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FreeStyle Optium Neo H

Blood Glucose Test Strips
Electrodes de dosage de la glycémie
Strisce per il test della glicemia
Tiras reactivas de glucosa en sangre

English

Intended Use

IVD Individually foil wrapped FreeStyle Optium Neo H Blood Glucose Test Strips are for *in vitro* diagnostic use by healthcare professionals in a multi-patient setting with the FreeStyle Optium Neo H Meter. This system may be used for the quantitative measurement of glucose (D-glucose) in fresh capillary (*i.e.*, from the finger), venous, arterial, and neonatal whole blood samples. This system is not for use in diagnosis of diabetes mellitus, but is to be used as an aid in monitoring the effectiveness of diabetes management programmes.

What's in the test strip box?

- Test strips individually wrapped in foil packets
- Instructions for use
- Calibrator

Storage and Use

FreeStyle Optium Neo H Blood Glucose Test Strips are for single use only. The lot number and expiry date are printed on the back of the foil packet.

• Store the test strips at temperatures between 4° and 30°C (39° and 86°F). Keep away from direct sunlight and heat. Storage outside this range is not recommended.

• Do not use the test strip beyond the expiry date printed on the foil packet and outer box. If only the year and month are shown, then the expiry date is the last day of the month. For example, "EXP 2014/03" means the test strip expires on March 31, 2014.

• Use the test strip immediately after opening the foil packet.

• Do not use wet, bent, scratched or damaged test strips.

• Use the test strip only once and then discard.

• Do not use the test strip if the foil packet has a puncture or tear.

• Use FreeStyle Optium Neo H Blood Glucose Test Strips only with the FreeStyle Optium Neo H Meter.

Calibration

The calibration procedure programs the meter with the lot number, expiry date and test strip technology. This procedure requires the calibrator supplied with this test strip package and a FreeStyle Optium Neo H Meter. Please refer to the meter Operator's Manual for detailed calibration procedures.

IMPORTANT: Always calibrate the meter with each new box of test strips. Failure to calibrate properly will cause incorrect results.

1. With the lot number facing toward you, insert the contact bars of the calibrator into the meter. The meter turns automatically.
2. Let the lot number appear in the display window.
3. Check that the lot number on the meter display window matches with the number on the test strip calibrator and the last five digits on both the test strip foil packet and test strip instructions for use. Calibration is complete.

Note: Use only the calibrator supplied with the test strips. Keep the calibrator until all the test strips in the box have been used. When the box is empty, throw the calibrator away.

Sample Collection and Preparation

FreeStyle Optium Neo H Blood Glucose Test Strips are designed for use with fresh whole blood samples. The minimum sample volume is 0.6 µL. Before obtaining a finger-prick blood sample, clean and dry the sample site completely. It is possible hang the arm down before lanceting the finger to increase the blood flow. Use the sample immediately.

Collect venous and arterial whole blood samples in tubes containing heparin or EDTA and use the sample within 30 minutes. Do not use tubes containing fluoride or oxalate. Caution should be taken to clear the arterial lines before blood is drawn and applied to the test strip.

If testing venous blood, it is important that the test is marked as a venous blood test by the operator. Please refer to the meter Operator's Manual for detailed instructions.

Testing Blood Glucose

This procedure requires a FreeStyle Optium Neo H Meter, available separately. Please refer to the meter Operator's Manual for detailed testing procedures.

1. Clean and dry the sample site completely.
2. Open the test strip packet by tearing at the notch.
3. Insert the contact bars into the test port.
4. Push the test strip into the test port and hold the test strip until the last 5 digits of the lot number appear in the display window and foil packet.
5. Lance the finger to obtain a drop of blood.
6. Touch blood drop to white target area of test strip while the Apply Sample prompt appears in the display window.
7. Hold finger in place until test begins.
8. Test will start when sample is detected.

IMPORTANT: If the test fails to start, sufficient blood sample may not have been applied to the test strip. Discard the current test strip, and repeat with new sample.

9. There is a 5-second countdown before the glucose result is displayed.

10. Dispose of the test strip correctly. The opened packet may be used to remove and discard the used test strip.

IMPORTANT: Please confirm that the correct unit of measure shows on your meter with every glucose result.

Meter Test Messages

These messages may mean there is a blood glucose result that requires immediate attention or there may be a problem with the test strip:

- LO means the blood glucose may be lower than 20 mg/dL (1.1 mmol/L).
- HI means the blood glucose may be higher than 500 mg/dL (27.8 mmol/L).
- E-3 means there may be a test error.
- E-4 means the blood glucose may be too high to be read by the system.

If any of these messages show, check that the meter is calibrated correctly and repeat the test with a new test strip.

IMPORTANT: High or low results that are incorrect may have serious medical consequences. If the blood glucose result is unusually high or low, or the results are not consistent with physical symptoms, repeat the test correctly with a new test strip. You may also use control solutions to check the performance of your system. Consult the prescribing doctor before making any changes to diabetes management programme plans.

Expected Results for Non-Diabetic, Non-Pregnant Adults
Fasting values: 74–106 mg/dL (1.1–5.9 mmol/L)
One to two hours after meal: Less than 160 mg/dL (<8.9 mmol/L)²

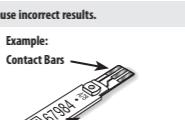
Limitations of Procedure

Note: This test strip has not been evaluated for alternative site testing.

- This test strip is not designed for use with serum or plasma samples.
- Result: If you have questions about the unit of measure on your meter, please contact Customer Service.
- Use between 15° and 40°C (59° and 104°F) and 10% and 90% relative humidity for best results.
- Testing requires that glucose levels up to 3,148 µmol/L (10,000 µmol/L) above sea level do not affect results.
- Haemoglobin range is 15%–65%.
- Test results may be erroneously low if the patient is severely dehydrated, severely hypotensive, in shock or in a hyperglycaemic-hypersmolar state (with or without ketosis). Small differences have been reported in the literature for other blood glucose monitoring systems.
- The test strip cannot be used with neonatal blood. As a matter of good clinical practice, caution is advised in the interpretation of neonate glucose values below 50 mg/dL (2.8 mmol/L).
- Do not use during intravenous infusion of high-dose ascorbic acid or during xylose absorption testing.
- Xylose may produce falsely elevated glucose results during a xylose absorption test for diagnostic evaluation of malabsorption.

Refer to the Operator's Manual for detailed testing procedures.

Quality Control
Use MedSense Glucose and Ketone Control Solutions to do a quality control check to verify the performance of the meter and test strips with each new test strip lot number, or when you question the results. In a multi-user setting, daily quality control testing is recommended to ensure the system is operating properly. Control results must be within the "Expected Results with Control Solutions" shown below on these instructions for use. When performing a control solution test, it is important that the test is marked as a control test by the operator. Please refer to the meter's Operator's Manual for detailed instructions. Please contact your local Abbott Diabetes Care office or distributor to obtain control solutions.



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No Text
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Gutter width is optional.

6 mm Clear Trim to Text.

Test Principle

When the blood sample is applied to the test strip, the glucose in the blood reacts with the chemicals on the test strip, producing a small electrical current. This current is measured and then a result displayed by the meter. The size of the current depends on the amount of glucose in the blood sample.

Reagents

The reagent area of each test strip contains:

Glucose Dehydrogenase (GOD-NAD Pseudomonas sp)

NAD + (as sodium salt)

Phosphate buffer

Non-reactive ingredients

≥ 0.03 U

≥ 1.0 µg

≥ 0.02 µg

≥ 16.3 µg

≥ 1.1–27.8 mmol/L

0.6 µL minimum

5 seconds

Performance Characteristics

Performance of the test strip has been evaluated in laboratory and clinical studies.

Assay Range:

20–500 mg/dL (1.1–27.8 mmol/L)

0.6 µL minimum

5 seconds

Sample Volume:

Test Time:

Calibration Reference

The FreeStyle Optium Neo H Blood Glucose Test Strip is referenced against the YSI Glucose Analyzer. The YSI whole blood glucose values are multiplied by 1.12 to provide plasma-equivalent glucose values for the FreeStyle Optium Neo H Blood Glucose Test Strips.

Precision

For within-run precision with blood samples, please refer to Table 1 at the end of these instructions for use. This study shows that results typically vary by no more than 2.9% to 4.8%.

Specificity

The FreeStyle Optium Neo H system exhibits no interference from the following substances above therapeutic levels: Acetaminophen, ascorbic acid, dopamine, ephedrine, ibuprofen, L-dopa, methotrexate, methylprednisolone, salicylate, tetracycline, tolazamide and tolbutamide.

Accuracy

Capillary Blood Study

Capillary blood glucose results obtained by trained operators at two clinical centres were compared with those obtained using the YSI Glucose Analyzer.

System accuracy results for glucose concentrations < 100 mg/dL (5.5 mmol/L).

Within ± 5 mg/dL (0.28 mmol/L)

Within ± 10 mg/dL (0.56 mmol/L)

Within ± 15 mg/dL (0.83 mmol/L)

136 / 222 (61.3%)

211 / 222 (95.0%)

222 / 222 (100.0%)

System accuracy results for glucose concentrations ≥ 100 mg/dL (5.5 mmol/L).

Within ± 5% (0.28 mmol/L)

Within ± 10% (0.56 mmol/L)

Within ± 15% (0.83 mmol/L)

522 / 751 (70.8%)

717 / 751 (95.5%)

744 / 751 (99.1%)

System accuracy results for glucose concentrations < 100 mg/dL (5.5 mmol/L).

Within ± 5 mg/dL (0.28 mmol/L)

Within ± 10 mg/dL (0.56 mmol/L)

Within ± 15 mg/dL (0.83 mmol/L)

668 / 973 (68.7%)

928 / 973 (95.4%)

966 / 973 (99.3%)

Number of samples tested

973

Range tested

33–494 mg/dL (1.8–27.4 mmol/L)

Arterial and Venous Blood Studies

Arterial and venous blood glucose results obtained at a medical centre and a clinical centre were compared with those obtained using the YSI Glucose Analyzer. Please refer to Table 2 at the end of this instruction for use. This study shows that results typically correspond with those obtained using the FreeStyle Optium Neo H system.

Neonate Blood Study

Newborn blood glucose results obtained at one medical centre were compared with those obtained using the Cobas Chemistry System, a laboratory instrument. Please refer to Table 3 at the end of this instruction for use for study results.

These studies show that the blood glucose test strip results compare well with the laboratory reference method.

Table 1 - Precision

Tableau 1 - Précision

Tableau 2 - Études sur sang artériel et veineux

Tableau 3 - Étude sur sang néonatal

Tableau 4 - Étude sur sang capillaire

Tableau 5 - Étude sur sang artériel et veineux

Tableau 6 - Étude sur sang capillaire

Tableau 7 - Étude sur sang capillaire

Tableau 8 - Étude sur sang capillaire

Tableau 9 - Étude sur sang capillaire

Tableau 10 - Étude sur sang capillaire

Tableau 11 - Étude sur sang capillaire

Tableau 12 - Étude sur sang capillaire

Tableau 13 - Étude sur sang capillaire

Tableau 14 - Étude sur sang capillaire

Tableau 15 - Étude sur sang capillaire

Tableau 16 - Étude sur sang capillaire

Tableau 17 - Étude sur sang capillaire

