	-	0	0	1
Fructose	0	0	0	0
Lactose	-	0	1	56

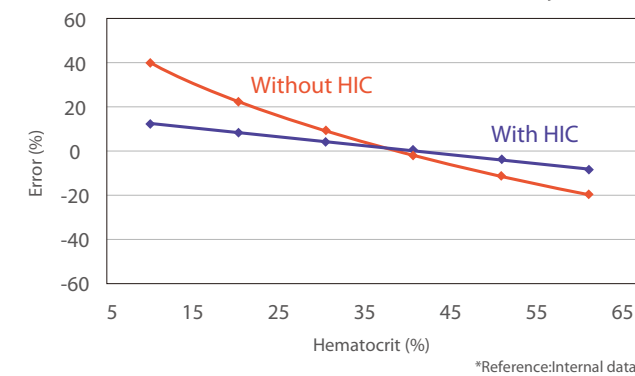
## HIC (Hematocrit Interference Correction)

Simultaneous measurement of a patient's hematocrit with algorithmic adjustment of glucose result is performed. Hematocrit (HCT) level varies between individuals, the normal HCT level for an adult male being 42% to 54%, and that for an adult female 38% to 46%, while kidney dialysis patients tend to have a lower HCT level of 33% to 36%\*.

\*Reference: J Am Soc Nephrol. 1999 March; 10 (3): 610-9



### Effect of hematocrit on accuracy

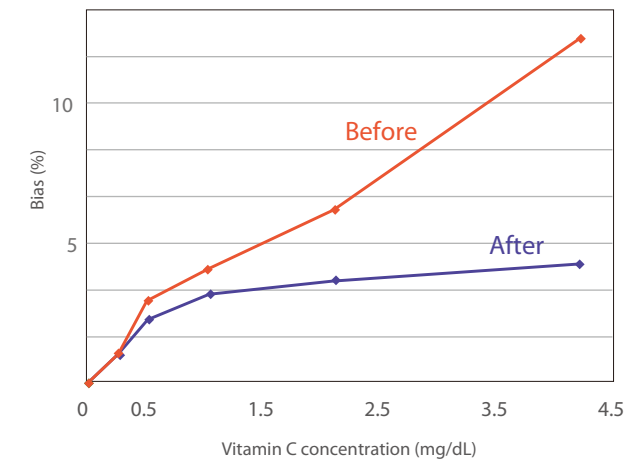


\*Reference: Internal data

## MIC (Medication Interference Correction)

Medication is an important factor in a blood glucose test result. For example, vitamin C (Ascorbic acid) is the most commonly seen interference during a blood glucose test.

### Ascorbic acid interference before and MIC



Summary of substances and concentrations in excess of limitation with interference

Substance	Limiting Concentration (mg/dL)	Therapeutic/Physiologic Concentration Range (or Upper Limit) (mg/dL)
Acetaminophen	> 6.25	0.45 - 3
Ascorbic Acid	> 5	2

## Superior Accuracy

The MEDISAFE EX complies with the ISO 15197 requirement:  $\geq 95\%$  of the BG system results fall within  $\pm 15$  mg/dL of the reference measurement results at glucose concentration  $< 75$  mg/dL (4.17 mmol) and within  $\pm 15\%$  at glucose concentration  $\geq 75$  mg/dL (4.17 mmol).

System accuracy results by professionals for glucose concentration

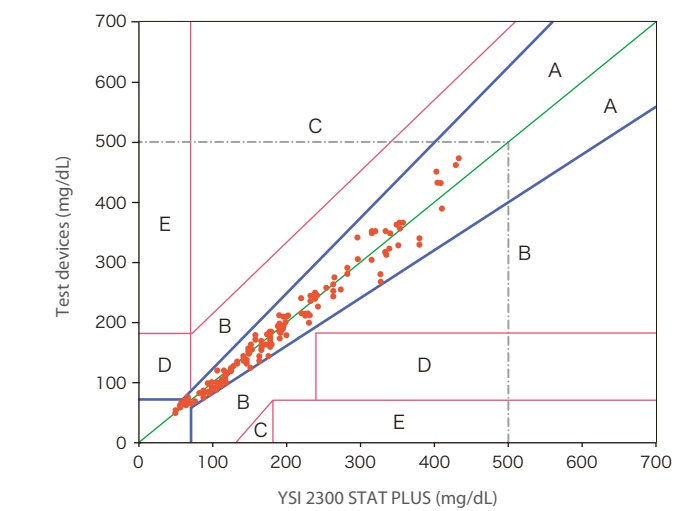
### < 75 mg/dl

Within $\pm 5$ mg/dl	Within $\pm 10$ mg/dl	Within $\pm 15$ mg/dl
22/31 (71.0%)	31/31 (100.0%)	31/31 (100.0%)

### $\geq 75$ mg/dl

Within $\pm 5\%$	Within $\pm 10\%$	Within $\pm 15\%$	Within $\pm 20\%$
72/149 (48.3%)	127/149 (85.2%)	147/149 (98.7%)	149/149 (100%)

### Clarke error grid of BGM by participants (n=180)



# Simplicity, efficiency

## Unique easy-to-hold design

Terumo's original easy-to-hold design has been specially considered for healthcare professionals. It allows single-handed operation and comfortably facilitates many measurements in hospitals.



## Test strip ejector

The safe design permits users to just simply slide the strip ejector to dispose of a used test strip without it touching the hand.



## Backlight illuminator

A bright backlight display enhances visibility. The high-contrast screen enables easy recognition of characters and symbols. Especially useful in a dark room or for nighttime measurement.



## Quick measurement in 5 seconds

Speedy measurement in just 5 seconds will not delay you during busy circumstances.

