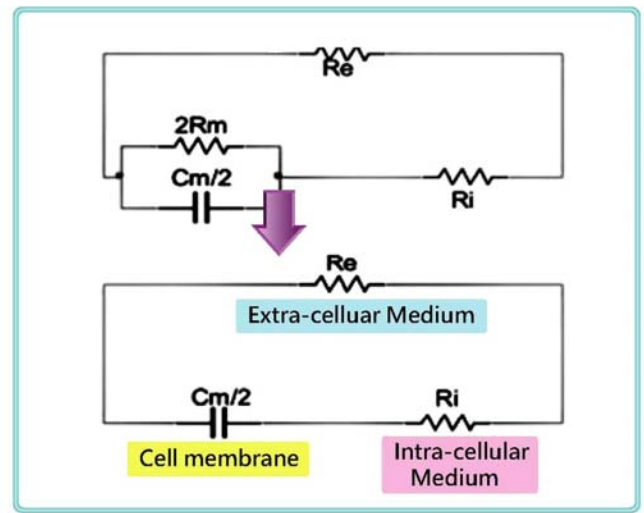**MS-99 AI Meter**

This device uses the patented AI algorithm technology to measure blood glucose.

NO NEEDLE, NO PAIN, NO BLOOD, NO INFECTION, NO TEST STRIPS, HUGE SAVINGS !

The Science of How MS-99 AI Meter Works.

• For those who do not mind reading scientific and geeky words and terminology, here is an explanation of how MS-99 AI Meter works and collects data to come up with a blood glucose level result.

• The basic principle of the non-invasive sugar testing machine (MS-99 AI Meter) is to use electrical impedance spectroscopy (**EIS**). EIS is mainly used to measure the intracellular fluid (**Ri**), the cell membrane (**Rm**) and extracellular fluid (**Re**) that are simulated into a circuit.

• When the glucose concentration changes, it also changes the plasma ions balance and increases the impedance of extracellular fluid (**Re**). Therefore, the change in Re has a linear relationship with the glucose concentration. We use radio waves of a specific frequency to hit our fingers, and then use gold-plated copper sheets to collect the feedback signal to quantify and calculate the simulated sugar value...

• Users need to touch the sensing electrodes with their four fingers. Two of the sensing electrodes emit the stimulating signal that is essentially a square wave with a specific frequency. The other two receive the feedback signal and conduct pre-processing and filtering procedures to convert the analog signal to digital.

• MS-99 AI Meter has collected data from three different diabetes types (Normal, Prediabetes, Type 2 diabetes) to cluster and develop specific patented algorithms to simulate blood glucose levels.

• MS-99 AI Meter is a revolutionary product that combines electronic engineering and biomedical engineering. It is a true non-invasive blood glucose meter that does not require fingersticks ortest strips.

MS-99 AI Meter
User Manual

* Press once along with the OK key, select "y" to enter the Advanced Settings mode.

* After entering the Advanced Setting mode:
  Press 1 time: Set time
  Press 2 times: Set measurement units
  Press 3 times: Access memory bank
  Press 4 times: Delete memory bank

Battery cover

OK key

- Press and hold for 5 sec.: Turn on the device

- Press once: Con?rm selection

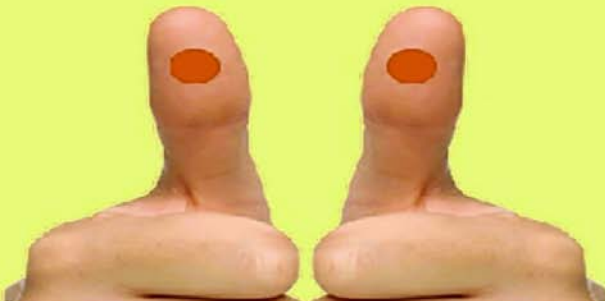- Press once: End blood glucose testing

Up key Left , +   Down key Right , -

Be sure to press the four gold-plated sensing discs with the thumb/forefinger of the Left and right hands correctly.

CORRECT WAY TO USE YOUR FINGERS WHILE USING MS-99 AI METER

CORRECT

USE YOUR THUMB PULP

USE YOUR FOREFINGER PULP

INCORRECT

DO NOT USE YOUR THUMB TIP

DO NOT USE YOUR FOREFINGER TIP

Precautions:
1) To ensure that the test results are accurate, please wash your hands and make sure your fingers are dry and clean before using the device.
2) To ensure the blood glucose test results are correct, it is recommended that users take the test at the time points of "**8 hours of empty stomach**" and "**2 hours after meals**".
3) Please be sure to wipe and clean the four sensing discs regularly (cleaning with alcohol is recommended) to ensure the obtained values are accurate.

Please consult your doctor to confirm the correct type of diabetes.

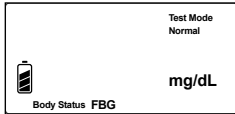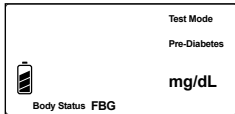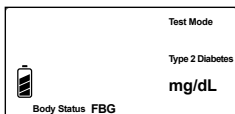| mg/dL (mmol/L)	FBG (Fasting Blood Glucose)	PBG (Postprandial Blood Glucose)
Normal	70 ~ 99 (3.8 ~ 5.5)	120 ~ 139 (6.7 ~ 7.7)
Pre-Diabetes	100 ~ 125 (5.6 ~ 6.9)	140 ~ 199 (7.8 ~ 11.1)
Type 2 Diabetes	126 + (7.0+)	200 + (11.1 +)

FBG stands for "8 hours of empty stomach"

PBG stands for "2 hours after meals"

* Diabetic patients often check their blood sugar with a home glucose meter.

* These meters measure glucose in whole blood, while hospital biochemical analyzers test it in plasma (serum).

* Home glucose meters can have an error of up to ±15%.

The setup procedures are as follows:

1) Press and hold the **OK** key for **5** seconds to turn on the MS-99 device.

2) Select the type of diabetes: Select the correct type of diabetes according to your personal blood glucose status. There are **3** types: Use the **Up** and **Down** keys to select diabetes type (**Normal**, **Pre-Diabetes**, or **Type 2 Diabetes** and then press **OK** to proceed to the next option.

3) Select Body Status: Use the **Up** and **Down** keys to select your body status : " **FBG** " or " **PBG** ". then press **OK** to confirm.

4) If "Type 2 Diabetes" is selected, the screen will display **y_d** (**on medication**) **n_d** (**no medication**); Use the **UP** and **Down** keys to select whether medications has been taken. Press **OK** to confirm.

5) A rotating circle on the left side of the screen will appear, indicating that the device is in the testing state. The user can lightly press the upper and lower **2** sensing discs of the device with the thumb and index finger of both hands to start blood glucose testing.
Under normal operational conditions, the blood glucose value will appear on the screen of the MS-99 approximately **7** to **9** seconds after pressing the **4** sensing discs with the four fingers. Press **OK** again to turn off the device and end the test.
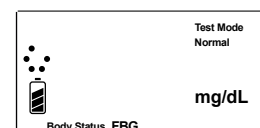
6) If the results are not displayed after **10** seconds, the screen will display error message " **C - 1** " and the device will automatically turn off, indicating that your fingers were not properly placed on the four sensing discs. Press **OK** and hold for 5 seconds to turn on thedevice, adjust the contact locations of your fingers on the **4** sensing discs, then perform the test again.
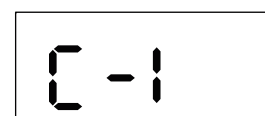
ADVANCED SETTINGS MODE

Users may want to keep records of all blood glucose test results recorded by the MS-99, or shorten the setup time needed for each subsequent use.
This can be done via Advanced Settings.

1) Press and hold the **OK** key for 5 seconds to turn on the device. Users should first select the diabetes type: **Normal**, **Pre-Diabetes** or **Type 2 Diabetes**. Press the **Up** and **Down** keys to select and then press **OK** to confirm.

2) Press and hold the **OK** key for **5** seconds to turn on the device, then press the **AS** key once and the screen will display " **y** ", then press **OK** to select and confirm the Advanced Settings mode. If users do not want to enter Advanced Settings mode, press the **Up** or **Down** key and the screen will then display " **n** ". Then press **OK** to select not entering the Advanced Settings mode and return to the factory default mode.

3) Press the **AS** key **one** time to enter the time settings.
The device will flash " **2019** " for the year. Select the year, month, day, hour and minute by using the **Up** and **Down** keys to make your selection, press **OK** to confirm and turn off the device.

4) Press and hold the **OK** keys for **5** seconds to turn on the device. Then press the **AS** key **two** times to display the blood glucose unit settings. Use the **Up** and **Down** keys to set the blood glucose units to **mg/dL** or **mmol/L** and press **OK** to confirm and turn off the device.

5) Press and hold the **OK** key for **5** seconds to turn on the device. Then press the **AS** key **three** times to read the recorded data. Use the **Up** and **Down** keys to select which record you want to view and press **OK** to confirm. Press **OK** again to turn off the device.

6) Press and hold the **OK** key for **5** seconds to turn on the device. Then press the **AS** key **four** times to delete all recorded data. After the screen displays **dEL** , " **- - -** " will appear after pressing the **OK** key, meaning all records have been deleted.
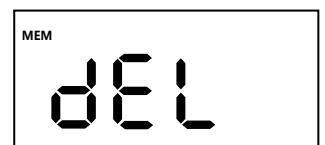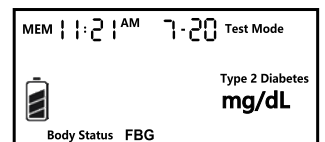
Return to the default mode of factory settings

1) Press and hold the **OK** button for **5** seconds to turn on the device.

2) Then press and hold the **AS** key again for **7** seconds.
The device will be restored to factory settings.
The LCD screen will flash and the power will turn off automatically.

To avoid getting contaminants on the sensing discs and fingers, which would affect the accuracy of the MS-99 AI Meter blood glucose testing device, it is recommended to clean the four sensing discs and the thumb and index finger of both hands before performing the test.

PRODUCT SPECIFICATION

1. Palmtop size: 92 * 86 * 24 mm.
2. Power supply: 2 "AAA" batteries (to prevent damage from leakage, use of alkaline batteries is not recommended).
3. Low power consumption: Can typically test 600-1,000 times.
4. Measuring range: 50 ~ 400 mg/dL (3 ~ 22 mmol/L). The MS-99, can measure blood glucose ranged from 50 ~ 400 mg/dL (3 ~ 22 mmol/L).
5. Operation conditions: 5°C to 40°C; 15% to 90%; 700hPa to 1060hPa.
6. Storage and Transport conditions: -25°C to 70°C; 15% to 90%; 700hPa to 1060hPa.
7. Monochromatic display without backlight.
8. Powers off automatically after 2 minutes idle.

Contraindications:

1. Patients with renal disease.
2. Patients undergoing dialysis.
3. Those with palmar hyperhidrosis.
4. Patients with implanted electrical stimulation devices
    (e.g., pacemakers or ICU patients).
5. Those with impaired thumbs or index fingers.

*** The MS-99 AI Meter is not suitable for patients with the conditions listed above.

Precautions:

1. The patient is the intended operator of the MS-99.
2. Do not proceed with maintenance and repair when using the MS-99.
3. Patients are allowed to replace battery pack by themselves.
4. Please remove battery pack to avoid battery leakage if the MS-99 is not in use for a long period of time.
5. Be sure to clean your fingers and the four sensing discs each time you use the MS-99 .
6. Do not touch your hand with the other hand during the process of testing and keep your body away from other metal objects.

Trouble Shooting

1. The battery icon flashes : stands for the battery capacity is low, please insert new batteries the sooner the better.

2. The screen appears " **C-1** " : please clean the four sensing discs and your thumb and index finger of both hands, then perform the testing again.

3. When the blood glucose value is higher than 400 mg/dL (22 mmol/L), the display will show " **HI** "on the other hand, when the value is lower than 50 mg/dL (3 mmol/L), the display will show " **Lo** ".
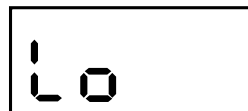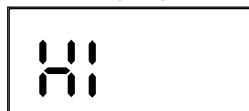
*** Display show either " Hi " or " Lo ", proper medical action is strongly recommended.

Legal Disclaimer
This product is a home diabetic testing kit, which is suitable for diabetes patients to self-monitor blood glucose values only.
It is not intended to diagnose, treat, cure, or prevent any disease or health condition.
If you suspect your health condition, please turn to your doctor immediately.