

Wairoa i-STAT 1 Overview

The Abbott i-STAT is a POCT chemistry analyser which utilises a cartridge-based testing system.

There are four different cartridges available:

Chem8+	Sodium, potassium, chloride, iCalcium, glucose, urea, creatinine, TCO ₂ , Anion Gap,
cTni	Troponin I
CG4+	Blood gas
PT PLUS	INR

- The meter's operating temperature range is 16 to 30 °C
- Do not store meter near equipment that gives off heat or in direct sunlight.

Health and Safety

Operators must be aware that there is a risk of infection when coming into contact with human blood. To minimise risk, ensure gloves are worn. Dispose of all consumables in a yellow biohazard bin.

Materials Required

Store at temperatures between 2 and 8 °C. Do not use after expiration date on cartridge pouch.

- Equilibrate a single cartridge for 5 minutes at room temperature.
- Individual cartridges may be kept for 2 weeks at room temperature, blood gas cartridges may be kept at room temperature for up to 2 months. Mark the cartridge pouches with the date removed from the fridge and the room temperature expiration date and your initials. Do not expose to temperatures above 30 °C (86°F).
- **Do not return cartridges to the refrigerator after room temperature equilibration.**
- Unwrap cartridge – handle by sides only. DO NOT PRESS ANYWHERE ON THE PAPER LABEL or the cartridge will not work. Do not touch the electrical contacts on the cartridge.
- Use cartridge immediately after opening pouch. If the pouch has been punctured, the cartridge should not be used.

Specimen Collection

Chem8, cTni and CG4+ require Lithium Heparin collection tube. INR must be performed with a direct sample (no anticoagulant). Refer to the 'Wairoa iStat Sample Requirements' SOP for further information.

Patient Testing

1. Press On/Off key to turn meter on.
2. Press 2 for i-STAT Cartridge from the Test Menu.
3. **Scan or enter operator ID** (Staff ID number).
4. **Scan or enter patient ID** Bradma label encounter number OR 'L' number.
5. **Scan the lot number** from the cartridge pouch
6. Remove cartridge from pouch. Handle a cartridge by its edges only.
7. Following thorough mixing of the sample, direct the pipette tip into the sample well. Dispense sample until it reaches the fill mark on the cartridge. Ensure there are NO bubbles.
8. Fold or push the cover over the sample well until it snaps into place. Don't push on sample well.



9. Insert cartridge into cartridge port until it clicks into place. Do not attempt to remove cartridge while 'Cartridge Locked' message is displayed.
10. Enter sample type, then push  for page
11. View results on meter's display.
12. Remove cartridge after 'Cartridge Locked' message disappears.

Reporting Results

All results are directly uploaded to Delphic via Aqure, based on the encounter number or Lab number.

Recalling Previous Test Results

To print last result after it has disappeared from the screen:

Press On, then 1 for Last Result. Print as above.

If you want to go earlier than the last result:

Press On.

Press Menu twice to get Administration Menu.

Press 2 for Data Review, then 1 for Patient.

Key in patient ID, Enter.

Print as above.

Training

Every user of the device must be trained and prove competent in the use of the device, patient testing, QC requirements and device limitations before performing any patient testing. Initial training records are held by the POCT QM. Annual competency is assessed by one of the following; direct observation, online module or successful QC.

Limitations

Any unexpected results should be repeated in the first instance. A sample should be sent to the laboratory, when possible, for follow-up testing.

Outage Procedures

Power Outage:

- Analyser is plugged into an essential power supply so can continue to be used.
- Results will continue to transmit to CP if the data network is not affected.
- If results are not transmitting to CP, revert to manual processes as described below for 'IT Outage'
- Once data connection is active again, results will automatically transmit to CP.

IT outage:

Acute Ward:

Using the Patient POCT results worksheet:

- a patient label is attached to the top of the sheet
- POCT result printouts are attached to the sheet
- The worksheet must be signed, time and dated, by the POCT operator

The original form is filed in the patient notes, and a photocopy is left for the laboratory staff which is used for checking samples and results.

Laboratory:

- Fill in the patient demographics and test results on an Urgent Results Sheet. Attached printed result (see above). Fax a copy to the ward/doctor.
- Scan to RFI and discard of paper copy

Analyser Failure:

- Contact the POCT QM for troubleshooting support.
- Run samples on the i-Stat analyser located in the laboratory until the fault is resolved.

Printing Results (if computer interface not working)

Once results are displayed and the 'Locked' message disappears, you can remove the cartridge and print the results.

Turn printer on – power switch left hand side.

Point top of I-Stat towards window on left hand side of printer (both sitting flat on bench and close together).

Ensure that the results to be printed are displayed on the screen – otherwise see Recalling Previous Test Results below.

Press Print button on I-Stat.

Turn printer off again after printing. **Ensure there is proper patient ID on printout.**