# Indications for Use

The Abbott Optium Xceed is to be used for the monitoring of patients with Diabetes Ketoacidosis.

# Risks and Hazards

There is a risk that you may get an inaccurate blood ketone reading if:

* the meter has not been calibrated
* the meter has not been quality control checked
* the patients hands have not been washed prior to taking the test
* the test strips have not been stored properly
* you squeeze the patients finger immediately after pricking it

There is also a risk of:

* blood contamination - always wear gloves
* sharps injury - ensure you dispose of sharps correctly

**Risk control measures:**

* wash your hands before starting
* ask the patient to wash their hands
* ensure that the microfill stick and quality control solution are correctly stored and in date
* follow the correct procedure for blood ketone monitoring

# Pre-use checks

Before carrying out a blood glucose test, check that:

* the device is clean and in tact
* the meter has been calibrated
* the internal quality control check has been carried out within the last 24 hours and that the result was within the limits on the bottle

# Equipment needed

* Box of blood β-ketone test strips (in date)
* Otpium Xceed meter
* Quality control record book and Quality control solution
* Cotton wool
* Unistix lancet, single-patient use finger pricking device
* Orange (or Tiger Stripe) clinical waste bag
* Designated sharps container
* Instruction manual for the meter
* Patients chart
* Disposable gloves

# Calibration

Calibration should be carried out when the meter is first used and whenever a new box of test strips is opened.

To calibrate the meter, simply insert the calibration strip into the test port then check that the LOT number or calibration CODE on all these items matches:

* Display window
* Test strip calibrator
* Test strip instructions for use
* Test strip foil packet

When the LOT number or calibration CODE on all these items matches calibration is complete.

# Quality Control

As the meter is not going to be used on a regular basis, the quality control procedure should be carried out on a daily basis, **but only whilst the meter is in use**.

* Ensure you have your supplies: your meter, test strips and a bottle of the Control Solution
* Insert the test strip into the meter until it stops
* Squeeze a small drop of control solution onto a clean non-absorbent surface (such as a cleaned bottle lid). Do not apply solution to the test strip directly from the bottle
* Bring the test strip to lightly touch the control solution
* The meter will now perform the test.
* Compare the normal control test result with the range on the test strip bottle label

**What to do if the QC test fails:**

* Check all the expiry dates
* Run another control test using a different control solution.
* If this is still out of range, re-test using a new Test Strip box (remembering to calibrate the meter) and the new control solution
* If the meter is still out of range, contact the Chemical Pathology team, who will give you a replacement meter and send the faulty one off to Abbott.

# Procedure

* Wash and dry your hands, then put on gloves
* Wash and dry the patients hands, preferably using warm water, rinse well if soap used. DO NOT USE ALCOHOL SWAB
* Prime UNISTIK II
* Take an Abbott Optium Xceed ketone test strip from the box, remove it from its foil packet
* Insert the 3 black lines at the end of the test strip into the strip port. The meter will turn on automatically, and then run a quick self test. The meter then displays KETONE and prompts you to apply blood by showing a blood drop
* Choose the finger to be pricked, ideally avoiding thumb and forefinger. Prick the underside of the patients fingertip. Discard used UNISTIK into designated sharps bin.
* Touch the blood drop to the purple area on the top of the test strip. The blood is drawn into the test strip.
* Continue to touch the blood drop to the purple area on the top of the test strip until the meter begins the test.

Note: Do not remove the test strip from the meter or disturb it during the countdown.

* Apply clean cotton wool to bleeding site
* Chart the ketone result.
* Remove the test strip from meter. Turn the meter off
* Wash your hands and dispose of waste appropriately

# Interpretation of results

|  |  |
| --- | --- |
| Blood β-Ketone Levels | What you should do… |
| < 0.6 mmol/L | Normal range  No need to change anything |
| 0.6 – 1.5 mmol/L | Hyperketonaemia  Medical assistance required |
| 1.5 – 3.0mmol/L | Patient at risk of Diabetic Ketoacidosis  Medical assistance required |
| >3.0 mmol/L | Diabetic Ketoacidosis  Emergency medical intervention required.  Initiate the DKA protocol. |

# Cleaning and Decontamination

**Cleaning:** If the surface of your meter gets dirty, use a damp cloth and mild soap to clean it.

**Decontamination:** Use Sanicloths

IMPORTANT:

* Do not try to clean the strip port.
* Do not pour liquid into the strip port or buttons.
* Do not place your meter in water or any other bath

# Storage

* clean the device prior to storage
* store in a clean dry area
* do not store on window sills or in a place where the meter may get warm

# Maintenance and Reporting Faults

The meters are supplied on loan and remain the property of Abbott. Should there be a fault with the meter, return it to the Chemical Pathology team, who will forward it to the meter company for investigation.

# Alarms and Alerts

**Code HI**

**Cause:** Result above 8.0 mmol/L or there may be a problem with the test strip

**Action:** Repeat the test. If the result remains HI, advise the medical team immediately.

**Battery icon**

May be displayed with results or displayed alone

**Cause:** Battery low (if shown with results) or battery exhausted (if displayed alone)

**Action:** Replace battery

**Code E1**

**Cause:** The temperature is too hot or too cold for the system to work properly.

**Action:** Move your meter and test strips to a location where the temperature is appropriate and monitor again with a new test strip. You may have to wait for your meter to adjust to the new temperature. Refer to your test strip instructions for use for the appropriate operating range.

**Code E2**

**Cause:** Meter error.

**Action:** Turn the meter off, then repeat previous monitoring steps. If the error message appears again, contact

**Code E3**

**Cause:** There may be a problem with the test strip.

**Action:** Review the monitoring instructions. Monitor again with a new test strip. If the error message appears again, contact

**Code E4**

**Cause:** This indicates either an extremely high result or there may be a problem with the blood ß-Ketone test strip.

**Action:** Monitor again with a new test strip. If the error message appears again, advise the medical team immediately. If the meter is faulty, send to it to Chemical Pathology to be repaired.

**Code E5**

**Cause:** Blood applied to test strip too soon.

**Action:** Review the monitoring instructions. Monitor again with a new test strip. If the error message appears again, contact Chemical Pathology

**Code E6**

**Cause:** Calibration/Test strip error.

**Action:** Repeat the calibration using the calibrator bar that came with the test strip you are using. Check the date setting on your meter. Check the expiration date on the test strip foil packet. If the error message appears again, contact Chemical Pathology

**Code E7**

**Cause:** Test strip error. Test strip is damaged, used, or the meter does not recognize it.

**Action:** Monitor again using a test strip designed for use with Optium Xceed. • If the error message appears again, contact Chemical Pathology

**Code E8 and E9**

**Cause:** Meter error.

**Action:** Remove test strip, turn meter off, and try to monitor again. If the error message appears again, contact Chemical Pathology

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**Abbott Optium Xceed**

**Blood Ketone Meter**

**QUICK GUIDE**

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**For further information:**

Contact the Medical Device Trainer on x5095 or

Diabetes Specialist Nurse on x4555

Go to the intranet: Departments/Medical Device Training

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