



MEMORANDUM

To: Physicians, Nurse Practitioners, Capital Health HSM (inpatient and outpatient clinics), provincial laboratories, and independent phlebotomists

From: Dr. Bassam Nassar, Chief of Service, Division of Clinical Chemistry
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Date: April 22, 2013

Subject: **Chemistry Blood Collection Tube Changes**

Effective June 2nd 2013, at 1300 hrs, collection requirements for some Chemistry tests will change from the gold capped Serum Separator Tubes (SST) to light green capped lithium heparin Plasma Separator Tubes (PST).

Action: In preparation for this change, order supplies as soon as possible:

- Capital Health In-stock number 176925 (box of 100 tubes). No change in cost.

The following tests are to be collected in light green capped lithium heparin Plasma Separator Tubes (PST):

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| • Ammonia | • LD, LDL, Lipase, |
| • ACE, ALB, ALT, ALP, AMY, AST | • Magnesium, |
| • Bili T & D, Bicarbonate (CO ₂), BNP | • Osmolality |
| • Calcium, Chloride, Cholesterol, CK,
Creatinine, CRP-hs | • Phosphate, Potassium, Prealbumin, |
| • GGT, Glucose | • Sodium |
| • HCG, HDL, | • Total Protein, Triglycerides, Troponin T-hs |
| • Iron | • UIBC, Urea, Uric Acid |
| | • Vitamin D |

As per standard practice, PST tubes must be thoroughly mixed by gently inverting **8-10 times** immediately after collection is complete (DO NOT SHAKE). This allows the blood to mix properly with the heparin and prevents errors due to clot formation. Vigorous shaking will cause hemolysis and the sample may have to be recollected.

This change will improve sample integrity and turnaround times for testing. The PST tubes contain a small amount of heparin that prevents the sample from clotting and allows for immediate centrifugation and faster processing. Additionally, erroneous results which are sometimes attributed to fibrin strands will be significantly reduced.

Please follow the collection requirements indicated in the **Laboratory Test Catalogue** available on the Capital Health website: <http://www.cdha.nshealth.ca/pathology-laboratory-medicine>



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Reference changes:

The following test results from the PST tubes showed slight but significant differences from those from the SST tubes, based on our evaluation studies. Therefore, their reference ranges will be changed accordingly, as shown in the following table:

Analyte	Old Reference Ranges	New Reference Ranges
Bilirubin-direct (umol/L)	2-9	0-4.5
Phosphorus (mmol/L)	0.76-1.53	0.73-1.50
Potassium (mmol/L)	3.6-5.1	3.4-5.0
Protein-total (g/L)	61-81	64-83

Note: There are no changes for pediatric reference ranges

If you have any questions, please contact Bassam.Nassar@cdha.nshealth.ca at (902) 473-2225, Amy.Lou@cdha.nshealth.ca at (902) 473-1528, or Shauna.Thompson@cdha.nshealth.ca at (902) 473-4065.

Thank you for your attention.

CC. Ms. Fran O'Brien
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