

IME-DC Blood glucose test strips

Please read this package insert carefully and follow the instructions. Should you have any questions, please contact the customer service unit at **IME-DC** at the following telephone number: **+49 9281 | 85 01 6-0**

User information

These **IME-DC** test strips serve to quantitatively determine glucose in fresh whole blood. **IME-DC** blood glucose meter is exclusively used for evaluation (*in vitro* diagnostics; suitable for self-application).

Principle of the process

The test strip analysis is based on the GOD (glucose oxidase) enzyme, which is specific to β -D-glucose with the biosensor technology used. The blood sample is drawn into the reaction zone by way of capillary forces. The glucose's chemical reaction with the GOD enzyme results in a measurable current of electrons, which is analysed by the **IME-DC** blood glucose meter. The strength of the current correlates with the concentration of blood glucose, which is shown on the display as a measurement result.

Note

Determining the blood glucose level is an important way of monitoring diabetes. These **IME-DC** test strips help you adjust your blood glucose optimally. However, before you begin measuring your blood glucose, you should first familiarise yourself with the entire measurement system (refer to the **IME-DC** meter's instructions for use).

Required quantity of blood:	2 μ l
Measurement range:	20 – 600 mg/dL or 1.1 – 33.3 mmol/L
Storage temperature:	+4 °C to +32 °C
Measurement temperature:	+10 °C to +40 °C
Haematocrit value:	30 % – 55 %
Air humidity:	< 85%
Shelf life:	18 months after date of manufacture / 90 days after opening *
Sample type:	Fresh capillary blood
Calibration:	Whole blood

* Please note the date of opening on your test strip vial.

Chemical components of the test strip

21.8 % w/w Glucose oxidase (*A. niger*, 30 U/mg)
41.6 % w/w Potassium ferricyanide
36.6 % w/w Non-reactive components

IME-DC Test strips are suitable for clinical use and for patient self-testing.

Code strips



Each **IME-DC** test strip package has a code strip. You will need this to code the **IME-DC** blood glucose meter.

Coding the IME-DC blood glucose meter

Before measuring your blood glucose, check to see if the code saved in the measurement device matches the code of the test strips you are using (see Fig. 1). If the code has changed, please insert the new code strip of the test strip package in the area provided for this purpose on the measurement device and wait until the second beep, which confirms that the new code has been saved. The new code will then be shown on the display (see Fig. 2).



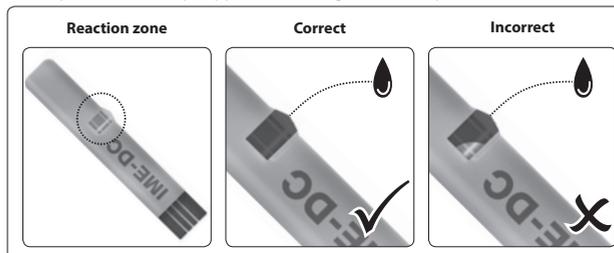
Coding is only possible if the measurement device is turned off!

Note

If the two codes do not match (test strip and device display), the measurement results may be erroneous.

Determining the blood glucose level

1. Only use **IME-DC** test strips for the **IME-DC** blood glucose meter.
2. Wash your hands with warm water before taking a measurement. Then dry your hands thoroughly.
3. Insert the test strip into the blood glucose meter's test strip insertion area. The measurement device will automatically turn on and ask you to administer blood. At the same time, the saved code will be displayed to you.
4. **Before taking a measurement**, compare it with the code on the test strips to be used. If the two codes do not match, you must first re-code the measurement device.
5. Obtain a drop of blood using a lancing device.
6. Now place the test strip's application area against the drop of blood.



7. The blood will be drawn in automatically. A beep confirms that the measurement is commencing. You may halt the intake procedure. (Please make sure that the reaction zone is completely filled).
8. The measurement results will be displayed to you after 10 seconds, along with the date, time and measurement unit and automatically saved.

Factors that may affect measurement results

- The code saved in the measurement device does not match the test strips' code.
- Venous, neonatal or arterial blood was used for measurement instead of capillary blood.
- The blood to be measured was expressed from the finger with great force and therefore contains tissue fluid.
- The blood glucose test strips are past their expiration date.
- The blood glucose test strips were stored at an improper temperature (the proper storage temperature is +4 °C to +32 °C).
- The test strips were not adequately protected against moisture.
- The disinfecting agent had not completely evaporated following a prior disinfection procedure.

- Your hands were contaminated prior to measuring blood glucose.
- After washing your hands, you did not dry them for subsequent blood glucose measurement.
- Excessively high blood pressure can result in false readings with erroneously lowered measurement values.
- Blood glucose meters should not be used to test seriously ill patients.

Please consult your specialist physician in the instance of frequent, inexplicable measurement results.

Interference

Bilirubin, uric acid, glutathione, triacylglycerol and cholesterol, substances that occur naturally in the human body, and the other medicinal substances listed in the table do not significantly influence the **IME-DC** blood glucose meter's glucose measurement results if the normal concentrations are not exceeded and/or the usual therapeutic doses are administered. Otherwise, measurement results yielded may be erroneous:

Substance	Interference occurring from
Paracetamol	> 10 mg/dL
Ibuprofen	> 40 mg/dL
Pralidoxime iodide	> 50 mg/dL
Icodextrin	> 75 mg/dL
Acetylsalicylic acid	> 40 mg/dL
Tolbutamide	> 10 mg/dL
Tolazamide	> 23 mg/dL
Triacylglycerol	> 500 mg/dL
Cholesterol	> 200 mg/dL
Glutathione	> 1.5 mg/dL
Uric acid	> 15 mg/dL

Haematocrit values below 30 % may result in erroneously high blood glucose measurement results being displayed. Haematocrit values above 55 % may result in erroneously low blood glucose measurement results. When measuring EDTA-treated blood samples with the **IME-DC** blood glucose meter, the blood glucose values ascertained may differ from those of an untreated blood sample. Therefore, the use of lithium-heparin treated test tubes is recommended.

Note

Our **IME-DC** customer service unit will be happy to address any questions you may have.

Additional information

- Please do not make any important medical decisions without consulting your specialist physician.
- Clinical facilities and care personnel: Please dispose of used test strips in accordance with your regulations. Please be aware that used test strips may involve potentially infectious substances.
- Private users: Please dispose of used test strips in accordance with local regulations.
- To check that the blood glucose meter is working properly, you have the option of taking measurements using **IME-DC** control solutions (available separately).

IME-DC Blood glucose test strips

System accuracy

To assess the system accuracy of the **IME-DC** blood glucose meter in accordance with **EN ISO 15197:2013**, an external laboratory (accredited by the FDA) ascertained blood glucose values in capillary whole blood taken from 100 test subjects. A total of three test strip batches were tested. The blood glucose values ascertained were compared with the associated reference values (YSI 2300; YSI Incorporated, Brannum Lane, Yellow Springs, Ohio, USA). The evaluation was conducted in accordance with the specifications of the guideline.

Table 1
System accuracy for blood glucose values below 100 mg/dL (< 5.55 mmol/L)

	Within ± 5 mg/dL (within ± 0.28 mmol/L)	Within ± 10 mg/dL (within ± 0.56 mmol/L)	Within ± 15 mg/dL (within ± 0.83 mmol/L)
YSI vs IME-DC	91/177 (51.41 %)	146/177 (82.49 %)	173/177 (97.74 %)

Table 2
System accuracy for blood glucose values more than 100 mg/dL (≥ 5.55 mmol/L)

	Within ± 5 %	Within ± 10 %	Within ± 15 %
YSI vs IME-DC	237/423 (56.03 %)	355/423 (83.92 %)	408/423 (96.45 %)

Table 3
System accuracy of all blood glucose values ascertained

Within ± 15 mg/dL; < 100 mg/dL (± 0.83 mmol/L; < 5.55 mmol/L) or ± 15 %; ≥ 100 mg/dL (≥ 5.55 mmol/L)
581/600 (96.83 %)

Accuracy (repeatability)

The repeatability of the measurements was checked using 5 venous whole blood samples and glucose concentrations ranging from 41 to 330 mg/dL. 100 repeat measurements were carried out using the **IME-DC** blood glucose meter and **IME-DC** blood glucose test strips (three each per test strip batch).

Average glucose concentrations	Standard deviation (s)	Coefficient of variation CV in %
41 mg/dL (2.30 mmol/L)	3.1 mg/dL (0.17 mmol/L)	7.7
86 mg/dL (4.80 mmol/L)	1.8 mg/dL (0.10 mmol/L)	2.1
132 mg/dL (7.30 mmol/L)	3.1 mg/dL (0.17 mmol/L)	2.4
204 mg/dL (11.30 mmol/L)	3.7 mg/dL (0.21 mmol/L)	1.8
330 mg/dL (18.30 mmol/L)	7.0 mg/dL (0.39 mmol/L)	2.1

Intermediate precision

The intermediate precision of the measurements was ascertained using control solutions that correspond to hypoglycaemic, euglycaemic and hyperglycaemic glucose concentrations.

Average glucose concentrations	Standard deviation (s)	Coefficient of variation CV in %
40 mg/dL (2.20 mmol/L)	2.5 mg/dL (0.14 mmol/L)	6.2
120 mg/dL (6.70 mmol/L)	2.6 mg/dL (0.14 mmol/L)	2.2
349 mg/dL (19.40 mmol/L)	4.9 mg/dL (0.27 mmol/L)	1.4

Assessing user performance

A study conducted to assess glucose values in blood samples from capillary fingertip blood, obtained from 112 persons who had not received any special instruction, yielded the following results:

- 95,0 % within ± 0.83 mmol/L (± 15 mg/dL) of the laboratory procedure results for glucose concentrations below 5.55 mmol/L (100 mg/dL)
- 96,7 % within ± 15% of the values obtained in a medical laboratory setting for glucose concentrations of at least 5.55 mmol/L (100 mg/dL).

	Article number
	Lot number
	In vitro diagnostics
	Instructions for use
	Expiry date
	Manufacturer
	Manufacturing date
	For one-time use only
	Temperature range
	Keep dry
	Protect from direct sunlight
	Note, please read supplementary information
	This product fulfills the standards of the IVD directive according to 98/79/EC

Package size:
1 x 50 units

Article number:
P001062ENXX-XX00X



IME-DC GmbH
International Medical Equipment -
Diabetes Care
Fuhrmannstraße 11
95030 Hof | Germany

Tel: +49 9281 | 85 01 6-0
Fax: +49 9281 | 85 01 6-100
E-Mail: info@imedc.de
Web: www.imedc.de