



Standard Operating Procedure **ABBOTT FREESTYLE PRECISION PRO GLUCOSE AND KETONE METER**

SETTING	Trust-wide
FOR STAFF	All staff performing near patient glucose or ketone testing
ISSUE	All locations with glucose or ketone meters

Standard Operating Procedure (SOP)

Meters must not be held upright when testing. This will result in blood entering the strip port and damage to the meter.

Performing a quality control (QC) test

Meter will be 'locked out' for either glucose or ketones if QC test has not been passed within the last 24 hours. Ketone QC is only required if ketone testing will be required that day.

Procedure for QC test is the same for glucose and ketones, only the strips are different. **Blue** strips = glucose; **purple** strips = ketone.

1. From the initial menu press **2** to select Control Test.
2. When asked for Operator ID press **SCAN** and scan your operator barcode. Alternatively the Operator ID may be typed in manually, followed by **ENTER**.
3. The screen will prompt you for the Low QC Lot number. This can be scanned from the barcode on the bottle or typed in manually followed by **ENTER**.
4. Scan strip lot number (glucose or ketone strip as appropriate) from the strip wrapper when prompted. This number can also be typed in, followed by **ENTER**.
5. Unwrap a strip and place in the port (contact bars facing up). When the strip has been correctly inserted **STRIP INSERTED** will be displayed.
6. Invert the control solution 3 – 4 times and remove the lid. When **APPLY SOLUTION** is displayed add a small drop to the strip. The meter beeps and displays **SAMPLE ACCEPTED** when a sufficient sample has been applied.
7. Once test is complete, the screen will display **PASS** or **FAIL** and you will be given the option to test the next level (1) or repeat the test (2). Enter the appropriate number or press **MENU** to return to the main menu or **ON/OFF** to turn the meter off.
8. If option 1 is selected you will then be prompted to scan or enter the lot number for the High QC. Do these then proceed as from step 5.

Performing a patient test

Hand hygiene must be undertaken pre and post activity. PPE (gloves and apron) should be worn and changed in-between patients.

Procedure for patient testing is the same for glucose and ketones, only the strips are different.



Blue strips = glucose; purple strips = ketone.

Measuring limits are 1.1 – 27.8mmol/L for glucose and 0.0 – 8.0mmol/L for ketones. Outside of these values a greater than (>) or less than (<) sign will be displayed.

1. From the initial menu press **1** to select Patient Test.
2. When asked for Operator ID press **SCAN** and scan your operator barcode. Alternatively the Operator ID may be typed in manually, followed by **ENTER**.
3. The screen will prompt you for the patient ID, scan patient wristband or manually enter this. If available T number should be used. Alternatives to T number include NHS number, ED number, Date of birth followed by gender (e.g. 01011950M) or if only gender is known UKNM/UKNF. Press **ENTER** then **2** to continue.
4. Scan strip lot number (glucose or ketone strip as appropriate) from the strip wrapper when prompted. This number can also be typed in, followed by **ENTER**.
5. You will be prompted to enter sample type: press **1** for arterial/capillary or **2** for venous. Venous mode is only for samples that have been in capped tubes and have not been mixed with air.
6. Unwrap a strip and place in the port (contact bars facing up). When the strip has been correctly inserted **STRIP INSERTED** will be displayed.
7. When **APPLY SAMPLE** is displayed apply a drop of blood to the test strip. The meter beeps and displays **SAMPLE ACCEPTED** when sufficient has been applied.
8. The meter will countdown then display the glucose or ketone result in mmol/L.

External Quality Assurance (EQA)

Every 3 months EQA samples will be distributed by Biochemistry. Analysis and reporting of these samples is required to monitor performance of meters and to satisfy MHRA guidance.

1. From the initial menu press **1** to select Patient Test.
2. When asked for Operator ID press **SCAN** and scan your operator barcode. Alternatively the Operator ID may be typed in manually, followed by **ENTER**.
3. The screen will prompt you for the sample ID; this will be supplied with the EQA sample, scan or enter manually then press **ENTER**.
4. Scan strip lot number (glucose or ketone strip as appropriate) from the strip wrapper when prompted. This number may also be typed in, followed by **ENTER**.
5. Unwrap a strip and place in the port (contact bars facing up). When the strip has been correctly inserted **STRIP INSERTED** will be displayed.
6. Make sure sample is well mixed and when **APPLY SAMPLE** is displayed apply a drop to the test strip. The meter beeps and displays **SAMPLE ACCEPTED** when sufficient a sample has been applied.
7. The meter will countdown then display the glucose or ketone result in mmol/L.
8. Dock the meter so that the result can be remotely gathered in Biochemistry. Alternatively results may be returned using the sheet provided or by email to POChelp2@uhbristol.nhs.uk (if docking is not working).



Infection Prevention & Control

- Before cleaning the meter **must** be switched off.
- Meters **must** be cleaned in-between patients.
- The meter may be cleaned with a detergent wipe or a damp cloth of detergent and water (squeeze out any excess fluid before cleaning). Ensure the device is dried thoroughly after cleaning.
- Actichlor plus may be used if required. When using Actichlor plus apply using a disposable cloth/blue roll and wipe the meter ensure to dry afterwards; do not apply Actichlor plus directly to the meter sensor.
- The following Trust policies **must** be followed:
 - Standard Infection Control Precautions
 - Hand Hygiene
 - Safe Handling, Disposal and Reporting of Sharps and Blood-borne Viruses Exposure Injuries.

Storage of meters

Meters should be stored in carry cases in a secure location.

Contacts

- Ordering new strips/QC material: Pharmacy distribution unit.
- To request batteries or to report a problem with a meter: email POchelp2@UH Bristol.nhs.uk or leave a message with Pathology Help Desk (23080).
- Training issues: [REDACTED] Medical Devices Training Officer
[REDACTED]

RELATED DOCUMENTS

Standard Infection Control Precautions
[Hand Hygiene](#)
[Safe Handling, Disposal and Reporting of Sharps and Blood-borne Viruses Exposure Injuries.](#)

AUTHORISING BODY

SAFETY

QUERIES

[REDACTED] Medical Devices Training Officer
 [REDACTED]
 Pathology Help Desk on 23080 or email POchelp2@UH Bristol.nhs.uk.



Paper for Review

Reviewed by	Date Reviewed
[Redacted] (Infection Prevention and Control Sister)	19/05/2015
[Redacted] (Consultant Clinical Scientist)	19/05/2015

Change Control

Version:	Date	Author(s):	Summary of Changes:
2	09/08/2018	[Redacted]	Updated contact details

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