

## Procedure for taking Blood Gases using the i-STAT Analyser

The i-STAT Analyser is a hand held device that is capable of producing blood gas results and electrolytes from a blood sample. It requires calibration every 24 hours and/or prior to taking out on an acute transfer.

### Calibration procedure

1. Switch on i-STAT analyser
2. Select 2, i-STAT Cartridge
3. Insert i-STAT ELECTRONIC SIMULATOR
4. Enter 9999 for operator ID (press Enter to accept)
5. Enter 9999 for patient ID (press Enter to accept)
6. Enter 0000 for simulator ID (press Enter to accept)
7. Will show date + time and PASS or FAIL (repeat procedure until PASS)
8. Remove ELECTRONIC SIMULATOR
9. Turn analyser off

### Operating instructions for blood gas analysis

1. Switch on i-STAT analyser
2. Select 2, i-STAT Cartridge
3. Enter 9999 for operator ID
4. Enter transfer No for patient ID
5. Press ENTER to accept
6. Fill the cartridge and insert it
7. DO NOT REMOVE THE CARTRIDGE WHEN "CARTRIDGE LOCKED" IS DISPLAYED AT THE BOTTOM OF THE SCREEN. It can only be removed once the cartridge has been analysed.
8. Once the cartridge has been analysed the blood gas result will appear. For more results (e.g. electrolytes) use the → arrow key.
9. Press the → arrow key again and you can enter data such as the sample type (art, cap, etc) and temperature. If you enter the temperature, the analyser will produce a separate set of blood results based on this.

### Cartridges and Blood Samples

- Cartridges must remain in their individual pouches until needed. Use the cartridge within 5 minutes of removal from its pouch.
- Store the main supply of cartridges in the fridge at temperatures between 2-8°C until their expiration date. DO NOT ALLOW CARTRIDGES TO FREEZE. Cartridges may

also be stored at room temperatures up to 30°C for 14 days. Cartridges should not be returned to the fridge once they have been at room temperature. Mark the margins of individual pouches with the 14-day expiration date..

- Remove cartridge from its pouch without touching the contact pads or exerting pressure over the centre of cartridge.
- Collect the blood sample in either a syringe or a capillary tube.
- At least 95µl of blood needs to be collected, preferably in a 250µl capillary tube.
- Analyse the blood sample immediately after tit has been taken. If this isn't possible make sure the syringe is capped and analyse as soon as possible, mixing it before it is emptied.
- Direct syringe tip or capillary tube containing the sample over the sample well. If using a capillary tube, place it at a 45° angle over the well and it should empty.
- Dispense sample until it reaches the fill mark. Sample must be dispensed without a break in one application. Inspect and discard if air bubbles are present.
- Close cover over the sample well until it snaps into place. Do not exert pressure over the sample well.
- Dispose of the cartridge in a sharps bin.

### Recalling Results

1. I-STAT displays last results when it is powered on.
2. Select 1-for last results from Main Menu.
3. Press Menu key to view previous patient or control results.

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