

Pathology and Laboratory Medicine Memorandum

To: Nova Scotia Laboratories
From: Dr. Amy Lou, Clinical Biochemist, Division Clinical Chemistry
Mrs. Catherine Lambert, Manager Community Based Labs
Ms. Cindy Andrews, Manager Core Lab
Date: April 20, 2018
Subject: **Revised Memo:** Changes in Specimen Collection and Reporting of Ionized Calcium (iCa) in the Central Zone

Please note change to specimen collection requirements. Specimens must not be placed on ice, see revised memo below.

Specimen collection requirements:

- a. Specimens collected in a SST gold topped tube is a preferred sample type. It should be collected in full capacity of the tube. **Do not place on ice.** Specimens should be centrifuged within 2 hours of the collection and the post-spun specimens should be kept cold and unopened before analysis (up to 5 days).
- b. Whole blood iCa testing is still available as part of a blood gas panel in a heparinized syringe on ice, which must be delivered immediately to be received in the laboratory within 30 minutes from collection.
- c. Lithium heparin tubes are **no longer** acceptable and frozen specimens are also not accepted.
- d. Proper collection technique is critical to ensure accurate results.

Reference ranges and reporting panel:

- a. Serum: 1.16-1.32 mmol/L; pH and iCa corrected to pH=7.4 will also be reported
- b. Whole blood: 1.15-1.27 mmol/L

Pre-analytical factors that can affect ionized calcium results:

- a. pH changes can occur in samples that have not been handled quickly and anaerobically.
- b. iCa result changes by 0.05 mmol/L for every 0.1 unit change in pH.

If you have any questions, please contact Dr. Amy Lou at (902)473-1528