# GlucoPlus ™ MD

## User's Manual
## *Guide d'utilisation*

Code M888 Del

188.0

Avg mmol/L mg/dL

88:88 88:88 AM PM

S  M

GlucoPlus™ Quick Touch®

5 4 3

Allows easy application
from left or right
side of the test strip.

*Lecteur de la gauche
ou de la droite.*

# INTRODUCTION

Thank you for selecting the GlucoPlus™ Blood Glucose Monitoring System (GlucoPlus™ System). This system was produced in close association with diabetes healthcare professionals, most importantly, people with diabetes.

Before using your GlucoPlus™ System for the first time, please refer to Quick Reference Guide included in this package. Should you require further information, please study this User's Manual. Please forward your warranty card immediately to GlucoPlus™ Inc.

If you have any questions or enquiries, please contact GlucoPlus™ Inc. customer service or your local GlucoPlus™ System Distributor.

# TABLE OF CONTENTS

# GETTING STARTED

The GLUCOPLUS™ Blood Glucose Monitoring System consists of: GLUCOPLUS™ Blood Glucose Meter, GLUCOPLUS™ Blood Glucose Test Strips, and GLUCOPLUS™ Control Solution.

The GLUCOPLUS™ Blood Glucose Complete Monitoring System includes:

- GLUCOPLUS™ Blood Glucose Meter with one 3V Lithium Battery (Preinstalled)
- GLUCOPLUS™ Blood Glucose Test Strips
- GLUCOPLUS™ Control Solution
- Owner's Operation Manual and Quick Reference Guide
- GLUCOPLUS™ Check Strip
- GLUCOPLUS™ QuickTouch Adjustable Lancing Device
- Lancets
- Carrying Case
- Logbook

# GlucoPlus™ BLOOD GLUCOSE METER

Study this diagram and become familiar with all the parts of your GLUCOPLUS™ Blood Glucose Meter.



1 **⏻ BUTTON** Use button to turn the meter on and off, activating different modes and confirming changed values.

2 **DISPLAY** The large, easy to read display shows blood glucose result, messages, glucose results stored in memory, time and date.

3 **Ⓢ BUTTON** Use Ⓢ button to set options and when you need to decrease values in setting mode.

4 **Ⓜ BUTTON** Use Ⓜ button to recall the information stored in meter's memory and to increase values in setting mode.

5 **NOTES** You may hold the Ⓢ or Ⓜ button down to scroll the numbers forward quickly anytime during usage.

6 **STRIP SLOT** Holds a GLUCOPLUS™ blood glucose test strip and GLUCOPLUS™ check strip in place when you perform blood glucose test or perform check tests.

7 **DATA PORT** Allows you to transfer the information stored in the meter's memory to a computer to view, analyze and print.

8 **BATTERY COMPARTMENT** Holds ONE 3v Lithium battery. The battery is already installed in your meter.

# GlucoPlus™ TEST STRIP



## *IMPORTANT TEST STRIP INFORMATION*

- Do not use test strips beyond the expiration date on the vial. The discard date for test strips is (3) months after first opening the vial. Record the discard date on the vial, when you open a new vial of test strips.

- Do not use damaged test strips or test strips changed in any way, use test strip immediately after removing it from the vial; replace the vial cap and close it tightly.

- Do not transfer test strips to a new vial. Always carry test strips in their original vial.

- GLUCOPLUS™ Blood Glucose Test Strips are intended for in vitro diagnostic use with capillary whole blood or GLUCOPLUS™ Control Solution. Results will not be accurate if used with plasma or serum samples.

- GLUCOPLUS™ System measures the amount of glucose in capillary whole blood. Blood can be applied to both the right and left side aperture of the GLUCOPLUS™ Blood Glucose Test Strip and is automatically drawn into the reaction cell where the reaction takes place.

- GLUCOPLUS™ Blood Glucose Test strips can be damaged by heat and light. Keep them sealed in the original vial. Store the vial in a cool, dry place below to 40_/104_ and above 10_/50_. Do not refrigerate.

- Do not place in direct heat or sunlight.

- Do not carry loose test strips in your carrying case.

# GlucoPlus™
# CONTROL SOLUTION



Glucoplus™ Control Solution is used to check that Glucoplus™ Blood Glucose Meter and Glucoplus™ Blood Glucose Test Strip are working together as a system.

Glucoplus™ Control Solution can be used in two ways:

**1** To practice the test procedure

**2** To make sure that the GlucoPlus™ Blood Glucose Meter and GlucoPlus™ Blood Glucose Test Strips are working together properly.

## *PERFORM A TEST (PAGE 14)*

- Gently shake the control solution, apply a drop on the test strip.
- The test result should correspond to the range printed on the test strip vial used.
- Check the expiration date on the control solution. Do not use if expired. Discard after three months after first opening.
- Store the control solution closed at temperatures below 30ºC (86ºF).

# GlucoPlus™ CHECK STRIP

Glucoplus™ Check Strip is used to check that the meter is operating properly. Use when performing quality control check on your meter.

- Insert the check strip into test strip slot with label side up as below.



- You should obtain an acceptable **"OK"** reading within 15 seconds, otherwise repeat the test.

# SETTING METER PARAMETERS

## *SETTING THE TIME AND DATE*

Time and Date should be set prior to testing if you plan to download the results into software or to review your memory to check when a test was done.



To set the time and date:

**1** Press 🔘 to turn meter on.

**2** When the last test result, time, date and a moving strip appear, press **S** BUTTON for 3 seconds (at the beep sound , the year will flash - for example for the year 2004, number 4 will appear).

**3** Press and release the **S** or **M** button to obtain the desired year.

**4** Press and release 🔘 to move to the month, year, hour, minute and unit of measure.

**5** Press and release **S** or **M** button to obtain the desired result. Upon changing the minute, the unit will flash. Press **S** or **M** button for 3 seconds to change the unit of measurement to mg/dL or mmol/L.

# PREPARE FOR BLOOD SAMPLING

## *GLUCOPLUS™ QUICKTOUCH ADJUSTABLE LANCING DEVICE*

Used with lancet to obtain a blood sample.
**1** Depth adjustment Cap
**2** Lancet Holder
**3** Cocking control
**4** Release Button

## *LANCET*

Used with lancing device to obtain a blood sample.
**1** Protective cap

**1** Remove the depth adjustment cap. Insert a lancet into the lancet holder and push down until it is fully seated.



**2** Twist off the protective disk until it separates from the lancet.



**3** Replace the lancing device cap and set the puncture depth to the desired number.

**Note:** *the larger the number setting the deeper the puncture.*



**4** Pull back the cocking mechanism until it makes a click, and then release. If it does not click, the device may have been cocked when the lancet was inserted.

# CODING YOUR METER

Before you use your meter for the first time and every time you open a new box of test strips, you need to set the meter to "match" the strips. This is called coding.

**1** Inserts the strip into the slot, the meter will activate, The last code number will appear on the screen.

**2** Press ⓢ button until you hear the sound of buzzer and the code value flashes, press ⓢ or Ⓜ button to obtain the code number indicated on the new vial.

**3** Upon obtaining the right code number, press ⓞ to validate the change. The screen on your Meter will illustrate as right figure. Now your meter is ready for test.

# PERFORMING A TEST WITH GlucoPlus™ BLOOD GLUCOSE TEST STRIP

**1** Wash your hands in warm, soapy water. Rinse and dry completely. Warm your fingers to increase blood flow.



**2** Load lancing device according to manufacturer's instruction.

**3** Remove new test strip from vial. Be sure to tightly replace vial cap after removing test strips. Insert test strip immediately into test strip slot as illustrated on the meter above strip slot. The meter turns on automatically.



**4** Check that the code number in the monitor matches the code on the vial of test strips you are using.



**5** When the blood drop symbol flashes, you are ready to perform a test.

**6** Use the Lancet loaded In Lancing device to obtain a drop on the side of your finger. Hold the device firmly against the side of your finger. Press the release button. Gently massage your finger to obtain the required blood volume. To perform the test, you need only 1.5uL of blood sample resting on your finger.



**7** Apply the blood sample to the right or left edge of the strip in a way that is comfortable for you. Make sure that the blood drop covers the test confirmation window . When blood is applied to the strip, a line moves on the display until measurement is completed.



**8** Test result appears in mmol/L or mg/dL depending on the pre-set unit on your Meter. Your result is automatically recorded in the meter's memory. You may also want to record the result in your log book.



**9** Remove test strip from meter. Discard the strip and lancet in a container with lid.

**10** If **HI** is displayed your blood glucose result may be higher than 33.3 mmol/L or 600 mg/dL. If **LO** is displayed, your blood glucose result may be lower than 1.6 mmol/L or 30 mg/dL.

# UNDERSTANDING YOUR TEST RESULT

If your blood glucose result seems unusually high or low, or inconsistent with your previous results, check the following:

- Does the test strip code number match the code number on the meter?

- Was the blood sample applied immediately to the test strip within 3 minutes of removing it from the vial?

- Was the size of the blood sample sufficient?

- Was the test strip vial cap tightly sealed?

- Was the test strip used before the expiration date?

- Were the test strips stored away from extreme temperatures in very cold or hot weather or from areas of high humidity?

Then run a quality control check with your Glucoplus™ Control Solutions and a new test strip. If the control result is within the acceptable range, review testing procedure and repeat your blood glucose test with a new test strip. If your blood glucose value is still inconsistent with your previous results, glucose trend, or how you feel, please contact your doctor.

# REFERENCE

**1** Tietz N.W. textbook of Clinical Chemistry, P.2190 (1994)

**2** American Diabetes Association Position Statement, Diabetes Care Vol. 19 (Suppl.1), p.S4 (1996)

# Memory Recall

The Glucoplus™ Blood Glucose Meter automatically stores 192 test results, letting you review them in order from the most recent to the oldest. If you have set the time/date feature, the time and date of the results are also displayed. If the memory is full and a new result is added, the meter deletes the oldest result.

Turn meter on, when test strip flashes, press Ⓜ button till you hear a beep sound. Pressing Ⓜ button allows you to see each test stored in the memory. The record will appear in order from the most recent to the oldest.

The meter also calculates and displays the previous 1-, 7-, 14-, 21-, and 28-day averages.

While in memory mode, press ⏻ button. The one day average will be displayed, by pressing Ⓜ button you will obtain the averages of the last 1-, 7-, 14-, 21- and 28-days. Press ⏻ button till you hear the beep to return to the previous screen.

# SYSTEM SPECIFICATIONS

| 1 | Assay Method | Electrochemical biosensor |
|---|---|---|
| 2 | Test Sample | Capillary Whole Blood |
| 3 | Test Result | Plasma/Serum glucose |
| 4 | Sample Size | Less than 1.5 _L |
| 5 | Measuring Range | 30~600 mg/dL or1.6~33.3 mmol/L |
| 6 | Measuring Time | Less than 15 seconds |
| 7 | Memory Capacity | 192 test results with time/date |
| 8 | Average Display | 1-, 7-, 14-, 21-, 28-days average |
| 9 | Power Supply | One 3-volt Lithium Battery |
| 10 | Battery Life | Approximately 1000 tests |
| 11 | Operating Temp. Range | 10~400C (50~104(F) |
| 12 | Operating Relative Humidity | 20%~80%RH |
| 13 | Automatic shut-off | In 3 minutes |

# TAKING CARE OF YOUR METER

## *REPLACING THE BATTERY*

The Glucoplus™ Blood Glucose Meter comes with battery already installed. Battery life will vary depending on usage, so always keep a spare on hand.

The battery should last about 18 months when testing (2) times a day.

When the battery symbol appears on the meter display, battery is getting low. (FIG. a)

You will still be able to test with low battery, but you should replace it as soon as possible. When battery symbol appears flashing on the display, the meter will no longer give results and you must replace the battery immediately. (FIG. b)

The meter's current time/date settings are saved for 30 minutes after battery has been removed.

# TO REPLACE THE BATTERY

- Make sure the meter is turned off.

- Let the front of the meter rest in the palm of your hand.

- With your thumb, press upward on the opening tab of the battery compartment door and lift upward. (FIG. c)

- Remove the old battery and insert the new 3-volt Lithium battery into the battery compartment, being sure to align the plus (+) and minus (-) signs correctly. (FIG. d)

- Lower the battery compartment door until it snaps shut. Check to see that your meter is working. If it fails to turn on, the battery may have been inserted incorrectly. Remove the battery and reinsert them illustrated.

## CLEANING

Clean the outside of the meter with a soft cloth, slightly dampened with water. Do not get moisture into the test strip slot.

## STORAGE AND HANDLING

Keep your meter free of dust. Protect it from extremes in temperature and humidity.

# DISPLAY MESSAGES AND PROBLEM-SOLVING GUIDE

When any of these messages appear, there is a problem with your Glucoplus™ Blood Glucose Meter or the way in which you are performing a test. These messages help to identify certain problems but do not appear in all cases when a problem has occurred and in most cases, problems are easy to fix. If you have trouble, help is available from Glucoplus™ Customer Services or your local distributor.

| DISPLAY | DESCRIPTION |
|---|---|

If some parts of the display are not working. Contact Glucoplus™ Customer Services or your local distributor.

Blood glucose result may be higher than 33.3 mmol/L or 600 mg/dL. If this not confirmed the way you feel, review proper testing procedure and perform a quality check repeat test. If "HI" still appears, call your doctor's immediately.

Blood glucose result may be lower than 1.6 mmol/L or 30 mg/dL. If this not confirm the way you feel, review proper testing procedure and perform a quality check. Repeat test. If "LO" still appears, call your doctor's immediately.

Temperature is above or below the operating range of test strips. The result you have obtained may not be accurate. Move to an area with temperature within the test strip's operating range temperature 10ºC ~ 40ºC (50ºF ~104ºF). Do not artificially heat or cool the meter.

| *DISPLAY* | *DESCRIPTION* | *NOTE* |
|-----------|---------------|--------|

**DISPLAY** — **DESCRIPTION** — **NOTE**

If there is any error message displayed but not listed here, please contact Glucoplus™ Customer Services or your local distributor for help.

Battery is low.
Change battery soon

Battery is dead. Only memory results can be recalled. Change battery now.

E23

Test strip may be damaged or test was not performed correctly.

E24

Test strip is used.

*25*

## CUSTOMER SERVICE

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## GUARANTEE

The makers guarantee that the Glucoplus™ Blood Glucose Monitoring System shall be free of defects in material and workmanship for a period of six years. This guarantee is valid from the date of purchase. The guarantee extends only to the original purchaser and is not transferable.

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