

New Urine Drug Screen Instrument

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Starting in late March 2018, all drug screen tests at our Burnaby lab will move from the current Roche Integra 800 instrument to a new Siemens platform. Lab reports will indicate tests where the methodology has changed. Note that the new tests may cross-react differ-

ently than the existing method with related compounds: please refer to our website for complete cross reactivity tables.

All cut-off levels will be unchanged with the exception of buprenorphine, which is changing from 5 ng/mL to 10 ng/mL, as the new method cross-reacts with both parent drug and metabolites.

Semen Analysis

Anil Mangal, DSM, ABIM, FRCPC, Hematopathologist

Semen analysis testing for fertility status and post-vasectomy (PV) samples requires assessment for semen viability and motility testing. As these samples should be tested within one hour of sample collection, patients need appointments for sample delivery to specified Patient Service Centres (PSCs) so that samples reach the testing laboratory in a timely manner.

By contrast, requests for Semen RBC or WBC (usually in elderly patients) do not require appointments: these samples may be dropped off at any PSC. It is important that the Laboratory Requisition specifically identifies these tests to avoid unnecessary appointments or delays.

Please request testing as indicated below:

Semen analysis (fertility) – appointment booking is needed, complete semen analysis will be performed.

Post-vasectomy – appointment booking is needed, but only sperm estimates and motility will be reported. We suggest avoid using terms like semen analysis for PV.

Semen for RBC or WBC only– no appointment required.

CBC Parameters Revisited

Anil Mangal, DSM, ABIM, FRCPC, Hematopathologist

Since 2012, LifeLabs has been reporting Immature Platelet Fraction (IPF) and Reticulated Hemoglobin Content (Ret-He) indices upon request. Starting June 2018, however, LifeLabs is planning to implement newer hematology analyzers (Sysmex XN Series): while both these indices will continue to be available, they will need to be specifically requested.

Immature Platelet Fraction (IPF)

IPF, also referred to in the literature as reticulated platelets, represents the youngest circulating platelets. IPF provides an estimate of thrombopoiesis similar to a reticulocyte count as a measure of erythropoiesis. It is part of accepted hematological practice and provides useful clinical information for the investigation and monitoring of platelet production in various thrombocytopenic conditions.

The clinical utility of IPF is in the laboratory diagnosis of thrombocytopenia due to increased peripheral platelet destruction, particularly autoimmune thrombocytopenic purpura (AITP).

IPF is also useful in monitoring platelet recovery following chemotherapy and bone marrow/stem cell transplants, as well as timing of prophylactic platelet transfusion.

To order, please request '**Immature Platelet Fraction (IPF)**' on the requisition.

Reticulated Hemoglobin Content (Ret-He)

Determination of Ret-He provides an early measure of functional iron deficiency as reticulocytes are the earliest erythrocytes released into the bloodstream, where they circulate for 1-2 days

Ret-He is used as a sensitive and specific indicator of iron deficiency in clinical situations with otherwise normal red cell indices. It is the strongest predictor of iron deficiency and iron deficiency anemia in children. Ret-He is also used to monitor response to iron supplements in iron deficiency and erythropoietin treatment during dialysis.

To order, please request a '**Reticulocyte count**' on the requisition.

References:

- Briggs C, Harrison P, Grant D, et al. New Quantitative parameters on a recently introduced automated blood cell counter – the XE 2100TM. *Clinical Laboratory Hematology* 2000; 22:345-350.
- Saigo K, Sakota Y, Masuda Y, et al. Clinical Utility of new parameters provided by XE-2100 RET Channel. *Sysmex Journal International* 2007; 2:81-94.
- Sysmex XN Series, PLT-F Channel Performance Specifications
- Mast AE, Binder MA, Dietzen DJ, Test of the Month: Reticulocyte Hemoglobin Content. *Am J Hematol* 2008;83(4):307-310.