

Pathology and Laboratory Medicine Memorandum

To: Nova Scotia Laboratories
From: Dr. Amy Lou Clinical Biochemist, Division of Clinical Chemistry
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Date: February 08 , 2017
Subject: **Changes in Specimen Collection and Reporting of Ionized Calcium (iCa) in the Central Zone**

Effective Feb 21, 2018, iCa specimen collection and reference ranges will change.

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 and placed on ice immediately. 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 with 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