



100 International Blvd.
Toronto, ON
Canada M9W 6J6

T: 416-675-4530
www.LifeLabs.com

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IMPROVEMENTS TO REFERRED OUT TESTING SERVICES AT LIFELABS

To whom it may concern,

LifeLabs has recently undertaken a comprehensive review of services associated with testing that we refer out to other partner laboratories. As a result of this review, we will be making changes that aim to improve quality of referred out testing, including turnaround times, and process efficiencies.

The first of a number of changes being rolled out in the coming months, is the transition of a portion of referred out tests to University Health Network (UHN). Details of the expected changes are listed in the table below, including new methodology and reference ranges.

Please note that the changes will be effective Dec 5, 2021.

Yours Sincerely,

Robert Gharbharan (*Hons.*) *BHSc., MLT*
**Technical Quality Specialist – Referred Out Testing &
Special Projects**
Quality & Regulatory Affairs
LifeLabs | 100 International Blvd. | Toronto, ON M9W 6J6
T 416-675-4530 Ext. 42687 | F 416-213-4090
E Robert.Gharbharan@LifeLabs.com
www.LifeLabs.com



Test Name	Current Testing Information			New Testing Information at UHN					
	Site	Methodology	Reference Range	Methodology	Reference Range	Preferred Container Type	Storage/Transportation	Pre-Testing Requirements	Collection/Preanalytical Requirements
11 DEOXYCORTISOL	The Hospital for Sick Children	LCMS/MS	Female 0-1 years: 0-5.3 nmol/L	LCMS/MS	<2.60 nmol/L	SST	send frozen on dry ice		<p><2.60 nmol/L</p> <p>Patient with untreated 11-β-hydroxylase deficiency: ≥ 100 nmol/L</p> <p>Overnight Metyrapone Test: Normal ≥ 200 nmol/L</p> <p>Hypopituitarism/Addison's: No response (cortisol should be <200 for valid test)</p>
Activated Protein C Resistance	Hamilton Health Sciences	Clot Based STA-R Analyzer	>1.73 Ratio	Optical Clot Detection	>2.2 ratio	Sodium Citrate (light blue)	send frozen on dry ice	<p>Patient should be fasting, if possible. Anticoagulants should be held for a requisite amount of time prior to testing to ensure no anticoagulant effect on the plasma.</p>	<p>ALWAYS partially fill a DISCARD TUBE first.</p> <p>Then collect blood in a LIGHT BLUE top tube (citrate). Collect a FULL TUBE. Mix thoroughly by gentle inversion.</p> <p>Dispose the DISCARD TUBE into the biohazardous container. IMMEDIATELY centrifuge for 15 minutes at 3500 rpm. Carefully pipette all PLATELET POOR plasma, starting from the top of the plasma, into a clear labelled centrifuge tube taking care NOT TO DISTURB the buffy coat layer (white layer of platelets and white cells directly above red cells). Cap centrifuge tube. IMMEDIATELY centrifuge this plasma for another 15 minutes at 3500 rpm. Pipette the PLATELET POOR plasma, starting from the top of the plasma into one (1) labelled 12x75 mm opaque polypropylene tube, taking care NOT TO DISTURB the BOTTOM of the tube. DO NOT TRANSFER ANY CELLS. Cap tightly and FREEZE IMMEDIATELY.</p>

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Alpha -2 Macroglobulin	Hamilton Health Sciences	immunoassay	1.02 - 2.59 g/L	Immunoassay	1.02 -2.59 g/L	SST	Refrigerated 2-8 degrees C.		Collect blood in SST tube. Allow blood to clot at room temperature for 30 minutes and separate by centrifugation. Transfer an aliquot of serum to a labeled tube and cap tightly. Store and ship refrigerated at 2-8 degrees C.
AMIKACIN	The Hospital for Sick Children	Immunoturbidimetric	Not Available	immunoturbidimetric	Pre-dose: <2.0-10.0 mg/L, post-dose: 20.0-30.0 mg/L; random: <30.1 mg/L	Plain Red Top	frozen serum	<p>Do not take levels from the same limb in which the drug has been infused.</p> <p>TROUGH SPECIMEN (Pre): Collect blood IMMEDIATELY prior to next dose. Record COLLECTION DATE. Record time in HOURS that have ELAPSED between LAST DRUG DOSE and time of specimen COLLECTION.</p> <p>PEAK SPECIMEN (Post): IV - Collect blood IMMEDIATELY after infusion has been completed. IM - Collect blood 60 minutes after injection. Record COLLECTION DATE. Record time in HOURS that have ELAPSED between LAST DRUG DOSE and time of specimen COLLECTION - Only indicated in patients with end-stage renal failure:</p>	<p>Freeze immediately.</p> <p>Collect blood in PLAIN RED top tube. Allow blood to clot at room temperature for 30 minutes and separate by centrifugation. Transfer an aliquot of serum to labelled tube and cap tightly. Transfer aliquots of serum into labelled pre and post aliquot tubes. Store and ship frozen at minus 20 degrees C.</p>

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AMYLASE FLUID	Unity Health	Spectrophotometric (Enzymatic / Colorimetric)	20-110 U/L Normal fluid amylase activity is typically less than the upper limit of normal serum amylase and has a ratio of fluid amylase to serum amylase ratio less than 1.0	Immunoassay using Abbott Chemiluminescent Microparticle Immunoassay (CMIA) technology	Urine: <60 U/d Other Fluids: Unavailable	Sterile Container	Refrigerated 2-8C		Fluid collected in sterile container. Store and ship refrigerated at 2-8 degrees C. Send on ice or freeze packs
CHROMOGRANIN A	London Health Sciences Centre	Thermo Fisher Fluorescent Immunoassay	≤ 76 ng/mL	Fluorescent Immunoassay; B.R.A.H.M.S. Kryptor	<77 ng/mL	EDTA (Lavender)	frozen plasma	Patients should be fasting for 12 hours and discontinue proton pump inhibitor medications for 2 weeks prior to sample collection.	Spin and separate within 4 hours of collection. Freeze immediately.
GENTAMICIN	The Hospital for Sick Children	Colometric	Not Available	PETIA, immunoassay (Abbott)	Pre-dose: <2.1 mg/L, post-dose: 4.0-10.0 mg/L; random: <10.1 mg/L	EDTA (Lavender)	ROOM TEMPERATURE OR 4C	Only indicated in patients with end-stage renal failure:	take 2 random levels to determine rate of elimination from body. Do not take levels from the same limb in which the drug has been infused.
MYOSITIS/ MYOPATHY PROFILE	London Health Sciences Centre	Immunoblot	Negative	Immunoblot; EUROBlot Master	Negative	SST	frozen serum		centrifuge and aliquot. ship frozen

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RIVAROXABAN	Hamilton Health Sciences	Chromogenic anti Xa assay	<p>A therapeutic range for rivaroxaban has not been established. In patients on therapeutic doses, the drug may be undetectable in plasma (<25 ng/ml) taken 24 hours after the last dose. Caution, other drugs that inhibit factor Xa activity are also detected by this assay.</p>	Chromogenic; Siemens Sysmex CS-5100	<p>There are currently no established therapeutic reference ranges for Rivaroxaban. Clinical thresholds for the efficacy and safety of Rivaroxaban related to drug concentrations are not known. The result must be interpreted within the clinical context.</p>	Sodium Citrate (Light Blue)	Frozen	Fasting is preferred.	<p>ALWAYS partially fill a DISCARD TUBE first. Then collect blood in a LIGHT BLUE top tube (citrate). Collect a FULL TUBE. Mix thoroughly by gentle inversion.</p> <p>Dispose the DISCARD TUBE into the biohazardous container. IMMEDIATELY centrifuge for 15 minutes at 3500 rpm. Carefully pipette all PLATELET POOR plasma, starting from the top of the plasma, into a clear labelled centrifuge tube taking care NOT TO DISTURB the buffy coat layer (white layer of platelets and white cells directly above red cells). Cap centrifuge tube. IMMEDIATELY centrifuge this plasma for another 15 minutes at 3500 rpm. Pipette the PLATELET POOR plasma, starting from the top of the plasma into one (1) labelled 12x75 mm opaque polypropylene tube, taking care NOT TO DISTURB the BOTTOM of the tube. DO NOT TRANSFER ANY CELLS. Cap tightly and FREEZE IMMEDIATELY.</p>
TRAB	Hamilton Health Sciences	Fluorescent Immunoassay	<1.8 IU/L	Immunoassay; B.R.A.H.M.S. Kryptor	<p>Normal: <1.0 IU/L Borderline: 1.0 - 2.0 IU/L Elevated: >2.0 IU/L</p>	SST	frozen at -20C		Centrifuge and aliquot. Ship frozen.

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VON WILLEBRAND FACTOR SCREEN	Hamilton Health Sciences	Run on STAR Evolution: FVIII - clot based; VWF Ag - LIA based; VWF Act - GP Ligand assay	Not Available	Turbidimetric; Siemens Sysmex CS-5100	0.40 - 1.50 IU/mL	Sodium Citrate (Light Blue)	send frozen on dry ice	Patient should be fasting, if possible.	<p>ALWAYS partially fill a DISCARD TUBE first.</p> <p>Then collect blood in a LIGHT BLUE top tube (citrated). Collect a FULL TUBE. Mix thoroughly by gentle inversion.</p> <p>Dispose the DISCARD TUBE into the biohazardous container.</p> <p>IMMEDIATELY centrifuge for 15 minutes at 3500 rpm. Carefully pipette all PLATELET POOR plasma, starting from the top of the plasma, into a clear labelled centrifuge tube taking care NOT TO DISTURB the buffy coat layer (white layer of platelets and white cells directly above red cells). Cap centrifuge tube. IMMEDIATELY centrifuge this plasma for another 15 minutes at 3500 rpm. Pipette the PLATELET POOR plasma, starting from the top of the plasma into one (1) labelled 12x75 mm opaque polypropylene tube, taking care NOT TO DISTURB the BOTTOM of the tube. DO NOT TRANSFER ANY CELLS. Cap tightly and FREEZE IMMEDIATELY.</p>
Tacrolimus (Non-Transplant)	Hamilton Health Sciences	PETIA, Homogeneous Particle-Enhanced Turbidimetric Immunoassay	Therapeutic range 12 h trough: =3 month post-transplant: 10-20 ng/mL >3 month post-transplant: 5-15 ng/mL	CMIA	Dependent on clinical status	EDTA (Lavender)	Refrigerated 2-8C (send on ice or freeze packs)	Optimum sampling time is trough level just prior to the next dose (drug is administered every 12 h).	



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Sirolimus (Non-Transplant)	Hamilton Health Sciences	LCMS	4.0 - 20.0 ug/L	CMIA	Dependent on clinical status	EDTA (Lavender)	Refrigerated 2-8C (send on ice or freeze packs)		