

Statstrip Glucose/Ketone Quality Control

Quality Control (QC) Overview

QC is imperative to ensure that the analyser and consumables are functioning together correctly to provide accurate and reliable patient results. Frequency of QC will be determined by your local POCT team according to New Zealand Best Practise Guidelines for Point of Care Testing 2025 (New Zealand Point of Care Testing Advisory Group).

Stock Control

Stock must undergo quality control prior to being used for patient testing. Lot number management and pre-acceptance testing is performed by the POCT Quality Manager prior to stock being released to Hawke's Bay Hospital stores/warehouse.

Internal Quality Control

Commercial liquid controls are purchased from the supplier ready-to-use. There are two levels of control, level 1 (low) and level 3 (high). Controls must be stored between 15-30°C.

Open vial stability is 3 months. The discard date must be written on the QC vial when it is opened. QC vials must not be used past this date.

QC lockout for both Glucose and Ketones will occur every 24 hours on each meter. QC testing can be performed by all staff. If a meter is only used for Glucose, Ketone QC does not need to be performed.

QC should also be performed in the following situations:

- An unexpected patient result
- If the meter has been dropped
- A new vial of strips is opened
- If there is suspicion a meter is not working correctly

To ensure stability of QC material, ensure the nozzle is clean and the lid is tightly closed after use.



1. Mix the QC vial gently
2. Prepare the meter for QC testing
 - a. Login with your unique operator ID
 - b. Select QC
 - c. Scan the strip lot barcode on the pottle
 - d. Scan the QC vial barcode
3. Insert the test strip into the test strip port
4. Discard the first drop of QC material
5. Touch the second drop to the end of the test strip ensuring no liquid enters the meter
6. Clean the tip of the QC nozzle and close the lid tightly
7. At the end of the countdown, a Pass/Fail result will be displayed.
8. Accept or add a comment

QC results are recorded in the middleware BioConnect which is accessed and monitored by the POCT Quality Manager.

If the control fails:

- Check the expiry of all consumables and replace where appropriate
- Discard QC vials that have not been maintained appropriately with a build-up of dried/sticky QC material around the nozzle
- Ensure the correct level of QC was tested
- Repeat once. Do not continuously repeat QC testing hoping for it to 'come in'. This may be masking an issue with the meter that needs investigating.
- Consult with the designated Ward Champion for the Statstrip meters.
- Send the meter to the POCT Quality Manager in the laboratory for further testing

External Quality Assurance (EQA)

The Statstrip Glucose/Ketone meters are enrolled in two EQA programmes, Waikato QC (Glucose) and RCPA (Ketones).

Waikato QC is performed monthly across a selection of meters throughout the hospital, including Wairoa and CHB. This is managed by the POCT QM or delegate.

RCPA is performed bi-monthly across a selection of meters throughout the hospital, including Wairoa and CHB. This is managed by the POCT QM or delegate.

Results are entered online and reports are checked and actioned by the POCT QM and Chemical Pathologist.