

This compendium is the responsibility of Regulatory Affairs, Lab Services. All revisions to this document must go through Regulatory Affairs.

Note: Occasionally specimen collection (type of specimen, type of container required, etc.) and specimen transport instructions may change following the print date of this handbook. Therefore, it is recommended that the use of the LIS "Ctrl-T" key function be performed in Order Entry, prior to specimen collection.

** For serological evidence, two blood specimens are desirable whenever possible. The first should be collected within 5 days of onset, the second collected 5 -10 days later. Separate the serum from the clot and send only cell-free serum to avoid the danger of hemolysis of the clot. It is essential that the clinical history accompany the specimens for serological investigations in order to select the appropriate viral antigens for testing.

Microbiology tests (culture and susceptibility) have been alphabetized in the micro section.

Tests referred to Saskatchewan Disease Control Laboratory (SDCL) previously Provincial Laboratories (*) must be recorded on the appropriate SDCL Requisition.

Effective date: April 2, 2012

Highlighted information denotes changes for this version

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
**5 th Disease	Blood			See Parvovirus B19.				
*ACE	Blood	1 Red	2 mL serum	Aliquot + freeze ASAP.			SDCL - Hamilton TAT: 3 weeks	ACE
*ACE	CSF		0.5 mL	Freeze			SDCL - Hamilton	ACECF
Acetaminophen (Tylenol) N.B. Treatment chart should be consulted before beginning therapy.	Blood	1 SST or 1 Green	1 mL serum or plasma		Peak Concentration: 66-199 Toxic Levels: Hours after ingestion: 4 hr: 1325 16 hr: 150 8 hr: 600 20 hr: 75 12 hr: 300 Hepatic damage may occur if >790 at 4 hr	µmol/L	Chem - RGH & PH	ACET
*Acetazolamide	Blood	2 Red	3 mL serum	Aliquot			SDCL - Mayo	AZOLA
*Acetone (Quantitative)	Blood	1 Grey	3 mL whole blood	Do not use alcohol swab. Do not open tube. Record time of collection on tube and requisition.	Normal: negative <0.34 Occupational exposure: <0.34-1.72 Ketoacidosis: 1.72-12.04 Panic value: >8 Toxic: >3.40	mmol/L	SDCL Routine = 24 hr Emergency = 2 hr	ACETO
Acetone (Qualitative)	Blood	1 SST or 1 Green	1 mL serum or plasma	Do not use alcohol swab. Do not open tube.	Negative		Chem - RGH & PH	KETON

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*Acetylcholine Receptor Antibodies	Blood	1 SST	1 mL serum Frozen	Aliquot and freeze serum. Ship frozen.			SDCL - Hamilton	ABACR
*Acetylcholinesterase Pre-arrange with SDCL	Blood	4 Mauve	3 mL EDTA whole blood & 3 mL plasma	Stable for only 48 hr. Store and send COLD. Send Hematocrit result with specimen.			SDCL - Toronto	ACHOL
Acid Elution (Kleihauer)	Blood	1 Mauve	Can use same tube as CBC				Hematology - RGH	KLEIH
Acid Glycerol Lysis Test	Blood	1 Mauve or Green	0.5 mL whole blood	Refrigerate ASAP after collection. Collect Monday-Friday only. Keep cool and send to Special Chem within 12 hours.	Sperocytosis = <150 seconds. At least 60% lysis occurs before scan is leveled. Normal = >150 seconds. Scan should level off before 60% lysis occurs.		Special Chem - RGH	AGLT
*Acid Phosphatase				Not available				
*ACTH Note: Patient does not need to be fasting	Blood	1 Mauve (chilled)	2 mL plasma	Collect on ice between 0800 and 1000. Collect at any time for endocrinologists Mohammed and Mann. Return to lab immediately. Spin and separate within 15 minutes. Freeze and send frozen. Submit as separate sample.	0-11	pmol/L	SDCL TAT – 7 days	ACTH
*ACTH Stimulation Test (Cortrosyn) (Rapid Screen)	Blood	1-SST at 3 separate times	1 mL serum for each collection	Collect cortisol before injection and at 30 and 60 minutes after injection.			SDCL TAT = 3 days	Order Timed Cortisols
Activated Protein C (APC)				See Hypercoag				
*Acyclovir	Blood	1 SST	2 mL serum	Aliquot and freeze			SDCL - California	ACYCL
Acylcarnitine (for NICU)	Blood	PKU Card						
*ADH Anti-Diuretic	Blood	2 Mauve or 2 Green	3 mL plasma	Collect in pre-chilled tubes, on ice. Aliquot and freeze			SDCL – Toronto TAT = 4 weeks	ADH

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Hormone (Vasopressin) Water Deprivation Test To measure basal level, collect after 12 hr fast with patient in Recumbent position for 1 hr prior to collection.		(chilled tubes)		immediately. Must be frozen within 24 hr. Cannot be refrozen. Aliquot plasma equally into 2 pre-chilled plastic vials.				
*Adenosine Deaminase	Blood or CSF or Fluid	1 SST	1 mL serum or CSF or fluid (min. 0.5 ml)	Aliquot. Must Be Frozen. Specimen must be received with 7 days of collection.			SDCL - Mayo	ADEAM
*Adenovirus	Naso-pharyngeal Aspirate, Washes - Throat			See Respiratory Virus Isolation or Detection. - See Throat Virus Isolation or Detection.				
*Adrenal Antibodies Adrenal tissue Ab	Blood	1 SST	1 mL serum frozen	Freeze and send frozen.			SDCL – Hospital in Common TAT = 3 weeks	ABAD
*Adrenalin	Blood			See Catecholamines				
AFP				See Alpha-fetoprotein				
AGBMA (Anti-Glomerular Capillary Basement Membrane Antibodies)	Blood	1 SST	1 mL serum				Immunology - RGH	AGBMS
ALA				See Aminolevulinic Acid				
Albumin	Blood	1 SST	1 mL serum		< 1 yr. 32-48 1 – 2 yrs. 37-57 2 – 3 yrs. 33-58 > 3 yrs 35-50	g/L	Chem - RGH & PH	ALB
Albumin	Fluid	1 Red	1 mL fluid		None available	g/L	Chem - RGH & PH	ALBFL
Alcohol, Ethyl	Blood	1 SST or 1 Green or	1 mL serum or	Do not open tube.			Chem - RGH & PH	ALC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Aldolase		1 Grey	plasma	No longer available. Recommend CK				ALDOL
*Aldosterone	Blood	1 SST or 1 Green	2 mL serum	Aliquot and freeze	Restricted salt diet: 580-1240	pmol/L	SDCL - Edmonton	ALDOS
*Aldosterone	24 hr Urine	24 hr Urine container	10 mL aliquot	Keep cool during collection. Freeze aliquot. Record collection data and 24 hr volume on requisition.	15-70	nmol/d	SDCL – Hamilton TAT = 4 weeks	ALDOU
Alkaline Phosphatase (ALP)	Blood	1 SST or 1 Green	1 mL serum or plasma		<30 d: 76-300 1-23 mo: 112-396 2-11 yr: 90-300 12-14 yr (F): 40-270 12-14 yr (M): 76-400 15-17 yr (F): 32-200 15-17 yr (M): 63-270 Adult (>17 yr): 40-135	U/L	Chemistry - RGH & PH	ALP
Alkaline Phosphatase (ALP)	Fluid			No Longer Available	None available			ALPFL
Alkaline Phosphatase Fractionation (Isoenzymes) Testing will be performed only on specimens with elevated alkaline phosphatase.	Blood	1 SST	2 mL serum		Heat stable fraction: <20% implies bone source >25% and <55% implies liver and/or intestinal source		Special Chem - RGH	APISO
*Allergy Test (RAST) (Food screen or inhalant screen) Please fill out special sheet	Blood	1 SST	100 µL serum per test	100 µL is required for each test ordered. Special sheet must accompany specimen.			SDCL - Saskatoon TAT = 2 weeks	RAST
Alpha-1-Antitrypsin	Blood	1 SST	1 mL serum		0.91-3.07	g/L	Immunology - RGH	A1AT
*Alpha-1-Antitrypsin	Feces	Special container from Mayo	24 hour feces collection	Freeze			SDCL TAT = 7 days	ATTRF
*Alpha-1-Antitrypsin Phenotyping	Blood	1 SST	1 mL serum	Freeze serum within 24 hr of collection. Send copy of			SDCL - Toronto	A1PHT

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Only done if alpha-1-antitrypsin is low.				the alpha-1-antitrypsin results with specimen.				
*Alpha-2-Macroglobulin	Blood	1 SST	1 mL serum				SDCL - Hamilton	A2MAC
Alpha-Fetoprotein (AFP) <i>Tumour Marker</i>	Blood	1 SST	1 mL serum		0-9	µg/L	Chemistry - RGH	AFPO
*Alpha-Fetoprotein (AFP)	Amniotic Fld.	1 mL Amniotic Fluid	1 mL amniotic fluid	Refrigerate at 2-8° C and transport on ice packs, within 24 hr of collection. Complete Maternal Serum Screen requisition.			SDCL TAT = 1 day	AFMAT
*Alpha-Fetoprotein (AFP) <i>Maternal Screen</i> Fill out special form with all relevant info.	Blood	1 SST	1 mL serum	Accurate gestational age and all relevant information needed for interpretation of results.			SDCL	MSS
*Alpha Galactosidase	Blood	1 Green	5 mL whole blood	Send whole blood. Keep at room temperature. Refer ASAP.			SDCL - Saskatoon	ALGAL
*Alpha-Hydroxy Progesterone				See 17-hydroxyprogesterone				
*Alprazolam (Xanax)	Blood	1 Red	1 mL serum		Therapeutic: 2-120	nmol/L	SDCL	ALPRA
ALT	Blood	1 SST or Green	1 mL serum or plasma		4 - 55	U/L	Chem - RGH & PH	ALT
ALT	Fluid			No Longer Available	None available	U/L	Chem - RGH & PH	ALTFL
*Aluminum	Blood	1 – 7 mL Royal Blue EDTA) BD368381	3 mL plasma	Separate plasma from red cells ASAP. Put plasma or serum in polypropylene tube. Indicate on requisition that specimen is EDTA plasma.			SDCL – Toronto TAT = 10 days	ALUM
*Aluminum	Urine	24-hr urine container acid-washed or random	10-15 mL aliquot of 24 hr urine or 10-15 mL of	Place in polypropylene container. Record on requisition: collection date, total 24 hr volume if submitted or random urine.			SDCL – Toronto TAT = 10 days	ALUMU

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
		urine collected in acid-washed container.	random urine					
Amikacin (Amikin) Trough and Peak NOTE: Record pre or post along with exact date and time of last doses and exact date and time of collection	Blood	1 SST or 1 Green	1 mL serum or plasma	Freeze if testing is not performed within 24 hrs. Trough – usually drawn ½ hr before drug is administered. Peak – usually drawn 1 hr after drug is administered, but physician may vary. Daily – 6 to 14 hrs after dose.	Trough: 1-8 Peak: 20-30 Toxic Trough: > 10 Toxic Peak: > 30	mg/L	Chemistry- RGH	AMIPR (trough) AMIP (peak) AMIKN (random)
*Amino Acid Chromatography (Can be done micro - 2 small green. Spin and freeze plasma.)	Blood	1 SST or 1 Mauve or 1 Green (full) NICU: 2 mL venous blood in pediatric green top	1 mL serum or plasma NICU: 0.6 mL serum or plasma	Separate ASAP, freeze			SDCL - Saskatoon	AACID
*Amino Acid Chromatography State collection period	Urine	Random or 24 hr urine. Aliquot.	10 mL urine	Freeze. Record collection date 24 hr volume if submitted or random urine on requisition.			SDCL - Saskatoon TAT = 1 week	AARUR (random) AA24 (24 hr)
Aminolevulinic Acid (ALA) State collection period	Urine	24 hr brown urine container	20 mL aliquot of 24 hr urine in dark container or wrap in tin foil	Collect into brown bottle. Freeze aliquot ASAP in dark container or wrap in tin foil	0-45	µmol/d	Special Chem - RGH	ALA24
Aminophylline (Theophylline) Provide date & time of last dose. See TDM section for ideal sampling times	Blood	1 SST	1 mL serum		Therapeutic: <1 mo: 28-83 >1 mo: 28-85 Toxic: ≥111	µmol/L	Chem - RGH & PH	THEO
*Amiodarone (Cordarone)	Blood	2 SST	3 mL serum				SDCL – Toronto TAT = 2 weeks	AMIOD

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Collect trough specimen prior to administration of next dose) dose.								
*Amitriptyline (Elavil)	Blood	2 Red or Green	4 mL serum or plasma	Do not use SST tubes	Therapeutic: Minimum: 220-600 Maximum: 650-1100 Toxic: >1700	nmol/L	SDCL TAT:Emerg = 4 hr Routine = 3 days	AMIT
Ammonia	Blood	1 Green (full)	2 mL heparinized plasma	Place specimen on ice immediately after collection and bring ASAP to lab. Patient not to clench hand during collection. Outpatient collections to come to RGH or PH. If shipping freeze plasma aliquot and send on dry ice.	12-47	µmol/L	Chem - RGH & PH	AMMO
Amniotic Fluid Scan (A450) (OD Rise)	Amniotic Fluid		10 mL amniotic fluid	Keep specimen in the dark at all times.			Special Chem - RGH	A450
*Amoebasis Serology (Entamoeba)	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Montreal TAT = 4 weeks	AMOES
*Amoxapine (Asendin)	Blood	2 Red or 2 Green	4 mL serum or plasma	Do not use SST tubes	Therapeutic: 600-1200 Toxic: >1200 – but CNS effects including seizures, convulsions, lethargy and coma are important indicators	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	AMOX
*Amphetamines	Urine	Plastic urine container	20 mL random urine	NOTE: Blood unsuitable. Refrigerate samples.	Negative		SDCL TAT = 2 days	AMPH
AMA (Anti-Mitochondrial Antibodies)	Blood	1 SST	1 mL serum				Immunology - RGH	AMAS
Amylase	Blood	1 SST	1 mL serum		20-110	U/L	Chem - RGH & PH	AMYL
Amylase	Fluid		1 mL fluid		None available	U/L	Chem - RGH & PH	AMYFL
Amylase	Urine	Random	5 mL urine	24 hr urine amylase no longer available.	32-641	U/L	Chem - RGH & PH	AMYRA (random)

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Amylase Isoenzymes	Blood	1 SST	1 mL serum	No Longer Available	Total: 20-110 Pancreatic: 43-67 Salivary: 38-56	U/L % %		
ANA or ANF (Anti-Nuclear Antibody or Anti- Nuclear Factor)	Blood	1 SST	1 mL serum	No hemolysis			Immunology - RGH	ANA
*Anafranil (Clomipramine)	Blood	2 Red	4 mL serum				SDCL	CLOMI
*ANCA				See Anti-Neutrophil Cytoplasmic Antibodies				
*Androgen				See Testosterone				
*Androstenedione (A2) Draw in AM	Blood	1 SST or 1 Green	1 mL serum or plasma	Record date/time of collection on tube and requisition. Aliquot and freeze. Must have own specimen and req.	Infants and children: Decreased from 10.1 during the first week to 1.7 in prepuberty At puberty: 0.3-8.4 Female: Normal: 1.6-9.4 Menopausal: <3.5 Male: 2.0-9.4	nmol/L	SDCL TAT = 14 days	ADION
*Angiotensin I				See Renin				
*Angiotensin Converting Enzyme				See ACE				
*ANNA-1				See Anti-Hu				
*Anti-Adrenal Antibodies				See Adrenal Antibodies				
*C1 Esterase Inhibitor				See C1 Esterase Inhibitor				
Anticardiolipin and (Anticardiolipin Antibodies to Nonspecific Antigen)	Blood	3 Blue and 1 Red		See LUPWS				
*Anti-Centromere Antibodies	Blood	1 SST	1 mL serum				Immunology-RGH	CENTR
*Anti-Chlamydia pneumoniae	Blood			See Chlamydia pneumoniae IgM and IgG.				
*Anti-Cyclic Citrullinated Peptide (Anti-CCP)	Blood	1 SST	1 mL serum	Aliquot and freeze	Only done if ANCA screen is positive.		SDCL to Edmonton	CCPAB
*Anti-Diuretic				See ADH				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Hormone								
Anti-DNA or dsDNA (Anti-Nucleic Acid) Performed only if ANA screen positive	Blood	1 SST	1 mL serum	RHD specimens only			Immunology - RGH	DSDNA
*Anti-DNASE B				No Longer Available				
*Anti-Endomysial Antibodies	Blood	1 SST	1 mL serum	Keep specimen cool. Send on ice packs.			SDCL	ABEND
*Anti-GAD65				See Anti-Glutamic Decarboxylase Ab				
*Anti-Gastric Antibodies (Anti GP Cell Ab)	Blood	1 SST	2 mL serum	Send last B12 result with specimen			SDCL - Saskatoon	ABGA
Anti-Glomerular Capillary Basement Membrane Antibody (AGCBM Ab)	Blood	1 SST	1 mL serum				Immunology - RGH	AGBMS
*Anti-Gliadin Antibody (Identifies IgA & IgG)	Blood	1 SST	1 mL serum				SDCL TAT = 3 weeks	ABGLI
Anti-Glutamic Decarboxylase Ab	Blood	1 SST	2 mL serum	Separate immediately and Freeze			SDCL-Toronto	ABGAD
*Anti-Gluten Antibodies				Order Celiac Disease Profile and write on req.				CDP
*Anti-HAV IgM and/or IgG Hepatitis A	Blood	1 SST	2 mL serum				SDCL	HEAAB
*Anti-HAV – Total Ab	Blood	1 SST	2 mL serum				SDCL	HEATO
*Anti-HBc	Blood	1 SST	2 mL serum				SDCL	HEBCO
*Anti-Hbe	Blood	1 SST	2 mL serum	Performed on patients with history of being HbsAg positive	Negative		SDCL - test done weekly	HEBEB
*Anti-HBs	Blood	1 SST	2 mL serum				SDCL	HEBAB
*Anti-HCV	Blood	1 SST	2 mL serum				SDCL	HECAB
*Anti-HDV Only done if HBV positive	Blood	1 SST	2 mL serum				SDCL	HEDAB
*Anti-HEV	Blood	1 SST	2 mL serum				SDCL	HEEAB
*Anti-HFV	Blood	1 SST	2 mL serum				SDCL	HEFAG
*Anti-HGV	Blood	1 SST	2 mL serum				SDCL	HEGAB

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Anti-Histone	Blood	1 SST	1 mL serum	Freeze			SDCL - Ontario	HISAB
*Anti-Hu (ANNA-1)	Blood	1 SST	1 mL serum	Freeze ASAP			SDCL – Mitogen Diagnostics, Calgary	HU
*Anti-Insulin Ab				See Insulin			SDCL	ABINS
*Anti-Islet Cell Ab	Blood	1 SST	1 mL serum	Separate and freeze ASAP			SDCL – Toronto TAT = 3 weeks	ABISC
*Anti-Intrinsic Factor Ab	Blood	2 SST	3 mL serum	Avoid administration of B12 for 48 h before collection			SDCL	ABINF
Anti-Jo-1	Blood	1 SST	2 mL serum				SDCL	ABJO
Anti-La				See Anti-SSB				
*Anti-Liver & Anti- Kidney Ab (Anti-KLM or Anti-LKM)	Blood	1 SST	2 mL serum	Keep cool. Send on ice pack.			SDCL - Toronto	ABKLM
*Anti-Mag Assay (Anti-Myelin Associated Glycoprotein Assay)	Blood	1 RED	1 mL serum	Patient should be fasting. Freeze serum			SDCL	AMAG
*Anti-Microsomal				See Anti-Thyroid Peroxidase			SDCL	ABMIC
*Anti-Mitochondrial Ab (AMA)	Blood	1 SST	1 mL serum				Immunology - RGH	AMAS
*Anti-Mullerian Hormone	Blood	1 SST	1 mL serum	Send frozen			SDCL – Hospital in Commons, Toronto	MULLH
*Anti-Musk	Blood	1 RED Do not use SST	2 mL serum	Freeze. Must be approved by Dr. Lehotay(SDCL 787-7900)			SDCL – California	MUSKA
*Anti-Myocardial	Blood	1 SST	1 mL serum				SDCL - Toronto	ABMYO
*Anti-Neutrophil Cytoplasmic (ANCA) p-ANCA c-ANCA	Blood	See spec. require- ment 1 SST 1 SST	2mL serum 2 mL serum 2 mL serum	Separate ASAP in aliquot. Must specify perinuclear or cytoplasmic staining. If ANCA positive a p-ANCA will be performed.			SDCL – Saskatoon	PANCA CANCA
Anti-Nuclear Ab				See ANA				
*Anti-Ovarian Ab	Blood	1 SST	1 mL serum				SDCL - Toronto	ABOVA
Anti-Pancreatic Islet				See Anti-Islet Cell Ab				

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Ab								
*Anti-Parietal Cell Ab	Blood	1 SST	2 mL serum				SDCL	ABPAR
Anti-Phospholipid Ab	Blood	3 Blue & 1 Red	4 mL plasma 2 mL serum	Order as LUPWS. Double spin plasma and separate into 4 tubes, freeze all plasma and serum tubes.			Special Coag Hematology - RGH	
*Anti-Reticulin Ab	Blood	1 SST	1 mL serum	Aliquot & send specimen on ice packs			SDCL - Toronto	ABRET
*Anti-Ri	Blood	1 SST	1 mL serum	Freeze ASAP			SDCL – Mitogen Diagnostics, Calgary	RI
Anti-RNP Performed only if ANA screen is positive	Blood	1 SST	1 mL serum	RHD only			Immunology - RGH	RNPSM
Anti-Ro				See Anti-SSA				
Anti-Scleroderma-70 Ab (Anti-Scl-70) Performed only if ANA screen positive	Blood	1 SST	1 mL serum	RHD only			Immunology - RGH	SCL70
Anti-Skeletal Ab				See Anti-Striated Muscle Ab				
*Anti-Skin Ab	Blood	1 SST	1 mL serum				SDCL - Saskatoon TAT = 2 weeks	ABSKI
Anti-Smooth Muscle Ab (ASMA)	Blood	1 SST	1 mL serum				Immunology - RGH	ASMAS
*Anti-Sperm Ab	Blood	1 Red	2 mL serum	Freeze			SDCL - Mayo Lab	ABSPE
Anti-SSA Ab Anti-SSB Ab (Anti-La) Anti-Smith Ab (SM) Performed only if ANA Screen positive	Blood	1 SST	2 mL serum	RHD only			Immunology – RGH	SSA SSB SM
*Anti-Streptolysin (ASO) (Streptozyme)	Blood	1 SST	2 mL serum				SDCL	ASLT
*Anti-Striated Muscle Ab	Blood	1 SST	2 ml serum				SDCL - Toronto	ABSTM
*Anti-Techoic Acid				See Techoic Acid.				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Anti-Thrombin III				See Hypercoag (order as HCOAG)			Special Coag Hematology - RGH	
*Anti-Thyroglobulin	Blood	1 SST	2 mL serum		<100	IU/mL	SDCL TAT = 2-3 days	ABTHY
*Anti-Thyroid Microsomal	Blood	1 SST	1 mL serum				SDCL	ABMIC
*Anti-Thyroid Peroxidase	Blood	1 SST	1 mL serum				SDCL	PEROX
Anti-Thyrotropin Ab				See Thyrotropin Binding Inhibitory Immunoglobulin				
Anti-Topoisomerase				See Anti-SCL-70				
Anti-Transglutaminase Ab	Blood	1 SST					SDCL	ABTTG
Anti-Trypsin				See Alpha-1-Antitrypsin				
Anti - Xa				See Heparin Assay				
*Anti-Yo (Purkinje Cyto Ab)	Blood	1 SST	1 mL serum	Freeze ASAP			SDCL – Mitogen Diagnostics, Calgary	YO
*Apolipoprotein A1 Collect after 14 hr fast	Blood	1 Mauve	1 mL plasma	Separate from cells within 4 hr of collection			SDCL – Toronto	APOA1
*Apolipoprotein B Not required to be fasting.	Blood	1 Mauve	1 mL plasma	Separate from cells within 4 hr of collection. Freeze and send frozen			SDCL – Toronto	APOLI
*Apo-E Lipoprotein Must be fasting 14 hr. A letter submitted by the ordering physician outlining the reason for requesting this test must accompany the sample.	Blood	4 Mauve	Minimum of 6 mL EDTA plasma	Separate within 4 hrs of collection. Store and ship at 4 degrees.			SDCL	APOLE
APT (Alkaline Denaturation Test) Bring to lab ASAP	Feces, vomitus or gastric content		1 g or 1 mL	Give to Chemistry ASAP			Chemistry - RGH	APT

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*Arbovirus Serology	Blood	1 SST	2 mL serum				SDCL	ARBOS
*Arsenic For non-dietary exposure within 48 hr	Blood	1 – 7 mL Royal Blue EDTA) BD368381	Whole blood	No substitute is acceptable *24 hr urine is specimen of choice.			SDCL - Edmonton	ARSB
*Arsenic Information on patient's diet should be included	Urine	24 hr or random urine container acid- washed	1 mL of 24 hr urine or 10 mL random urine	24 hr urine is specimen of choice. For non-dietary exposure within 48 hr, send EDTA whole blood. Send in polypropylene container. Record collection date, 24 hr volume if submitted or random urine on req.			SDCL – Toronto TAT = 3 weeks	ARSU
*Arylsulfatase A	Blood	1 Red	3 mL serum	Freeze			SDCL - Saskatoon TAT = 3 weeks	ARYLS
ASA				See Salicylate				
*Ascorbic Acid (Vitamin C)	Blood	1 Green or 1 SST or 1 EDTA or 1 Grey	2 mL plasma or serum	Separate and freeze immediately. Send frozen on dry ice.	45-85	µmol/L	SDCL TAT = 3 days	VITAC
*Asendin (Amoxapine)	Blood	2 Red or 2 Green	4 mL serum or plasma				SDCL	AMOXa
ASMA				Anti-Smooth Muscle Ab				
*ASO	Blood			See Anti-Streptolysin (ASO).				
AST (SGOT)	Blood	1 SST	1 mL serum		<6 mo: 63-81 6 mo-5 yr: 46-63 >5 yr: 5-35	U/L	Chem - RGH & PH	AST
*Aspergillus Serology (Farmer's Lung, Galactomannin)	Blood	1 SST	3 mL serum				SDCL - Edmonton TAT = 3 weeks	ASPGS
Atenolol (Ternormen, Tenolin)				Test Not Available				
*Ativan (Lorazepam)	Blood	2 Red	5 mL serum				SDCL	LOR
*Australian Antigen (HBsAg)	Blood	1 SST	1 mL serum				SDCL	HEBAG
*Auto Antibodies	Blood	1 Mauve	Full	Tubes must be labelled with name, DOB, and PHN			Transfusions - RGH	*DANT

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				or MRN				
*Auto Immune Muscle Disease Profile	Blood	1 RED	1 mL serum	Freeze within 4 hours of collection	Includes Jo1, Mi2, PL-7, PL-12, PM/Scl, Ku, Ro52, SRP.		SDCL to Calgary	AIMDP
*Aventyl (Nortriptyline)	Blood	2 Red	4 mL serum	Do not use SST			SDCL	NORTR
B12				See Vitamin B12				
B12 & Folates (RBC) Note: If B12 or RBC folate decreased, serum folate reflexed.	Blood	1 SST & 1 Mauve	1 ml serum & 1 mL whole blood	Needs hematocrit run in Hematology first			Chemistry - RGH	B12FO
*B12 Binding Protein				See Transcobalamine				
*Babesiosis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT = 4 weeks	BABES
*Bacterial Meningitis (Hemophilus influenzae, Neisseria meningitidis, Strept. pneumoniae)	Blood CSF			See Encephalitis (Bacterial).				
*Barbiturates	Blood	1 Red or 2 Green (full) NOT SST	3 mL serum or plasma	Do not use Seraclear - false positive	See individual tests for reference ranges		Special Chem - RGH	BARBQ
*Barbiturate (Urine Drug Screen)	Urine (random)			Refrigerate sample	Negative		SDCL TAT = 2 days	
*Bartonella henselae (Cat Scratch Fever)	Blood	1 SST	2 mL serum				SDCL – Winnipeg TAT = 3 weeks	BARTS
Bence Jones Protein	Urine or Blood	24 hr urine or 1 SST	100 mL of 24 hr urine or 1 mL serum	24 hr urine collection is preferred Record Collection Time, Date and Volume on req. Rural sites: Send aliquot frozen			Immunology - RGH	IFEU
*Benzitropine (Cogentin)	Blood	2 Red	4 mL serum				SDCL	BENZI
*Benzodiazepines	Urine	Random	20 mL urine	Refrigerate	Negative		SDCL TAT = 2 days	BENZO
Beta 2 Microglobulin	Blood	1 SST	1 mL serum		0-3.4	mg/L	Immunology - RGH	B2MGB
Beta 2 Microglobulin	Urine			Not available				
Beta-Hydroxybutyrate				See B-OH Butyric Acid				
Bicarbonate				See CO2				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Bile Acid Concentration	Blood	1 SST	2 mL serum	Aliquot & Freeze Collect after overnight fast or postprandial.			SDCL - Edmonton	BCONC
Beta 2 (B2) Transferrin	Fluid		0.5 mL	Freeze in plastic. Must be frozen before shipping.			SDCL – referred out - Mayo	B2TFE
Bilirubin	Blood	1 SST or 1 Green	1 mL serum		Cord: 18-52 Direct: 0-9 Total: 2-20	µmol/L	Chem - RGH & PH	BILCD (cord) BILTD (total and direct) BILIT (total)
Bilirubin – Neonate	Blood	1 Micro-container	0.2 mL serum or heparinized plasma	Protect from light	Full term: 24 hr: 36-104 48 hr: 103-120 3-5 d: 68-103 Premature: 24 hr: 17-103 48 hr: 103-137 3-5 d: 171-205	µmol/L	Chem - RGH	BILIN
Bilirubin	Fluid		1 mL fluid		None available	µmol/L	Chem - RGH & PH	BILFL
*Biotinidase	Blood	1 SST or 1 Green	2 mL serum or plasma	Freeze ASAP			SDCL to Winnipeg	BIOTD
β-hCG (Qualitative) (Pregnancy Test) State pregnancy test on req	Urine or Blood	Random or 1 SST	1 mL urine or 1 mL serum				Chem - RGH & PH	PREGU (urine) SPREG (serum)
β-hCG (Quantitative) <i>Tumour Marker</i>	Blood	1 SST	2 mL serum		0-6	IU/L	Chemistry - RGH	BHCGR
β-hCG (Quantitative) <i>Maternal Screen</i> Fill out special form with all relevant information	Blood	1 SST	2 mL serum	Accurate gestation age needed			SDCL	MSS
*β-OH-Butyric Acid	Blood	1 Green or 1 SST	1 mL plasma or serum		Pediatric: 0-02-0-29 Adult: 0-0.42	mmol/L	SDCL - Saskatoon TAT = 2 weeks	BOHBU
*BK Virus – Plasma PCR	Blood	1 Mauve	2 mL EDTA plasma	Freeze plasma ASAP. If specimen thaws , it is			SDLC – Toronto Hospitals in	BKVIR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*BK Virus CSF BK Virus PCR	CSF	Sterile leak proof tube	1 mL CSF	unsuitable for analysis. Freeze CSF ASAP. If specimen thaws , it is unsuitable for analysis.			Common SDLC – Toronto Hospitals in Common	BKVIC
*BK Virus Urine BK Virus PCR	Urine	Sterile plastic urine container.	20 ml urine (random)	Freeze urine ASAP. If specimen thaws , it is unsuitable for analysis.			SDCL –Toronto Hospitals in Common	BKVIU
*Blastomycosis Serology	Blood	1 SST	3 mL serum				SDCL - Edmonton TAT = 3 weeks	BLASS
Bleeding Time Must be approved by Hematologist				Done on patient's arm by Hematology Tech	2-9.5	Minute	Hem - RGH & PH	BT
Bleeding Disorder Investigation (BLDWS)	Blood	3 Blue (full)	4 mL citrate plasma	Double spin plasma and separate into 4 tubes. Freeze and send frozen on dry ice.			Spec. Coag. Hem – RGH & PH	BLDWS
Blood Culture Fungal	Blood	Aerobic and Anaerobic Vials	8-10 mL blood/vial	Transport to Microbiology Lab immediately and place in BacTAlert.			Microbiology - RGH	BCUL
Blood Culture Pediatric	Blood	Pediatric Vial	2-4 mL blood/vial	A single blood culture is acceptable for infants.			Microbiology - RGH	BCUL
Blood Culture Routine	Blood	Aerobic and Anaerobic Vials	8-10 mL blood/vial	Transport to Microbiology Lab immediately and place in BacTAlert.			Microbiology - RGH	BCUL
*Blood Culture TB (Mycobacterium)	Blood/Bone Marrow	Myco/F- Lytic vial	1-5 mL blood/vial	Transport to Microbiology Lab.			Microbiology – RGH Referred to SDCL.	BCUL
Blood Culture	Dialysis Fluid			See Microbiology Compendium			Microbiology - RGH	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Blood Gases	Arterial	Syringe (electrolyte balanced dry heparin)	1.5 mL (adults) 0.6 mL (neonates)	Anaerobic technique. Brought to lab ASAP.	pH <2 mo: 7.30-7.47 2 mo-2 yr: 7.34-7.46 >2 yr: 7.35-7.45 pCO₂ < 2mo: 27-40 2 mo-2 yr: 26-41 2yr: 33-45 pO₂ < 2 mo: 55-80 2 mo-2 yr: 65-100 >2 yr: 75-100 HCO₃ <2 yr: 16-24 >2 yr: 22-26 Base Excess <2 mo: -10 - -2 2 mo-2 yr: -4-2 >2 y: -2.5-2.5 O₂ Saturation: 95-98	mmHg mmHg mmol/L mmol/L %	Chem - RGH & PH	BGA
Blood Gases	Cord Arterial	Syringe (lithium or sodium heparin)	1.5 mL	Anaerobic technique. Brought to lab ASAP.	pH7.23-7.33 pCO₂ 41-58 pO₂ 12-24 HCO₃ 20-25 Base Excess	mmHg mmHg mmol/L mmol/L	Chem - RGH & PH	BGCA
Blood Gases	Cord Venous	Syringe (lithium or sodium heparin)	1.5 mL		pH ...7.30-7.40 pCO₂ ...33-44 pO₂ ... 23-35 HCO₃ ... 16-24 Base Excess	mmHg mmHg mmol/L mmol/L	Chemi - RGH & PH	BGCV
Blood Gases	Micro	Capillary tubes Electrolyte balanced heparin	2 x 125µL	Anaerobic technique. Brought to lab in ice water ASAP.	pH <2 mo: 7.30-7.47 2 mo-2 yr: 7.34-7.46 >2 yr: 7.35-7.45 pCO₂ < 2 mo: 27-40 2 mo-2 yr: 26-41 >2yr: 33-45 pO₂ <2 mo: 55-80 2 mo-2 yr: 65-100 >2 yr: 75-100 HCO₃ <2 yr: 16-24 >2 yr: 22-26 Base Excess <2 mo: -10 - -2 2 mo-2 yr: -4-2 >2 y: 2.5-2.5 O₂ Saturation 95-98	mmHg mmHg mmol/L mmol/L %	Chem - RGH & PH	BGM

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Blood Gases	Venous	Syringe		Anaerobic technique. No ice required if brought to lab ASAP.	pH7.32-7.42 pCO ₂ 40-50 pO ₂ 25-47 HCO ₃ 22-29 Base Excess	mmHg mmHg mmol/L mmol/L	Chem - RGH & PH	BGV
Blood Gases	Venous	1 FULL Green Vacutainer		Anaerobic technique. Place on ice and deliver to Chemistry lab within 15 minutes.	pH7.32-7.42 pCO ₂ 40-50 HCO ₃ 22-29 Base Excess	mmHg mmol/L mmol/L	Chem - RGH & PH	BGVVA
Blood Group	Blood	1 Mauve		Tubes must be labelled with full name, DOB, MRN OR HSN			Transfusions	*BLGR
Blood Parasite for _____	Blood	1 Mauve		Can use same tube as CBC, enter name of parasite in LIS			Hematology - RGH	BLPA
BNP (N-Terminal Pro Brain Natriuretic Peptide)	Blood	1 EDTA	1 mL 400uL- 1 full EDTA microtainer	Must be run within 4 hours of collection. For Neonatals can be collected using EDTA microtainers.			Chemistry – RGH	BNPA
Body Fluids (counts)	Pleural, Peritoneal Dialysate, Pericardial and Synovial Fluids	EDTA	3-5 mL	All fluids must be in lab within 4 hr from the time of collection	Dialysate normal range: WBC 0.0-0.1 x 10 ⁹ /L Pleural, synovial fluids normal range: clear, pale, yellow WBC: Pleural: 0-1.0 x 10 ⁹ /L Synovial: 0.02 x 10 ⁹ /L RBC: 0 x 10 ¹² /L Diff: <25% neutrophils Peritoneal fluid normal range: clear, pale, yellow WBC: 0-300 per mm ³ (<0.3 x 10 ⁹ /L) RBC: 0-10 ¹² /L Diff: - <75 neutrophils per mm ³ (<25%)	WBC x 10 ⁹ /L RBC x 10 ¹² /L Diff - %	Hematology- RGH & PH	Specific to each fluid
Bone Donor (Initial Testing)	Blood	2 SST and 1 Red top 2 EDTA		Tubes must be labelled with full name, DOB and MRN or PHN			GDML Brampton, Ontario	BDINI

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Bone Donor (6 Month Testing)	Blood	2 SST and 1 Red top		No longer performed			SDCL /RGH Transfusions	BD6M
Bone Specific ALP	Blood	1 SST	1 mL	Frozen			SDCL/Toronto	OSTAS
*Bordetella pertussis	Naso-pharyngeal			See Pertussis. *Nasopharyngeal Pertussis (Culture and PCR)				
*Borrelia burgdorferi				See Lyme Disease Total IgM and IgG Serology.				
*Brucella Antibodies	Blood	1 SST	3 mL serum	Aliquot and freeze.			SDCL	BRUCS
*BSE	CSF			See Creutzfeld Jakob Disease.				
*Butazoldin (Phenylbutazone)	Blood	2 Red	4 mL serum				SDCL	PHEBZ
C&S				See Micro Section				
*C1 A *C1 Esterase Inhibitor level is done first to see if C1 function is sent away.	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL - Denver	C1
*C1 Esterase Inhibitor Fasting preferred	Blood	1 SST	2 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 24 hours of collection.	0.21-0.39	g/L	SDCL TAT = 2-3 days	C1EST
*C1Q Immune Complex Antibody	Blood	1 Red	1 mL serum	Separate and freeze within 60 minutes of collection			SDCL-Toronto	C1QAB
*C2 Functional test	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL -National Jewish Reference Centre	C2
*C2 Level	Blood	1 EDTA	0.5 mL plasma	Freeze			SDCL - National Jewish Reference Ct	C2LEV
C3, C4 (Complement)	Blood	1 SST	1 mL serum		C3: 0.74-1.85 C4: 0.16-0.44	g/L	Immunology - RGH	C3C4
*C5 Level Request C5F if Functional test is required	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL - Denver	C5

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*C6 Level Request C6F if Functional test is required	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL - Denver	C6
*C7 Level Request C7F if Functional test is required	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL - Denver	C7
*C8 Level Request C8F if Functional test is required	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL - Denver	C8
*C9 Level Request C9F if Functional test is required	Blood	1 Red	1 mL serum	Allow to clot for no more than an hr. Aliquot and freeze at -70° C within 2 hr of collection.			SDCL – Denver	C9
*CA15-3	Blood	1 SST or 1 Mauve	1 mL serum or 1 mL plasma (EDTA)	Send frozen			SDCL – Toronto TAT = 2 weeks	CA15
CA 125	Blood	1 SST	1 mL serum		0-35		Chemistry - RGH	CA15
*CA19-9				See Carbohydrate Antigen				
*CA27-29	Blood	1 Red	1 mL serum	Aliquot & Freeze			SDCL - Mayo Lab	CA27
*Cadmium (Blood)	Blood	1 – 7 mL Royal Blue EDTA) BD368381	7 mL whole blood				SDCL - Toronto	CADMB
*Cadmium (Urine)	Urine	24 hr or random acid-washed container	10 mL aliquot of urine in polypropylene vial	Collect in acid-washed container. Record collection date, 24 hr volume if submitted or random urine.			SDCL – Toronto TAT = 3 weeks	CADMU
*CAE	Blood	1 Red	2 mL serum	Remove serum from cells within 2 hr of collection - freeze. Must arrive at SDCL frozen.	≥60	CAE units	SDCL - done weekly	CAE
*Calcitonin Collect after 14 hr fast	Blood	1 SST	2 mL serum	Aliquot & freeze. Record fasting serum on requisition.			SDCL - Toronto	CALCI
Calcium	Blood	1 SST	1 mL serum		0-10days=1.90-2.60	mmol/L	Chem - RGH & PH	CA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
					>10days =2.14-2.66			
Calcium	Fluid		1 mL serum	No Longer Available	None available	mmol/L	Chem - RGH & PH	
Calcium State collection period	Urine	Prefer 24 hr	10 mL urine	Acidify before analyzing Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	Intake 200n mg/d: 0.3-4.5 Intake 200-600 mg/d: 1.3-5.0 Intake 1 g/d: <7.5	mmol/d	Chem - RGH & PH	CAUR (random) CA24 (24 hr)
Calcium – ionized				See Ionized Calcium				
*Calculi	Calculus either passed or surgically removed (renal, bladder, ureter, biliary or prostatic)	Send calculi in a dry, sealed, clearly marked container		Send calculi in a dry, sealed, clearly marked container	Descriptive report		SDCL TAT = 7 days	STONE
*C-ANCA				See Anti-Neutrophil Cytoplasmic Ab (PR3)				
*Cannabinoids (Cannabis)	Urine	Random urine	20 mL urine	Keep cool	Negative		SDCL TAT = 3 days	CANNA
Carbamazepine (Tegretol) <i>See TDM section for ideal sampling times</i>	Blood	1 SST	1 mL serum	Collect 0-1 hr before dose.	Therapeutic: 17-50 Toxic: ≥63 (Earliest time for first TDM is one week)	µmol/L	Chemistry - RGH	CARBA
*Carbohydrate Antigen Ca 19-9	Blood	1 SST	1 mL	Aliquot			SDCL - Toronto TAT = 3 weeks	CA19
*Carbohydrate Deficient Transferrin	Blood	1 SST	1 mL serum	Aliquot and Freeze			SDCL - California	CDTRF
Carbon Monoxide (Carboxy Hemoglobin)	Blood	1 small Green (full) EDTA acceptable	5 mL whole blood	Do not open tube	Non-smoker: <2 Smokers: 2-5 Heavy Smokers: 5-9 Toxic: >20 Fatal: >50	%	Chem - RGH & PH	COHBA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Carcinoembryonic Antigen (CEA)	Blood	1 SST	1 mL		0-5	µg/L	Chemistry - RGH	CEA
Carcinoembryonic Antigen	Fluid		1 mL				Chemistry - RGH	CEAFL
Cardiac Antibodies				See Anti-Myocardial Ab				
*Cardizem (Diltiazem) Collect immediately before next oral dose	Blood	2 Red	3 mL serum				SDCL TAT = 5 days	CARDI
*Carnitine (Total & Free) Acylcarnitine - PKU card	Blood	1 Red or 1 Green	1 mL plasma or serum (200 µL for babies)	Freeze. Avoid hemolysis. Separate plasma from cells.			SDCL	CARNS
*Carnitine	Urine	Random 24 hr if quantitative results required	5 mL urine	Freeze			SDCL (ABC Lab - Saskatoon)	CARNU
*Carotene	Blood	1 SST	2 mL serum	Keep in dark			SDCL TAT = 7 days	CAROT
*Cat Scratch Disease	Blood			See Bartonella henselae (Cat Scratch Fever).				
*Catecholamines (Free) Plasma - Adrenalin, Noradrenalin, Epinephrine, Norepinephrine Collect after pt. has been at rest in a supine position for 30 min. No smoking, tea or coffee during procedure.	Blood	2 Mauve (EDTA) Immediately place specimen on ice after collection.		Not recommended because of pulsatile variation in levels of peripheral blood. Have urine done first. Separate and freeze immediately. Send on dry ice.			SDCL - Hamilton TAT = 10 days	CATEP
*Catecholamines - Urine (includes epinephrine & norepinephrine)	Urine	24 hr urine		Refrigerate during collection. Adjust pH to 2-4 with HCL or freeze. Pediatric - include weight. State 24 hr volume.			SDCL TAT = 7 days	CATEU

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
CBC	Blood	1 Mauve					Hem - RGH & PH	CBC
CBC for Hemodialysis	Blood	1 Mauve		Please order CBCK for post-dialysis or unknown dialysis and CBCP for Pre-Hemodialysis patients			Hematology - RGH	CBCK CBCP
CBC for Neonates	Blood	Micro sample EDTA	350 uL minimum	For C-NC and C-2D			Hematology - RGH	CBCNC
CCU Panel (renal, liver, glucose, Ca, Mg, PO4, uric acid, CK, AST, LD) NB: Pasqua Hospital does not include LD	Blood	1 SST					Chem - RGH & PH	CCURG CCUPH
*CD4\CD8 (CBC must be done with test) Weekdays only	Blood	1 Mauve		Send before 1400 hr - Att'n Flow Cytometry specimen must be processed within 24 hr of collection. Keep at room temperature.			Hematology - RGH	CD4 + 8
CEA				See Carcinoembryonic Antigen				
*Celiac Disease Profile	Blood	1 SST		Includes Gliadine Ab IgA/IgG and tissue transglutaminase Ab			SDCL - Toronto TAT = 3 weeks	CDP
*Cell Markers				See Flow Cytometry				
*Ceruloplasmin (CER)	Blood	1 SST	2 mL serum.	Aliquot. Refrigerate. Transport on ice packs within 24 hr.	200-600	mg/L	SDCL TAT = 2-3 days	CERUL
*CH 50 (will do CH 100)							SDCL	
*CH 100				Replaced with Complement Activation E (CAE)			SDCL	CH100
**Chickenpox	Blood			See Varicella Zoster.				
**Chlamydia pneumoniae IgM and IgG (Anti-Chlamydia pneumoniae, C. pneumoniae, TWAR)	Blood	1 SST	3 mL serum	IgM and IgG performed simultaneously on all specimens.			SDCL	CHLAS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Chlamydia pneumoniae PCR	Bronchio-alveolar lavage (BAL) or lung biopsy	Sterile screw-capped container	1 mL (BAL) or lung biopsy	Freeze and ship ASAP to SDCL. Documentation must include clinical background leading to suspicion of C.pneumoniae in the patient.			SDCL - Winnipeg	CHLPP
*Chlamydia psittaci	Blood			See Psittacosis Serology.				
*Chlamydia trachomatis Culture	Cervical, Urethral, Rectal, Oral, Eye, Respiratory (neonatal)	Universal Transport Medium					SDCL	CHLOC
*Chlamydia trachomatis - Urine Chlamydia and GC (NAAT)	Urine	APTIMA	20 -30 mL first catch void urine in collection cup	Using provided disposable pipette, add 2 mL of urine specimen to APTIMA tube. Urine level must be between black fill lines.			SDCL	CHLGC
*Chloralhydrate (Noctec) (Trichloroethanol)	Blood	1 Red	2 mL serum	Do not use SST. Record time of collection on tube and req.	Therapeutic: 9-90 (expressed as Trichloroethanol)	µmol/L	SDCL TAT = 3 days	CHLHY
*Chloramphenicol (Chloromycetin)	Blood	1 SST	1 mL serum	Collect trough level specimen before the next dose is administered. Collect peak level (post-dose) specimen 60-90 minutes after drug infusion. Submit separate requisition for both trough and peak specimen.			SDCL – Toronto	CHLAM
*Chlordiazepoxide (Librium)	Blood	1 Red	2 mL serum	Do not use SST	Therapeutic: 2-17 Toxic: >33	µmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	CHLOZ

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Chloride	Blood	1 SST or 1 Green or Syringe with electrolyte dry heparin	1 mL serum or 1.5 mL whole blood for adults or 0.6 mL for neonates in a syringe		Serum: 98-110 Whole blood: 98-106	mmol/L	Chem - RGH & PH	CL (Serum) ABLCL (whole blood)
Chloride	CSF		1 mL CSF	No Longer Available	120-130	mmol/L	Chemistry - RGH	
Chloride	Fluid		1 mL fluid	No Longer Available	None available	mmol/L	Chem - RGH & PH	
Chloride	Sweat			See Sweat Chloride				
Chloride	Urine	Random or 24 hr	10 mL	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr) . Rural sites: Send aliquot frozen	<14 yr: 50-170 >14 yr: 150-250	mmol/L	Chemistry - RGH	CLURA CL24
*Chlorpromide (Sulfonal urea)	Blood	2 Green	2 mL plasma	Aliquot and freeze			SDCL	CHPRO
*Chlorpromazine (Largactil)	Blood	2 Red	4 mL serum		0.1-2.0	μmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	CHLOP
*Chlorpromazine	Urine			See Phenothiazines				
*Cholecalciferol				See Vitamin D 25 Hydroxy				
Cholesterol	Blood	1 SST	1 mL serum		<30 yr: 3.2-4.6 30-65 yr: 3.8-5.2 >65 yr: 4.2-6.2	mmol/L	Chemistry - RGH	CHOL
Cholesterol	Fluid		1 mL fluid		None available	mmol/L	Chem - RGH & PH	CHOFL
Cholinesterase, Pseudo (if ordered with Dibucaine #)	Blood	1 SST	1 mL serum	Separate serum as soon as possible	Dibucaine No: 78-89 Fluoride No: 62-71 Cholinesterase: Female: 150-330 Male: 200-350	U/L U/L	Special Chem - RGH	PSDIN

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Cholinesterase, Pseudo (no Dibucaine #) Note: Baseline specimen (30-60 days before the pesticide spray season) is highly recommended.	Blood	1 SST	1 mL serum	Separate from cells ASAP. Refrigerate. Transport ice packs within 24 hr of collection.	7-19	U/mL	SDCL TAT = 2 days	PCHOL
Chorionic Gonadotropins				See β -hCG				
*Chromium	Blood	1 – 7 mL Royal Blue EDTA) BD368381)	3 mL plasma	Separate ASAP into polypropylene tube. Indicate on requisition that specimen is lithium heparin plasma.			SDCL - Toronto TAT = 3 weeks	CHROM
*Chromium	Urine	24 hr urine in acid-washed container	10 mL aliquot	Record on req. collection date and 24 hr volume.			SDCL - Toronto TAT = 3 weeks	
*Chromogranine-A	Blood	1 EDTA (Mauve)	1 mL EDTA plasma	Freeze			SDCL – Hospital in Commons	CHRG
Chromosome Studies (Whole Blood) Collect specimen Monday to Thursday mornings only. Diagnosis must be stated on req.	Blood	1 Green (Sodium Heparin, not Lithium)	3-4 mL (adult) whole blood heparinized 1-2 mL (newborn)	Keep at room temperature at all times. Must be at RGH by noon.			RGH will send to Royal Columbian Hospital, New Westminster -New Leukemia children to Calgary Lab Services -JAKS2 and BCRA to BC Cancer Agency	BLCHR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Chromosome Studies (Bone Marrow) Collect specimen Monday to Thursday mornings only. Diagnosis must be stated on req.	Bone Marrow	Bone marrow put in RPMI Bone Marrow Transport Media. Two containers of media	2 mL bone marrows aspirate	Keep at room temperature. Must be at RGH by noon.			RGH will sent to BC -Royal Columbia (Temporarily) Vancouver, BC Occasionally BC Cancer	BMCRS BMCHR
Chromosome Studies (Amniocentesis) Collect specimen Monday to Thursday mornings only	Amniotic Fluid	2 - 15 mL Sterile falcon centrifuge tubes	15-20 mL amniotic fluid	Keep at room temperature at all times. Transport the same day.			RGH will send to Royal Columbian Hospital, New Westminster	AMCHR
Chromosome Studies for Molecular Testing DNA				See Molecular testing				
Chylomicrons	Blood	1 SST		Specimen to Chemistry				
Citrate Patient's age is required. State collection period.	Urine	24 hr urine	10 mL aliquot of 24 hr urine	Refrigerate during collection. Send frozen. Record 24 hr volume.(If collected with oxalate send sep req and specimen.)	Lower limit of normal at age 20 is 0.78 and increases at rate of 0.037 for each year	mmol/d	SDCL to U of A	CITRU
*CJD	CSF			See Creutzfeld Jakob Disease.				
CK (CPK)	Blood	1 SST	1 mL serum		Male: 55-170 Female: 30-135	U/L	Chem - RGH & PH	CKS
CK-MB Screen				No longer available				
CK-MB Mass	Blood			Done if Ordered and the Total CK is >200	CKMB Mass: 0-9 µg/L CKMB RI: 0-4%		Chemistry - RGH	MASS
*Clobazam (Frisium) Includes N-desmethyl clobazam	Blood	2 Red	4 mL serum		Clobazam: 150-1000 N-desmethylclobazam: 2800-14000	nmol/L	SDCL TAT = 3 days	CLOBA
*Clomipramine (Anafranil)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	16-630 (up to 1500 for non-responders) Toxic: >1700	nmol/L	SDCL TAT: Emerg = 4 hr	CLOMI

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Clonazepam (Rivotril)	Blood	2 Red or 2 Green	4 mL serum or 4 mL plasma	Do not use SST. Record time of collection on tube and req.	Therapeutic: 60-220 Toxic: >230	nmol/L	SDCL TAT = 3 days	CLONZ
*Clozaril (Clozapine)	Blood	2 Red or 2 Green	4 mL serum or 4 mL plasma	Do not use SST. Record time of collection on tube and req.	Therapeutic: 300-2100 Toxic: >4000	nmol/L	SDCL	CLOZA
*CMV - Antigenemia				No longer available ORDER: CMV Viral Load				CMV/A
*CMV - Buffy Coat	Blood	2 Mauve	Whole blood				SDCL	CMV/B
*CMV – CSF PCR	CSF	Sterile container	1 mL	Freeze and ship ASAP to SDCL			SDCL to RUH, Saskatoon	CMV/C
**CMV IgM Cytomegalovirus IgM Serology	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	CMVMS
* *CMV IgG Cytomegalovirus IgG Serology	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	CMVIS
*CMV Urine CMV Isolation or Detection	Urine	Sterile urine container	20 mL urine (random)				SDCL	CMV/U
*CMV – Viral Load	Blood	1 Mauve	Whole blood	Ship on Ice. Collect in AM and must be at SDCL by noon Monday – Thursday. If unable to reach SDCL by noon aliquot plasma and refrigerate. Notify referral desk: 787-3131.			SDCL - Saskatoon	CMVVL
*Cobalt Provide collection date and DOB	Urine	Random or 24 hr urine container acid-washed	10 mL urine	Wash container with 500 mL of a 10% sol'n of nitric acid. Rinse the container twice with deionized water.			SDCL - Toronto	COBAL
*Cocaine	Urine	Random. Tightly sealed container	20 mL urine	Blood unsuitable. Refrigerate.	Negative		SDCL TAT = 2 days	COCAI
*Coccidioidomycosis Serology	Blood	1 SST	3 mL serum				SDCL - Edmonton TAT = 3 weeks	COCCS
*Codeine	Blood	1 Red					SDCL	CODS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Codeine	Urine	Random	50 mL urine				SDCL	CODU
Cold Agglutinins	Blood	1 Mauve + 1 Red clotted at 37° C	3 mL whole blood and 4 mL serum	Centrifuge and separate serum. Label tubes with first and last name, MRN or HSN and DOB.			Transfusions - RGH	*COLA
*Complement Activation E				See CAE				
Complete Blood Count				See CBC				
Coombs	Blood	1 Mauve		Label tubes with first and last name, MRN or HSN and DOB	Negative		Transfusions - RGH	*DANT
Congentin	Blood	2 Red	4 mL serum				SDCL	CONGE
*Copper (Serum)	Blood	1 – 7 mL Royal Blue EDTA) BD368381	2 mL plasma	Separate ASAP into polypropylene tube. Indicate on requisition if specimen is serum or sodium heparin plasma. DO NOT FREEZE	0-3 m: 1.4-7.2 3-6 m: 3.9-17.3 6-12 m: 7.9-20.1 1-13 yr: 12.6-19.0 13-Adult (Female): 9-27 13-Adult (Male): 11-22	µmol/L	SDCL TAT = 2 weeks	COPS
*Copper (Urine)	Urine	24 hr or random urine in acid- washed container	7 mL of 24 hr or random urine in acid- washed container	Send in polypropylene container. Record 24 hr volume if submitted or random urine and collection date on req.			SDCL - Toronto TAT = 3 weeks	COPU
Coproporphyrin				See Porphyrins				
*Cordarone				See Amodarone				
*Core Antigen	Blood	1 SST	1 mL serum				SDCL	HEBCO
Correction Studies				See Bleeding Disorder Investigation (BLDWS)				
*Corticosteroids	Blood	1 SST or 1 Green	2 mL serum or plasma				SDCL	COSTE
*Cortisol (Saliva)	Saliva			Doctor's office must contact SDCL 787-3197 for collection kit and instructions			SDCL	CORSA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Cortisol (Serum)	Blood	1 SST	1 mL serum (250 µL – neonates)	Critical - record time of collection	(AM) 0800 h: 138-690 (PM) 1600 h: approximately half of AM values	nmol/L	SDCL TAT = 3 days	CORTR
*Cortisol Urine Free	Urine	24 hr urine	10 mL of 24 hr urine	Record volume	Adult: 25-146	nmol/d	SDCL TAT = 7 days	CORTU
CosyntropinStim.				See ACTH Stimulation				
*Coxiella burnetii	Blood			See Rickettsial Serology.				
*C-Peptide (must be fasting)	Blood	1 SST	1 mL serum	Avoid hemolysis. Note fasting sample on req. Freeze within 2-3 hrs of collection. Submit as separate samples.	298-1324	pmol/L	SDCL TAT = 7 days	CPEP
**C. pneumoniae	Blood			See Chlamydoiphilia pneumoniae IgM and IgG.				
C-Reactive Protein (CRP)	Blood	1 SST	1 mL		1-8	mg/L	Immunology - RGH	CRPA
CRP (high sensitivity)	Blood	1 SST	1 mL serum				SDCL	CRPHS
Creamatocrit	Milk		1 mL human milk	No Longer Available			Special Chem - RGH	
Creatine Kinase				See CK				
Creatinine	Blood	1 SST	1 ml serum		Adult: 60-130 Pediatric Ranges: 0 – 5 yrs 20-60 6 – 12 yrs 30-70 13 – 14 yrs 40-85	µmol/L	Chem- RGH & PH	CREAT
Creatinine	Fluid		1 mL fluid		None available	µmol/L	Chem - RGH & PH	CREFL
Creatinine State collection period	Urine	Random or 24 hr urine	2 mL urine	Record 24 hr urine volume	24 hr: 7.1-18.0	mmol/d	Chem – RGH & PH	CRURA (random) CRE24 (24 hr)
Creatinine Clearance (State patient's height (cm) & weight (kg) and collection	Urine and Blood	24 hr urine and 1 SST	10 mL of 24 hr urine and 1 mL serum	Record 24 hr urine volume. Needs a serum specimen, patient's height in cm and weight in kg.	Children(<14yrs) 40.2-108.0 mL/min /1.73m ² Male: 84.0-125.4 mL/min /1.73m ²	mL/min	Chem - RGH & PH	CC24C (corrected) CC24A (actual)

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
period)				Rural sites: Send aliquot frozen.	Female: 75.6-114.0mL/min/1.73m ²			
*Creutzfeld Jakob Disease CSF Creutzfeld Jakob Disease (BSE, CJD)	CSF	Sterile leak proof tube	2 - 3 mL	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis.			SDCL - Winnipeg	CJDC
Cross Match (Requires diagnosis and reason for transfusion)	Blood	2 Mauve		Needs a Typenex # on out-patient. Requires patient armband (full name, Typenex # or MRN and DOB). Label tubes with full name, DOB and MRN or PHN and Typenex#.			Transfusions - RGH	*GSM
Cryofibrinogen	Blood	2 Blue	5 mL plasma	Collect and keep at 37° C until spun			Immunology - RGH	CRYOF
Cryoglobulin	Blood	1 Red	2 mL serum	Collect and keep at 37° C, clot in 37° C waterbath			Immunology - RGH	CRYGL
*Cryptococcal Antigen Serology	Blood	1 SST	3 mL serum				SDCL – Edmonton TAT = 3 weeks	CRYPS
*Cryptococcal Antigen	CSF	1 sterile tube	0.5 mL CSF	Requires 0.5 mL			Microbiology - RGH	CRYPT
CSF Cell Count	CSF	1 sterile tube	1 mL CSF	Specimen must be in lab within a half hour from the time of collection. If sharing same tube, cell count should be done first.	WBC: (Adults) 0-5 WBC: (Neonates) 0-30 RBC: 0	X 10 ⁶ /L	Hem - RGH & PH	FLCSF
CSF Cell Count for Cancer Clinic	CSF	1 sterile tube	1 mL CSF	Specimen must be in lab within a half hour from the time of collection. If sharing same tube, cell count should be done first.	WBC: (Adults) 0-5 WBC: (Neonates) 0-30 RBC: 0	X 10 ⁶ /L	Hem - RGH & PH	ABCSF
Culture & Sensitivity				See Micro Section				
*Cutaneous Immunofluorescence Antibodies				See Anti-Skin Ab				
*Cyanide	Blood	1 Mauve	3 mL whole		Normal: <0.2	µg/mL	SDCL - Mayo Labs	CYAN

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
			blood		Toxic: ≥ 2.0			
*Cyclic AMP Provisional diagnosis for interpretation required. Fasting overnight.	Blood & Urine	1 Mauve (full) and Random urine	2 mL plasma EDTA and 10 mL random fresh urine	Acidify urine with a few drops of 6N HCL. Freeze specimens and send on dry ice.			SDCL - Hamilton	CAMPS (serum) CAMPU (urine)
*Cyclobenzapine	Blood	1 Red	2 mL serum				SDCL	CYCLB
Cyclosporine	Blood	1 Mauve	2mL whole blood	Collect prior to AM dose	Ranges: Introduction phase up to 3 months post transplant: Kidney 150-225 $\mu\text{g/L}$ Liver 225-300 $\mu\text{g/L}$ Heart 250-350 $\mu\text{g/L}$ Maintenance after 3 months post transplant: Kidney 100-150 $\mu\text{g/L}$ Liver 100-150 $\mu\text{g/L}$ Heart 125-175 $\mu\text{g/L}$	$\mu\text{g/L}$	Chemistry - RGH	CYCLO
Cystic Fibrosis DNA Analysis Check out	Blood	2 Mauve (adult) 1 Mauve (child)	10 mL (adult) whole blood 5 mL (child) whole blood	Keep at room temperature at all times. Must be at RGH by noon.			Variety of places	DNACF
*Cysticercosis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Edmonton TAT = 4 weeks	CYSTI
Cystine	Blood	1 Green	2 mL plasma	Aliquot & freeze			SDCL- Saskatoon TAT = 1 week	CYSTP
*Cystine	Urine	Random Urine Container	5 mL	Freeze			SDCL- Saskatoon TAT = 1 week	CYSTU
**Cytomegalovirus IgM Serology (CMV IgM)	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	CMVMS
**Cytomegalovirus IgG Serology (CMV IgG)	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	CMVIS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Cytomegalovirus	Blood			See CMV.				
*Cytomegalovirus Urine CMV Isolation or Detection	Urine	Sterile urine container	20 mL urine (random)				SDCL	CMV/U
*Cytotoxic Antibodies	Blood	1 Red (full)	10 mL blood				Transfusions - RGH Saskatoon	SESTD
*Dalmane (Flurazepam)	Blood	2 Red	4 mL serum				SDCL	FLURA
*Darvon	Blood	2 Red	4 mL serum				SDCL	DARVO
D-Dimer	Blood	1 Blue (full)	1 mL plasma	Can use same tube as PT and APTT. Must be Double-spun and sent frozen if referred in.	<500	µg/mL	Hematology - RGH	DDIM
*7-dehydrocholesterol (Smith-Lemli-Opitz Screen)	Blood	1 Red or 1 Green	1 mL serum or plasma	Centrifuge immediately, protect from light. Freeze.			SDCL - Toronto	7DHYC
*Dehydroepiandrosterone (DHEA-S)	Blood	1 SST	1 mL serum		Female: 0.9-12.0 Male: 2.2-15.0	µg/mL	SDCL TAT = 3 days	DHEAS
*Demoral	Blood	1 Red	3 mL serum				SDCL	DEMOR
*Dengue Fever Serology	Blood	1 SST	2 mL serum				SDCL to National Micro Lab, Winnipeg	DENFS
*11 Deoxycortisol	Blood	1 SST or 1 EDTA	1 mL serum or plasma Frozen	Specimen must be frozen			SDCL - Hamilton	11DEO
*11 Deoxycorticosterone	Blood	1SST or 1 RED	1 mL serum Frozen	Specimen must be frozen			SDCL- Mayo Clinic	11DCS
*Depakene (Valproic Acid) Collect 0-1 hr before dose	Blood	1 SST or 1 Green	1 mL serum or plasma		350-700 Significant liver enzyme elevation and thrombocytopenia may occur at levels greater than 1000 µmol/L	µmol/L	Chemistry - RGH	VALPR
*Desipramine (Norpramin)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	Minimum: 150-470 Maximum: 600-1100 Toxic: >1700	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	DESI
*Desmethylcolbazam				See Clobazam				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Desyrel (Trazodone)	Blood	2 Red	4 mL serum				SDCL	TRAZO
*Dexamethasone Suppression Test (DST)				See Lab Service Manual for instructions				
*DHEA-SO ₄ (DHEAS)				See Dehydroepiandrosterone Sulfate				
*Diazepam (Valium)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube	Therapeutic: 350-900 Toxic: >3500	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	DIAZ
Dibucaine Number				See Cholinesterase				
*Digitoxin	Blood	1 Red	1 mL serum				SDCL	DITOX
Digoxin (Digitalis) Collect 0-1 hr before next dose; no earlier than 6 hr after last dose. <i>See TDM section for ideal sampling times</i>	Blood	1 SST	1 mL serum		Therapeutic & potentially toxic: 2.6-3.2 Therapeutic: 1.0-2.6 Therapeutic & potentially suboptimal: 0.6-1.9 N.B. Potassium status may modify Digoxin Toxicity	nmol/L	Chemi - RGH & PH	DIG DIGPA
*1,25 Dihydroxy Vitamin D				See Vitamin D1,25 Dihydroxy				
Dilantin (Phenytoin) Collect 1 hr before dose <i>See TDM section for ideal sampling times</i>	Blood	1 SST	1 mL serum		Therapeutic: 40-80 Toxic: ≥119	μmol/L	Chem - RGH & PH	PHENY PTNPA
*Dilantin (Phenytoin) - Free	Blood	1 Red	2 mL serum	Do not collect in SST. Freeze.			SDCL	FRPTN
*Diltiazem				See Cardizem				
Dilute Russell Viper Venom Time (DRVVT)	Blood	3 Blue (full) and 1 Red		Test is part of LUPWS, see LUPWS			Special Coag Hem - RGH	
*Diphenhydramine (Gravol)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	Therapeutic: 40-430 Toxic: >2000	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	DIPH
*Diphenylhydantoin				See Dilantin				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Diphtheria Antitoxin	Blood	1 Red	2 mL serum	Aliquot serum. Capital Health Requisition			SDCL- Edmonton TAT = 3 weeks	DIPAT
Direct Antiglobulin Test (DAT/Coombs)	Blood	1 Mauve		Label tube with first and last name, HSN or MRN	Negative		Transfusions - RGH	*DANT
Direct Immunofluorescence	Tissue biopsies						Histology - PH	
*Disopyramide (Rhythmadon) Collect immediately before next oral dose for trough concentration. Peak occurs 2-3 hr after last dose	Blood	2 Red or 2 Green or 2 Mauve	3 mL serum or 3 mL plasma	Do not use SST	Venous: 9-15 Arterial: 8.2-9.4	µmol/L	SDCL TAT = 1 day	DISOP
D-Lactate Add DNA testing	Blood	1 Grey	1 mL fluoride plasma	Separate immediately. Freeze.			SDCL - Hamilton	DLACS (serum) DLACU (urine)
DNA Analysis for CF	*Note: Call Supervisor, Accession (4495) or Asst Mgr, Lab Support Services (4465)	2 Mauve (adult) 1 Mauve (child)	10 mL (adult) whole blood 5 mL (child) whole blood	Keep at room temperature at all times. Must be at RGH by noon.			RGH will send to BC Children's Hospital, Vancouver	DNACF
*DNASE-B (Anti)				No Longer Available				
*Dopamine State collection period	Urine	24 hr urine	10 mL of 24 hr urine	Adjust pH to <2 with HCL. State volume and collection date.			SDCL - Toronto	DOPA
*Doriden (Glutethimide)	Blood	2 Red	3 mL serum				SDCL	DORID
*Doxepine (Sinequan)	Blood	2 Red or 2 Green	4 mL serum or 4 mL plasma	Do not use SST. Record time of collection on tube req.	Therapeutic: Lower level 300-500 Maximum 800-1000 Toxic: >1700	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	DOX

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
2,3 DPG (Diphosphoglycerate)	Blood	1 Green	3 mL whole blood heparinized	Place on ice immediate and deliver to Special Chemistry - RGH	8.2-17.4	μmol/g. Hb	Special Chem - RGH	23DPG
*Drug Screen Drugs to screen for must be listed individually.	Blood	2 Red	5 mL serum				SDCL	DRUGS
*Drug Screen	Urine	Random	2-5 mL aliquots in plastic tubes(12x7.5mL) at time of collection. If not aliquotted send source container.	Street drugs screened for			SDCL	DRUGU
D'Xylose				See Xylose				
E2				See Estradiol				
*Eastern Equine Encephalitis	Blood CSF			See Encephalitis (Viral).				
**EBV	Blood CSF			See Epstein-Barr Virus.				
*Echinococcosis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Montreal TAT = 4 weeks	ECHIN
*Effexor (Venlafaxine)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	Therapeutic: 250-900	nmol/L	SDCL TAT = 3 days	EFFEX
*Ehrlichia Serology	Blood	1 SST	2 ml serum				SDCL – Winnipeg TAT = 4 weeks	ERHLS
*Elavil (Amitriptyline)	Blood	2 Red	5 mL serum				SDCL	
Electrolytes (Na, K, Cl, CO2)	Blood	1 SST or 1 Green if STAT	1.5 mL serum or 1.5 mL plasma	Use Green if STAT or patient does not clot (Hemodialysis or OHS)	See individual tests		Chem – RGH & PH	HLYTE (hospital) PLYTE (community)
Electrolytes (Na & K)	Breast Milk	Sterile Container	5 mL breast milk	NOT AVAILABLE	None available		Chem - RGH & PH	LYBRM

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Electrolytes (Na & K) Not performed on formed stools	Feces	Stool Container	1 g feces	NOT AVAILABLE	None available		NOT AVAILABLE	LYFEC
Electrolytes (Na & K)	Fluid		1 mL fluid	NOT AVAILABLE	None available		Chem - RGH & PH	LYFLD
Electrolytes (Na & K)	Urine	Random or 24 hr	100 mL urine		See individual tests for reference ranges of 24 hr urine. None available or random urine.		Chem - RGH & PH	LYTUR (random) LYT24 (24 hr)
Electrophoresis				See specific test (i.e. protein, hemoglobin)				
*Encephalitis (Bacterial) – Blood PCR (Hemophilus influenzae, Neisseria meningitidis, Strept pneumoniae)	Blood	1 Mauve	2 mL EDTA whole blood	Refrigerate specimen. Do not freeze. Ship on ice pack.			SDCL	BANTS
*Encephalitis (Bacterial) CSF Encephalitis (Bacterial) PCR (Hemophilus influenzae, Neisseria meningitidis, Strept pneumoniae)	CSF	Sterile leak proof tube.	1 mL CSF	Phone SDCL at 306-787-7744 (afterhours 360-537-9416) to pre-arrange testing prior to shipping. If longer than 4 hrs, CSF must be frozen.			SDCL	BANTG
*Encephalitis (Viral) – Plasma PCR (Eastern Equine, Japanese Encephalitis)	Blood	1 Mauve	2 mL EDTA plasma	Separate ASAP and freeze plasma. Ship on ice. Plasma must be received frozen.			SDCL – Winnipeg	ENCAS
*Encephalitis (Viral) CSF Encephalitis (Viral) PCR (Eastern Equine, Japanese Encephalitis)	CSF	Sterile leak proof tube.	1 ml CSF	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis.			SDCL – Winnipeg	ENCCF
*Endomysial Antibodies (Anti-Glutenial Ab)	Blood	1 SST	1 mL serum	Keep specimen cool. Send on ice packs.			SDCL - Toronto	ABEND
*Entamoeba	Blood			See Amoebiasis (Entamoeba) Serology.				
**Enterovirus Serology	Blood			No longer available.				ENTAS
*Epinephrine				See Catecholamines			SDCL	EPIN

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Epival (Valproic Acid)				See Depakene				
**Epstein-Barr Virus IgM Serology (EBV IgM, Viral Capsid Antigen)	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	EBVMS
**Epstein-Barr Virus IgG Serology (EBV IgG)	Blood	1 SST	1 mL serum	Convalescent (Immune status)			SDCL-Saskatoon	EBVGS
*Epstein-Barr CSF Epstein-Barr Virus PCR	CSF	Sterile leak proof tube	1 mL CSF	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis.			SDCL	EBVC
Erythrocyte Protoporphyrin				NO LONGER AVAILABLE. See Zinc Protoporphyrin			SDCL	
*Erythropoietin (Eprex) (EPO) Recommend collection time 0730-1200 hr	Blood	1 SST or 1 Green	2 mL serum or plasma	Separate from cells and freeze ASAP. Avoid hemolysis.			SDCL - Toronto TAT = 3 weeks	ERYTH
ESR	Blood	1 Mauve	3 mL whole blood		0-20	mm/hr	Hem - RGH & PH	ESR
Estradiol	Blood	1 SST	1 mL serum	Refrigerate and keep cool. assay must be done within 48 hr.	Female: Follicular phase: <977 Mid-cycle: 433-1303 Luteal phase: 95-606 Post-menopausal: <110 Male: <205	pmol/L	Chemistry - RGH	ESTRA
*Estrione - Free (Unconjugated)	Blood	1 SST	1 mL serum				SDCL - Toronto TAT = 2 weeks	FREST
*Esterone	Blood	1 SST	1 mL serum	Aliquot and freeze			SDCL - Hamilton	ESTRO
Ethanol	Blood	1 Green or 1 SST		Do not open tube			Chemi - RGH & PH	ALC
*Ethanol (Ethyl Alcohol)	Urine	Random urine	20 mL urine	Refrigerate. Send in tightly sealed container.	Negative		SDCL TAT = 2 days	URALC
Ethchlorvynol (Placidyl)	Blood	1 Red	2 mL serum				SDCL TAT = 3 days	ETHVY

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Ethosuximide (Zarontin) Collect 0-1 hr before dose <i>See TDM section for ideal sampling times</i>	Blood	1 Red or 1 Green or 1 Mauve	1 mL serum or 1 mL plasma	Do not use SST	Therapeutic: 283-708 Toxic: >708	µmol/L	SDCL TAT = 1 day	ETHOL
Ethyl Alcohol	Blood	1 Green or 1 SST		Do not open tube			Chem - RGH & PH	ALC
*Ethylene Glycol	Blood	1 Grey or 1 Red	3 mL whole blood 0.5 mL serum	Keep tube stoppered Record time and date of collection on tube and req.	Normal negative Panic value: >4	mmol/L	SDCL TAT: Emerg = 2 hr Routine = 1 day	ETHGL
Euglobulin Lysis	Blood	1 Blue (full)					Hematology - RGH	EUGLO
Exposure: INHOUSE Source of Exposure Exposed Person	Blood	1SST 2 SST & 1EDTA		Extra information depending on if staff or public must be included on the requisition (Ward to complete)eg. copies	If this Exposure is due to an assault please see the following ASSAULT Exposure.		RGH	SORCE (source) EXPOS (exposed person)
Exposure: ASSAULT	Blood	1 EDTA & 2 SST		If Pediatric Assault order EXPOS with a VDRL			RGH	ASSLT
Exposure: RURAL Source of Exposure Exposed Person	Blood	1 SST (for either)					RGH-Chemistry	RUSOR (source) RUEXP exposed
Factor Assays	Blood	3 Blue (full)	6 mL citratd plasma	Test is part of BLDWS (see BLDWS)			Special Coag Hematology - RGH	BLDWS
Factor V Leiden	Blood	1 Mauve (full)	4.5 mL whole blood EDTA	See Hypercoag			Special Coag Hematology - RGH ? Saskatoon	HCOAG
Factor VIII Related Antigen	Blood	3 Blue (full)	6 mL citratd plasma	Test is part of BLDWS (see BLDWS)			Special Coag Hematology - RGH	
*Farmer's Lung	Blood			See Aspergillus Serology.				
Fat Content of Breast Milk				See Creamatocrit				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Fat in Feces	Feces		Containers available from SDCL only.	No longer available at RGH. Sent out by SDCL with prior approval from Dr. Lehotay.				FCFAT
*Fatty Acids (Free Fatty Acids) Collect Fasting	Blood	1 SST	1 mL serum	Freeze serum			SDCL	FFA
*Fatty Acids (Very Long Chain)	Blood	2 Red or 2 Mauve	2 mL serum or plasma	Send frozen - 2 mL minimum (Neonate - 0.5 mL minimum)			SDCL- Saskatoon	FALC
*Fecal Elastase	Stool		5g	Frozen			SDCL – Calgary	FELAS
*Feldene	Blood	1 Red	2 mL serum				SDCL	FELDE
*FEP (Free Erythrocyte Protoporphyrin)	Blood	1 Mauve (full)	5 mL whole blood	Keep in dark. Do not spin.			SDCL	TEP
*Fenopropfen (Nalfon)	Blood	1 Red	2 mL serum				SDCL	FENOP
Ferritin	Blood	1 SST	1 mL serum		Female: 10-200 Male: 30-300	µg/L	Chemistry - RGH	FER
Fetal Hemoglobin	Blood	1 Mauve	3 mL whole blood		<1 mo: 55-85 1 mo-6 mo: 0-30 6 mo-12 mo: 0-20 12 mo-18 mo: 0-10 18 mo-5 yr: 0-3 >5 yr: 0-1	%	Special Chem - RGH	HBF
Fetal Lung Maturity	Amniotic Fluid			See Lamellar Body Count				
Fibrinogen Anticoagulant status must be provided on req.	Blood	1 Blue (full)	1 mL citrated plasma	Can be same tube if PT and APTT are ordered	2-4 3.5-4.5 (maternity patients)	g/L	Hem - RGH & PH	FIB
Fibrinogen Degradation Products				Order D-Dimer instead				
*Fifth Disease	Blood			See Parvovirus B19.				
*Filariasis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal	FILAR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
							TAT = 4 weeks	
FK506				See Tacrolimus				
Flecainide (Tambocor) Collect 0-1 hr before dose for trough. Peak occurs 2-3 hr after last dose.	Blood	2 Red or 2 Green	3 mL serum or plasma	Separate from cells within 2 hr of collection. Send on ice packs or frozen.	Toxic: >1	µg/mL	SDCL - May Lab	FLECA
*Flow Cytometry (CBC must be done with test)	Blood, Bone Marrow, Tissue, Body Fluid, FNA	Blood and Bone Marrow (sodium heparin) Tissue, FNA and Body Fluids (RPMI media)		Test done Monday-Friday. Specimen must be received within 24 hr and processed within 48 hr. Keep blood and bone marrow specimens at room temperature. Tissue, FNA and body fluids must be refrigerated.			Hematology - RGH	FLOWG
Flow Cytometry (Saskatoon) (CBC must be done with test)	FNA, Bloody Fluid, Tissue	Do not add formalin. Deliver to lab immediately (RGH/PH) to be placed in RPMI media		RPMI media (RGH – flow fridge, PH – cyto fridge)			Saskatoon (RUH) (CBC done in Hematology)	FLOWC
*FLU Test for Severe Respiratory Illness	Naso-pharyngeal, Aspirate, Washings	Universal Transport Medium		Specimen must be accompanied with RQHR Microbiology Requisition and/or Severe Respiratory Illness and Pandemic Influenza Requisition.			SDCL	FLU-R
*Fluoxetine (Prozac)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	Therapeutic: 16-1600	nmol/L	SDCL TAT = 3 days	FLUOX
*Fluconazole (Anti-fungal drug)	Blood	1 SST or RED	2 mL serum	Frozen			SDCL to Edmonton	FLUCZ
*Fluphenazine				See Phenothiazines				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
(Moditen)								
*Flurazepam (Dalmane)	Blood	2 Red	4 mL serum	Do not use SST. Record time of collection on tube and req.	Therapeutic: 250-640	nmol/L	SDCL TAT = 3 days	FLURA
*Fluoride	Blood	1 Red Avoid contact with rubber stopper	2 mL serum	Draw blood into vacutainer and then remove rubber stopper immediately. Aliquot with plastic pipette			SDCL - California	FLUOR
*Fluoride	Urine	Random	20 mL urine	Do not collect in glass container			SDCL - California	FLUOU
*Flucytosine	Blood	1 Red or 1 Green	1 mL serum or plasma				SDCL - Toronto	FLUCY
*Fluvoxamine				See Luvox				
Folic Acid, Red Cell	Blood	1 Mauve	1 mL whole blood	Needs hematocrit run in Hematology first	408.6-1389.8	nmol/L	Chemistry - RGH	RCFOL
Folic Acid and Vitamin B12 NOTE: RBC folate done. If either B12 or RBC folate is decreased, serum folate is done.	Blood	1 SST and 1 Mauve	1 mL serum & 1 mL whole blood	Give EDTA tube to Hematology first. Needs to have hematocrit run.	RBC folate: 408.6-1389.8 Serum folate: 7.9-36.6 B12: Deficient: <116 Borderline: 116-138 Normal: 138-781	nmol/L pmol/L	Chemistry - RGH	B12FO
Follicle Stimulating Hormone				See FSH				
*Follitropin				See FSH				
Fragile X Chromosome	Blood	2 Mauve and 2 Green (Na Heparin)	Whole blood (do not spin)	Keep at room temperature. Collect Monday through Thursday. Specimen must be at RGH by noon.			BC Children's Hospital, Vancouver	FRAGX
**Francisella Acute Serology (Tularemia)	Blood	1 SST	3 mL serum	Submit acute and convalescent sera for diagnosis.			SDCL – Winnipeg TAT = 4 weeks	FRAAS
**Francisella Convalescent Serology (Tularemia)	Blood	1 SST	3 mL serum	Submit acute and convalescent sera for diagnosis.			SDCL – Winnipeg TAT = 4 weeks	FRACS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Free Androgen Index (Calculated from sex hormone, binding globulin and total testosterone assays)	Blood	1 SST	1 mL serum		Replaces Free Testosterone Male: 14.8-94.8 Female: Normal cycling: 0-8.5 Oral contraceptives: 0-3.4 Postmenopausal (untreated): 0-6.6 Hirsute: 1.7-20.6		SDCL TAT = 5 days	FAI
*Free Carnitine	Blood	1 SST or 1 Green	1 mL serum or 1 mL plasma	Avoid hemolysis. Separate from cells. Freeze. Send on dry ice.	Adult: 18-63 <12 yr: 16-51	µmol/L	SDCL TAT = 10 days	CARNS
*Free Cortisol	Urine	24 hr Urine	10 mL of 24 hr urine collection	Record volume. Refrigerate.	Adult: 25-146	nmol/d	SDCL TAT = 7 days	CORTU
*Free Iron (Non-transferrin bound)	Blood	1 Red	1 SST collected, remove serum from cells ASAP				SDCL	FREFE
Free Light Chains (Kappa, Lambda)	Blood	1 SST	2 mL serum		Free Kappa:3.3-19.4 Free Lambda:5.7-26.3 Ratio: 0.26-1.65	mg/L	Immunology-RGH	FRLCI
Free Light Chains (Kappa, Lambda)	Urine	24 hr Urine	10 mL of 24 hr urine collection		Free Kappa:1.35-24.19 Free Lambda:0.24-6.66 Ratio: 2.04-10.37	mg/L	Immunology-RGH	FRLCU
Free PSA Done if PSA >4 and <=10				DO NOT ORDER				
*Free-T3	Blood	1 SST	2 mL serum		2.6-5.7	pmol/L	Chemistry - RGH	FRT3
*Free-T4	Blood	1 SST	2 mL serum		9-19	pmol/L	Chemistry - RGH	FRT4
*Free Testosterone	Blood			See Testosterone				FTEST
*Frisium (Clobazam)	Blood	2 Red	3 ml serum				SDCL	CLOBA
*Fructosamine				See Glycosylated Proteinj				
Fructose in Semen	Semen		1 mL semen	UNAVAILABLE			Special Chem - RGH	FRUCT

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
FSH	Blood	1 SST	1 mL serum	Keep cool. Do not freeze.	FSH Male: 13-70 yr: 1.4-18.1 Females: Follicular: 2.5-10.2 Mid-cycle: 3.4-33.4 Luteal: 1.5-9.1 Pregnant: <0.3 Postmenopausal: 23-116.3	IU/L	Chemistry - RGH	FSHA
*FTI (Free Thyroxine Index)				Calculation from free T4 and TBG				
*Fungal Serology	Blood			Must indicate requested test on requisition. See: Aspergillus Blastomycosis Coccidioidomycosis Cryptococcal Antigen Histoplasmosis Sporotricosis			SDCL	
*Gabapentin				See Neurontin				
*Galactomannin	Blood			See Aspergillus Serology.				
Galactose	Blood	1 Red or 1 Green	1 mL serum or 1 mL plasma	Separate from cells and freeze	<1.11 at 60 minutes after galactose feed	mmol/L	Special Chem - RGH	GALSE
Galactose	Urine	Random	10 mL urine	Frozen	0.0-0.8 ≤3.3 for neonates	mmol/L	Special Chem - RGH	GALUR
Galctose-1-Phosphate Uridyl Transferase (GAL-PUT)	Blood	1 Green	1.0 mL whole blood heparinized				SDCL to Saskatoon	GALPU
Gamma Glutamyl Transferase (GGT)	Blood	1 SST	1 mL serum		Female: 12-43 Male: 15-73	U/L	Chem - RGH & PH	GGT
Gamma Hydroxy Butyric Acid	Urine	Random	4 mL urine	Frozen. Collect ASAP after suspected ingestion			SDCL	GHBAU
Gamma Hydroxy Butyric Acid	Blood	1 RED (NO SST)	2.0 mL serum	Frozen. Urine preferred.			SDCL	GHBAS
*Gastric Antibody				See Anti-Gastric Antibody				
*Gastrin Collect fasting (10 hr minimum)	Blood	1 RED	1 mL serum	Centrifuge in the cold ASAP. Freeze serum immediately. Submit a separate sample. Note	0-100	ng/L	SDCL TAT = 14 days	GAST

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
				fasting serum on req. Avoid hemolysis. Send on dry ice.				
*GC	Urine			See Neisseria gonorrhoeae.				
Genotyping for HCV				See HCV Genotyping				
Genotyping for Hemochromatosis				See Hemochromatosis				
Gentamycin Trough Peak NOTE: Record exact date and time of last dose and exact date and time of collection <i>See TDM section for ideal sampling times.</i>	Blood	1 SST	1.0 mL serum	Trough – usually drawn ½ hr before drug is administered. Peak – usually drawn 1 hr after drug is administered, but physician may vary. Daily – 6 to 14 hrs after dose.	Trough: 0.0-2.0 Peak: 5.0-10.0 Toxic: >=15.0 for post > 2.0 for pre	mg/L	Chemistry - RGH	GENT GENPR (trough) GENPO (peak)
Gestational 50 g Screen	Blood	1 SST	1 mL serum	Taken 1 hr after drink	3.6-7.8	mmol/L	Chemistry - RGH	GL50G
Gestational Glucose Tolerance (75 g drink)	Blood	1 SST for each sample	1 mL serum	Specimens (fasting, 1 hr and 2 hr after drink)	See section on glucose tolerances for interpretation		Chemistry - RGH	GTTGE
GGT				See Gamma Glutamyl Transferase				
*Gliadin Antibody				Anti-Gliadin Ab				
*Glucagon min. 12 hr fast required	Blood	2 Mauve (EDTA) prechilled	2- 5 mL EDTA whole blood	Call Chemistry immediately after collection to add Trasylol. Add 5 mL each of the EDTA whole blood to 2 Trasylol tubes (in accession fridge). Mix and spin in cold centrifuge ASAP. Freeze plasma.			SDCL - Toronto TAT = 3 months	GLUCA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Glucose	Blood	1 SST or 1 Green or syringe with electrolyte balanced dry heparin	1 mL serum or plasma or 1.5 mL whole blood for adults or 0.6 mL for neonates in a syringe		Fasting: 3.6-6.1 Random: <11.1 Whole blood: 3.9-5.8	mmol/L	Chem - RGH & PH	GLU GLUCR (random) GLUFA (fasting) GLUPC (2 hr PC) ABLGL (Whole Blood)
Glucose NB – Plasma glucose should be measured simultaneously with CSF glucose	CSF		0.5 mL CSF		2.7-4.2	mmol/L	Chem - RGH & PH	GLUCF
Glucose	Fluid		1 mL fluid		None available	mmol/L	Chem - RGH & PH	GLUFL
Glucose Tolerance	Blood	1 SST for each collection	0.5 mL serum from each collection	2 hr (F, 2h) 5 hr (F, 0.5h, 1h, 1.5h, 2h, 3h, 4h, 5h) Gestational (F, 1h, 2h)	See section on glucose tolerances for interpretation		Chem - RGH & PH	GTT2H GTT5H GTTGE
Glucose(Urine)	Urine	Random	10 mL urine	Will be performed as part of routine urinalysis.			Chem - RGH & PH	
Glucose (Urine) State collection period 24hr	Urine	24 hr	1 mL urine	NO LONGER AVAILABLE				
Glucose-6-Phosphate Dehydrogenase (G6PD)	Blood	1 Mauve	2 mL whole blood EDTA	For Newborn - 1 EDTA microtainer.	<1 mo: 11.3 – 21.3 >1 mo: 4.6 – 13.5	U/gm Hb	Special Chem - RGH	G6PHD
*Glutathione Peroxidase Recommended to order simultaneously with Selenium				NO LONGER AVAILABLE			SDCL - Toronto	GLUTA
*Glutethimide (Doriden)	Blood	1 Red	3 mL serum				SDCL	DORID

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Gluten Sensitive				See Endomysial Antibodies				
*Glyburide (Sulfonyl Urea)	Blood	2 Green	2 mL plasma	Preservative: 10 mg sodium bisulfite/2 mL plasma. Freeze.			SDCL - Hamilton	GLYBU
Glycerol Lysis Time				See Acid Glycerol Lysis				
*Glycol (Ethlene)	Blood	1 Grey	3 mL whole blood	Do not use alcohol swab			SDCL	ETHGL
*Glycosylated Hemoglobin (A1CHB) (For monitoring control of diabetics)	Blood	1 Mauve	1 mL whole blood EDTA. Or Capillary – 200 µL whole blood EDTA	Refrigerate	Canadian Diabetes Association Guidelines: Ideal non-diabetic: < 6.0% normal Optimal diabetic: < 7.0% target goal Suboptimal diabetic: 7.0-8.4% action may be required Inadequate: >8.4 action required		Special Chem - RGH	A1CHB
*Glycosylated Protein Fasting not required	Blood	1 SST or 1 Green or 1 Mauve	1 mL serum or plasma	Avoid hemolysis	Up to 285	µmol/L	SDCL TAT = 2 days	GLYPR
*GM1 Ganglioside Ab	Blood	1 Red	2 - 1mL serum aliquots.	Allow specimen to clot at room temp. for 3 hr. Spin, separate and freeze immediately.			SDCL - Toronto	GM1AB
*Gold				NO LONGER AVAILABLE				
Gonococcal	Blood			No longer available.				GONOS
*GQ1b IgG (Autoimmune Neurological Disease Profile)	Blood	1 RED	1 mL serum	Frozen within 60 minutes of collection			SDCL –Calgary	GQ1b
*Gravol (Diphenylhydramine)	Blood	2 SST	4 mL serum				SDCL TAT: Emerg = 4 hr Routine = 3 days	DIPH

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Group & Screen	Blood	2 Mauve		Needs a Typenex # on outpatient. Requires patient armband (full name, Typenex # or MRN and DOB). Label tubes with full name, DOB and MRN or PRN and Typenex#.			Transfusions - RGH	*GSM
*Growth Hormone Collect fasting or as specified by physician	Blood	1 SST	2 mL	Freeze and submit a separate sample	0.06-5.0	µg/L	SDCL TAT = 7 days	GROWH
*H1N1	Naso-pharyngeal , Aspirate, Washings			See FLU test for Severe Respiratory Illness.				
*Halcion (Triazolam)	Blood	2 Red	4 mL				SDCL	TRIAZ
*Haldol (Haloperidol), (Novoperidol), (Apo-Haloperidol), (Peridol) Collect trough before next dose is administered	Blood	1 Green	1 mL plasma	Separate ASAP. Freeze.			SDCL - Toronto	HALDO
Ham's Test	Blood	2 Red and 1 Mauve	4 mL serum & 2 mL whole blood EDTA	Usually ordered with Sucrose Lysis Test			Hematology - RGH	HAMSU
*Hantavirus Serology (Sin Nombre Virus)	Blood	1 SST	2 mL serum				SDCL – Winnipeg TAT = 3 weeks	HANTA
*Hantavirus CSF Hantavirus Serology (Sin Nombre Virus)	CSF	Sterile leak proof tube.	2 mL CSF	Also send serum for Hantavirus Serology.			SDCL – Winnipeg TAT = 3 weeks	HANTC
Haptoglobin	Blood	1 SST	1 mL serum		0.53-2.37	g/L	Immunology - RGH	HAPTO
HAV				See Hepatitis A				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
HBA1C	Blood	1 Mauve	1 mL whole blood EDTA. CapillaRY – 5 µL whole blood placed in a tube containing processing reagent.	Refrigerate (for monitoring control of diabetics)	4-6 (Non-Diabetic)	%	Special Chem - RGH	HBA1C
*HBV-DNA	Blood	2 Mauve	2 – 1.5 mL EDTA plasma	Freeze aliquots –send as dangerous goods.			SDCL- Winnipeg	HBDNA
HCG				See β-hCG				
*HCV Genotype Patient should be HepC positive before ordering this test	Blood	2 Mauve	4 mL plasma	Remove plasma ASAP. Freeze and ship on dry ice. Split plasma equally between 2 vials.			SDCL TAT = 3 weeks	HCGEN
HDL-Cholesterol Collect fasting	Blood	1 SST	2 mL serum		0.90-2.40	mmol./L	Chemistry – RGH & PH	LIPID
*Heart Muscle Ab				Anti-Myocardial Ab				
Hematocrit	Blood	1 Mauve	2 mL whole blood EDTA	Order as CBC	d0-3 mo: 0.44-0.64 3-12 mo: 0.32-0.44 1-3 yr: 0.36-0.44 4-12 yr: 0.37-0.45 Female: 0.37-0.47 Male: 0.4-0.5		Hem - RGH & PH	HCT
*Heavy Metals Do not order as such. Req must state specific test(s) (Lead, Copper, Mercury)							SDCL	
**Helicobacter pylori Ab Serology	Blood	1 SST	2-5 mL serum	Requires only a single serum sample. Specimen must be frozen if not received at RGH within 48 hrs.			Chemistry - RGH	HPYLS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Helicobacter pylori Titre	Blood			Titre - No longer available.				HPYLT
Hemochromatosis Must have clinical info and family history on req. Usually ordered by Dr. Devaraj. **MUST have approval before collection.	Blood	3 Mauve	Whole blood EDTA	Collect Mon, Tues, Wed, Thurs mornings only. Specimen must be kept at room temp at all times. Specimen must be received at RGH lab by noon and ready for FED-EX pickup at 1400 h			Winnipeg Health Sciences Centre	HEMOC
Hemoglobin	Blood	1 Mauve	2 mL whole blood EDTA	Order as CBC	d0-3 mo: 135-195 4-12 mo: 96-126 1-3 yr: 110-130 4-6 yr: 120-140 7-12 yr: 115-145 Female: 120-160 Male: 140-180	g/L	Hem - RGH & PH	HGB
Hemoglobin Electrophoresis	Blood	1 Mauve (full)	5 mL whole blood EDTA		HbF (adult): 0-1 HBA ₂ : 1.8-3.5	% op total Hb	Special Chem - RGH	HBEL
Hemoglobin F	Blood	1 Mauve	1 mL whole blood EDTA		See Fetal Hemoglobin		Special Chem - RGH	HBF
Hemoglobin in Plasma	Blood	1 Mauve	2 mL EDTA plasma	Centrifuge immediately and take plasma off into a new tube	0-70	mg/L	Special Chem - RGH	PLHB
Hemosiderin	Urine	Random	10 mL urine				Hematology - RGH	URHEM
Heparin Assays Anticoagulant status & type of heparin used must be provided on the requisition. Must be approved by Dr. Devaraj	Blood	1 Blue (full)	1 mL citrated plasma	Must be drawn 4 – 6 hrs post dose. Must be double-spun and sent frozen		U/mL	Hematology - RGH	HEPAR
Heparin Induced Thrombocytopenia (HITT)	Blood	1 Red	2- 1mL aliquots of serum	If sending, specimen must arrive frozen			Special Coag – RGH	HITT
*Hepatitis A-IgM, IgG Antibody	Blood	1 SST	2 mL serum				SDCL	HEAAB

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Hepatitis A - Total Antibody	Blood	1 SST	2 mL serum				SDCL	HEATO
*Hepatitis B – Genotyping	Blood	1 SST	2 – 1.5 mL serum	Not frozen			SDCL-Winnipeg	HBGEN
*Hepatitis B – Viral Load	Blood	2 EDTA	2 – 1.5 mL aliquots plasma	Freeze, ship on dry ice and send as Dangerous goods.			SDCL-Immunoserology Dept.	HBVVL
*Hepatitis B Surface Antibody (HBsAb)	Blood	1 SST	1 ml serum				SDCL	HEBAB
*Hepatitis B Surface Antigen (HBsAg)	Blood	1 SST	2 mL serum				SDCL	HEBAG
*Hepatitis B Core	Blood	1 SST	2 mL serum				SDCL	HEBCO
*Hepatitis Be Antibody	Blood	1 SST	2 mL serum				SDCL	HEBEB
*Hepatitis Be Antigen	Blood	1 SST	2 mL serum				SDCL	HEBEG
*Hepatitis C Antibody	Blood	1 SST	2 mL serum				SDCL	HECAB
*Hepatitis C Antigen	Blood	1 SST	2 mL serum				SDCL	HECAG
Hepatitis C Genotyping	Blood	1 Mauve		Separate plasma within 6 hr of collection. Freeze and send on dry ice.			SDCL	HCGEN
Hepatitis C PCR	Blood	2 Mauve	4 mL plasma (EDTA)	Separate plasma within 6 hr of collection. Split plasma equally between 2 vials. Freeze and send on dry ice.			SDCL Test performed 2-3 times per week	PCR
*Hepatitis C Viral Load	Blood	2 Mauve	4 mL plasma EDTA	Separate plasma within 6 hr of collection. Split plasma equally between 2 vials. Freeze and send on dry ice.			SDCL Test performed 1-2 times per month	HCVVL
*Hepatitis D Only done if HBV positive	Blood	1 SST	2 mL serum				SDCL	HEDAB
*Hepatitis E	Blood	1 SST	2 mL serum				SDCL - Winnipeg	HEEAB
*Hepatitis F	Blood	1 SST	2 mL serum				SDCL	HEFAB
*Hepatitis G	Blood	1 SST	2 mL serum				SDCL - Winnipeg	HEGAB
*Hepatitis Screen	Blood	1 SST	2 mL serum	Includes HAV, HBV & HCV			SDCL	HESCR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Heroin	Urine	Random	20 mL urine				SDCL	HEROI
*Herpes Simplex CSF Herpes Simplex Virus PCR	CSF	Sterile leak proof tube.	2 mL CSF	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis.			SDCL	HSPCR
*Herpes Simplex	Lesion			See Viral, Lesion.			SDCL	HRPVC
Herpes Simplex Virus IgM Serology	Blood			No longer available.				HSPCS
*Herpes Simplex Virus IgG Serology (HSV Type 1 & 2)	Blood	1 SST	2 mL serum	Immune status			SDCL	HSPIS
**Herpes Zoster	Blood - Lesion			See Varicella Zoster. - See Viral, Lesion.				
Hexosaminidase Level A & B or Taysachs Test	Blood	2 – 5 mL Green (adult) 2 Ped. Green (children)	7 mL whole blood				SDCL - Saskatoon	HEXOS
HFE Studies				See Hemochromatosis				
*HGH				See Growth Hormone				
*HGPRT				See Hypoxanthene guanine phosphoribosil transferase.				
*HHV-6	Blood			See Roseola IgM and IgG Serology.				
*Histamine	Blood	1 Mauve - prechilled	1 mL plasma (EDTA)	Collect in prechilled tube and place on ice immediately. Separate ASAP. Freeze. Avoid hemolysis.			SDCL - California	HISTS
*Histamine	Urine	24 hr Urine	5 mL aliquot of well-mixed urine	NO LONGER DONE			SDCL - California	HISTA
*Histoplasmosis Serology	Blood	1 SST	3 mL serum				SDCL – Edmonton TAT = 3 weeks	HPLAS
*HIV	Blood	1 SST	1 mL serum	Fill in special req. Address of where report is to go must be on req.			SDCL	HIV

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
HIV Point of Care (performed in-lab)	Blood	Whole blood or whole blood capillary	Plasma or serum specimens	Lab performed only				HIVPC
HIV – DNA- PCR	Blood	2 Mauve	10 mL- whole bld	Room Temperature DO NOT Order Fridays or Weekends. Must be received in Ottawa within 48 hrs. Notify SDCL at 787-8635.			SDCL-Ottawa	HIDPC
*HIV Genotyping	Blood	2 Mauve	3-5 mL plasma	Centrifuge and freeze 3-5 mL plasma in cryogenic tube. Ship on dry ice.			SDCL-Vancouver	HIVGT
*HIV Viral Load (Ordered on known anti-HIV positive patients, seen by infectious disease physician)	Blood	2 or 3 Mauve	3-5 mL plasma	Centrifuge and freeze at –70 degrees at least 1.5 mL plasma in separate cryogenic tubes. Ship on dry ice. (If not enough for 2 tubes use 1 aliquot and note on requisition.			SDCL	HIVVL
HLA Typing	Blood	Varies with testing site		Requires pre-booking with testing site. Performed Mon. and Thurs only.			Reference Lab	HLAOD
HLAB27 Special instructions. Contact CBS to book.	Blood	1 – 10 mL ACD tube					CBS Lab	HLAB
*Homocysteine in plasma & urine (child)	Blood or Urine	1 Green or Random Urine	2 mL plasma 10 mL urine	Same as amino acid. Freeze.			SDCL	AACID (serum) AARUR (urine)
*Homocysteine (adults)	Blood	1 Lithium-Heparin Green or 1 EDTA	1 mL plasma	Collect on ice. Centrifuge and separate within 1 hr. Freeze plasma.		µmol/L	SDCL	HCYST
Homogentisic Acid	Urine	Random	30 mL fresh urine	Freeze			SDCL – Saskatoon	HOMAC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Homovanillic Acid (HVA) State collection period Include weight of patient if less than 15 years	Urine	24 hr Urine	25 mL aliquot of 24 hr urine	Keep refrigerated during collection. Acidify to pH 2-4 with HCL or freeze. Record 24 hr volume and collection period.	Adults: up to 82 μ mol/d 1 mo-2 yr: up to 25 2-5 yr: up to 19 5-15 yr: up to 12	μ mol/d mmol./L creatinine	SDCL	HVA
*HPV Cervical HPV PCR (Human Papillomavirus)	Cervical swab	Universal Transport Medium					SDCL	HPVCV
*HSV	Blood CSF - Lesion			See Herpes Simplex Virus. - See Viral, Lesion.				
*HTLV1	Blood	1 SST	2 mL serum				SDCL	HTLV1
*HTLV2	Blood	1 SST	2 mL serum				SDCL	HTLV2
*Human Anti-Mouse Antibody	Blood	1 RED	1 mL serum frozen	Aliquot and Freeze			SDCL – Mayo	HAMA
*Human Growth Hormone				See Growth Hormone				
**Human Herpes 6 Virus	Blood			See Roseola IgM and IgG Serology.				
*Human Papillomavirus	Cervical swab			See HPV. Cervical HPV PCR				
**H. zoster, VZV	Blood - Lesion			See Varicella Zoster. - See Viral, Lesion.				
*Human T-Cell Lymphotropic Virus Antibody				See HTLV				
*5 Hydroxyindoleacetic Acid	Urine	24 hr Urine	100 mL aliquot of 24 hr urine	Keep refrigerated during collection. Acidify to pH 2-4 with HCL or freeze. Record 24 hr volume and collection period.			SDCL	5HIPL

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*17 Hydroxycorticosteroids (17 OHCS) State collection period	Urine	24 hr Urine	100 mL aliquot of 24 hr urine	Adjust pH to <5 with glacial acetic acid or freeze. Record 24 hr volume and collection period. Provide age and sex.			SDCL	CORTU
*17 Hydroxy-Progesterone Collect between 8 and 10	Blood	1 SST or 1 Green or 1 Mauve	1 mL serum or plasma Neonate: 100 µL	Refrigerate and transport on ice packs within 24 hr or send frozen. Submit separate sample to SDCL. Stable for 4 days at 2-8° Separate from cells ASAP	Female: Oral contraceptives: 3-5.1 Follicular: 0.3-3.6 Luteal: 0.3-12.1 Prepubertal: <1.8 Menopausal: 0.3-3.6 Male: 2.2-10.9	nmol/L	SDCL TAT = 15 days	17HYD
*17 Hydroxypregnenolone	Blood	1 RED	1 mL serum	Freeze			SDCL to Mayo Cl.	17HYP
*25-Hydroxy Vitamin D				See Vitamin D 25 Hydroxy				
Hydroxyproline State collection period. About 24 hr before and also during the collection of the sample, give the patient a diet free of collagen. A collagen-free diet contains no meat, meat products, fish, poultry, meat extracts, soup, soup concentrates, gravy, pudding, ice cream, soft candy or other products containing gelatin.	Urine	24 hr	10 mL aliquot of well-mixed 24 hr urine	Freeze sample. Record 24 hr volume and collection period. Provide age, weight and height	<1 yr: 420-1680 1-22 yr: 190-610 22-65 yr: 40-170 >65 yr: 40-130	µmol/d/m ²	Metabolic Diseases Lab in Saskatoon	OHPRO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Hypercoag - ATIII - Plasminogen - Protein C - Protein S - APC - PTMUT - FVLeiden	Blood	3 Blue(full) 1 Red (Plasma should be double spun)	1 mL plasma in 4 tubes. 1 mL serum in 2 tubes.	Arrival at hospital within 4 hr. Must be sent frozen and on dry ice.			Special Coag Hematology - RGH	HCOAG
*Hypoxanthene guanine phosphoribosil transferase	Blood	3 Sodium Heparin(3 mL)	Min. 3 mL plasma and saline washed RBCs	Collection must be done at RGH. Separate ASAP – Freeze plasma. Wash Red cells with saline x2 and after rmoving the last saline wash, freeze the red cells.	No Transfusions in the last 60 days		SDCL to Alberta Children's Hospital	HGPRT
Ibuprofen	Blood	1 Red	2 mL serum	Aliquot			SDCL	IBUPR
IFE				See Immunofixation Electrophoresis				
IgA	Blood	1 SST	1 mL serum		<3 mo: 0-0.30 3-6 mo: 0-0.50 6 mo-1 yr: 0.10-0.70 1-3 yr: 0.15-1.00 3-5 yr: 0.25-1.55 5-8 yr: 0.30-2.35 8-11 yr: 0.20-2.50 11-16 yr: 0.30-2.40 >16 yr: 0.87-3.94	g/L	Immunology - RGH	IGA
IgD	Blood	1 SST	1 mL serum frozen	Freeze State age of patient			SDCL - Toronto	IGD
*IgE	Blood	1 SST	1 mL serum		Neonates: <1.5 Infants in 1 st year of life: <15 1-5 yr: <60 6-9 yr: <90 10-15 yr: <200 Adult: <100	IU/mL	SDCL	IGE
*IGF (Somatomedin C) Insulin-like Growth Factor	Blood	1 SST	2 mL serum	Separate serum ASAP. Freeze			SDCL TAT = 21 days	SOMC
IgG	Blood	1 SST	1 mL serum		<1 mo: 6.00-16.30	g/L	Immunology - RGH	IGG

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
					1-3 mo: 2.10-6.20 3-6 mo: 1.35-5.75 6 mo-1 yr: 2.15-8.75 1-2 yr: 3.60-10.40 2-3 yr: 4.20-10.75 3-5 yr: 4.15-12.60 5-8 yr: 5.10-14.35 8-11 yr: 6.10-14.80 11-16 yr: 5.50-14.85 >16 yr: 5.52-17.24			
IgG Index	Blood & CSF		1 mL serum 1 mL CSF	Both serum & CSF required <u>CSF IgG/serum IgG</u> CSF alb/serum alb	0.30-0.60		Immunology - RGH	IGIDX
*IgG Subclass	Blood	1 SST	1 mL serum	Freeze and send on ice packs. Provide patient age. Fasting specimen preferred. If not, mark requisition Non-fasting.			SDCL - Toronto	IGGSC
IgM	Blood	1 SST	1 mL serum		<1 mo: 0.00-0.20 1-3 mo: 0.10-1.20 3-6 mo: 0.10-1.55 6-12 mo: 0.45-1.20 1-2 yr: 0.40-1.95 2-3 yr: 0.45-2.05 3-5 yr: 0.50-2.25 5-8 yr: 0.40-2.30 8-11 yr: 0.40-2.50 11-16 yr: 0.45-3.00 >16 yr: 0.44-2.47	g/L	Immunology - RGH	IGM
*Imipramine (Tofranil)	Blood	2 Red or 2 Green	4 mL serum or plasma	Aliquot. Do not use SST. Record time of collection on tube and req.	Minimum: 300-500 Maximum: 800-1000 Toxic: 1700	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	IMIPR
Immunoelectrophoresis				See Immunofixation Electrophoresis			Immunology - RGH	IFE
Immunoelectrophoresis	Urine	24 hr Urine	50 mL urine aliquot				Immunology - RGH	IFEU
Immunofixation Electrophoresis (IFE)	Blood	1 SST	1 mL serum				Immunology - RGH	IFE

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Immunoglobulins (Quantitative) IgA, IgG, IgM	Blood	1 SST	1 mL serum	State age	See individual immunoglobulins for reference ranges		Immunology - RGH	QIG
*Inderal	Blood	2 Red	3 mL serum	Aliquot			SDCL	INDER
*Indocid (Indomethacin)	Blood	1 Red	2 mL serum	Aliquot			SDCL	INDOM
*Infliximab/HACA Measurement	Blood	1 SST	2 mL serum				RGH to San Diego	IHACA
*Influenza A & B	Naso-pharyngeal Aspirate, Washes - Throat			See Respiratory Virus Isolation or Detection. - See Throat Virus Isolation or Detection.				
*Influenza Pandemic	Naso-pharyngeal Aspirate, Washes			See FLU test for Severe Respiratory Illness.				
INH	Blood	2 Green (full)	4 mL plasma	Aliquot			SDCL	INH
Inhibitor Correction Studies				See Bleeding Disorder Investigation			Special Coag RGH	
INR Anticoagulant status must be provided on req.	Blood	1 Blue	1 mL plasma	Draw is critical. 2.7 mL in a 3 mL tube. Remove plasma within 2 hr. If not analyzed within 4 hr, freeze.	Therapeutic range: DVT: 2-3 Mechanical valve & recurrent P.E.: 2.5-3.5		Hem - RGH & PH	PT
*Insulin	Blood	1 SST	1 mL serum 250 µL neonates	Freeze serum. Avoid hemolysis.	Fasting 43-194 pmol/L (6-27 µIU/mL)		SDCL TAT = 5 days	INSUN
*Insulin Antibodies (Insulin Receptor Antibodies)	Blood	1 SST	1 mL serum				SDCL - Toronto	ABINS
*β-Interferon (Nabferon Inf-B Ab.)	Blood	1 Red	2 mL serum	*Needs approval from SDCL 787-7900 Dr.Lehotay			SDCL - Mayo	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Interleukin-1 (IL-1)	Blood	1 Red	1 mL serum	Freeze @ -80 C. Send on dry ice.			SDCL – Toronto	IL1
*Interleukin-6 (IL-6)	Blood	1 Red	1 mL serum	Freeze @ -80 C. Send on dry ice.			SDCL - Toronto	IL6
*Intrinsic Factor Antibodies Avoid administration of B12 for 48 hr before collection	Blood	2 SST	3 mL serum				SDCL – Hamilton TAT = 4 weeks	ABINF
*Insulin-like Growth Factor Binding Protein 3	Blood	1 SST	1 mL serum	Frozen			SDCL – Toronto	IGFBP
*Insulin-like Growth Factor				See IGF				
Ionized Calcium	Blood	1 Green (full) or syringe or capillary tubes containing electrolyte balanced heparin or 1 SST	Whole blood 1.6-2.5 mL in syringe. 2 – 125 µL capillary tubes for babies	Hospital Sites: 1 full green top or blood gas syringe – order ABLCA-send to lab immediately on ice. OR 1 SST – order IONCA. Stable at room temp for 24 hrs or at 4°C for 72 hrs. DO NOT OPEN TUBE. Community Sites: 1 SST-order IONCA. Centrifuge ASAP and send to RGH within 24 hrs. DO NOT OPEN TUBE	Whole blood: <1 mo: 1.05-1.37 >1 mo: 1.10-1.29 Serum: 1.16-1.35	mmol/L	Chemistry - RGH	ABLCA (whole bld) IONCA (serum)
Iron and Iron Binding (TIBC)	Blood	1 SST	1 mL serum		Iron: 7-32 TIBC: 45-80	µmol/L	Chem - RGH & PH	IBIND
*Islet-Cell Antibodies (Pancreatic)	Blood	1 SST	2 mL serum	Freeze serum			SDCL	ABISC
*Iso-Propanol (Iso-Propyl Alcohol)	Blood	1 Grey	3 mL whole blood	Keep tube stoppered. Refrigerate.	Netative Panic value: >8	mmol/L	SDCL TAT: 1 day Emerg = 2 hr	ISOPR
JAKS-2	Blood	1 EDTA	Whole blood	Ship as per Chromosomes Studies			BC Cancer Agency	JAKS2
*Japanese Encephalitis	Blood CSF			*Encephalitis (Viral).				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*JO-1 Antibody	Blood	1 SST	1 mL serum				SDCL - Hamilton	ABJO
Kaolin clotting Time (KCT)				See Bleeding Disorder Investigation				
Karyotyping				See Chromosome Studies				
*Keppra	Blood	1 Red	1 mL serum	Syn: Levetiracetam			SDCL to Mayo	KEPRA
*17-Ketogenic Steroids (17KGS)				Test Discontinued Urinary-Free Cortisol done instead				
Ketones	Blood	1 SST or 1 Green	0.5 mL serum or plasma	Do not open tube	Negative		Chem - RGH & PH	KETON
*Ketoprofen (Orudis)	Blood	1 Red	2 mL serum	Aliquot			SDCL	KETOP
*17-Ketosteroids Provide age, sex and collection period. Pediatric - include patient's weight.	Urine	24 hr Urine	25 mL aliquot of 24 hr urine	Refrigerate during collection. Adjust pH to <5 with glacial acetic acid or freeze. Record 24 hr volume, collection period, age and sex.	Male: 35-70 Female: 15-50 Children: 0-3 yr: 0-2 4-8 yr: 0-7 9-10 yr: 2-14 11-14 yr: 2-35 (male) 11-14 yr: 2-30 (female)	µmol/d	SDCL	17KS
Kidney Room Pre-panel (Na, K, Cl, CO ₂ , glucose, urea, creat, TP, alb, Ca, PO ₄ , Bili, ALT, ALP)	Blood	1 SST	1 mL serum		See individual tests for reference ranges		Chemistry - RGH	KRPRE
Kidney Room Post-panel (Na, K, Cl, CO ₂ , glucose, urea, creat, TP, alb, Ca, PO ₄)	Blood	1 SST	1 mL serum		See individual tests for reference ranges		Chemistry - RGH	KRPOS
Kleihauer	Blood	1 Mauve (full) Same tube as CBC, if ordered	Whole blood				Hematology - RGH	KLEIH
KLM				See Anti Kidney & Anti Liver Antibodies				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Lactic Acid	Blood	1 Grey or syringe with electrolyte balanced dry heparin	1 mL plasma or 1.5 mL whole blood for adults or 0.6 mL for neonates in syringe	Grey: Separate plasma from cells within 15 min. Stable at 2-8°C for 14 days or may be frozen. If Shipping freeze plasma aliquot and send on dry ice. Syringe: deliver to lab ASAP	Plasma: 0.7-2.1 Whole blood: 0.5-1.6	mmol/L	Chem - RGH & PH	LA (plasma) ABLLA (whole bld)
Lactic Acid	CSF		0.5 mL CSF		1.10-2.20	mmol/L	Chem - RGH & PH	LACSF
Lactic Acid	Fluid		1 mL fluid		None available	mmol/L	Chem - RGH & PH	LAFL
Lactose Intolerance				Hydrogen Breath test done in GI Unit at Pasqua				
Lamellar Body Count	Amniotic Fluid		2 mL			/uL	Special Chemistry-RGH	LBC
*Lamictal (Lamotrigine) Collect pre-dose	Blood	1 SST	2 mL serum	Aliquot ASAP			SDCL Toxicology	LAMIC
*Lanoxin				See Digoxin				
*LATS (long acting thyroid stimulator)				See Thyroid Binding Inhibitory Immunoglobulin				
LD/LDH	Blood	1 SST	1 mL serum		<6 mo: 441-564 6 mo-5 yr: 319-441 Adult: 120-245	U/L	Chem - RGH & PH	LDH
LD/LDH	CSF		0.5 mL CSF		None available	U/L	Chem - RGH & PH	LDCSF
LD/LDH	Fluid		1 mL fluid		None available	U/L	Chem - RGH & PH	LDFL
LD/LDH Isoenzymes	Blood			No Longer Available			Special Chem - RGH	ISOLD
LDL - Cholesterol (calculation)	Blood	1 SST	2 mL serum		Target LDL-C values by level of risk *Risk: LDL-C Very high: <2.5 mmol/L High: <3.0 mmol/L Moderate: <4.0 mmol/L Low: <5.0 mmol/L *To determine risk refer to CMAJ 2000; 162(10):1441-7		Chem - RGH & PH	LIPID
LE				Not available. Do ANA				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Lead If a concurrent assay for zinc protoporphyrin is required, it must be specified on the req.	Blood	1 – 7 mL Royal Blue EDTA) BD368381	2 mL whole blood Ensure specimen is well-mixed		See report or SDCL Compendium		SDCL TAT = 7-10 days	LEAD
*Lead	Urine	24 hr urine container acid-washed or random acid washed container	7 mL of 24 hr or 7 mL random acid-washed container. Aliquot.	Send in polypropylene container. Provide 24 hr volume and collection date. State if 24 hr or random urine on req.			SDCL - Toronto TAT = 2 weeks	LEADU
Lecithin/Sphingomyelin Ratio (L/S Ratio)	Amniotic Fld			See Fetal Lung Maturity			Special Chem - RGH	
*Legionella *Bronchial Legionella Culture	Bronchial Lavage/ Aspirate	Sterile sputum container		Also send urine for Legionella Antigen Detection.			SDCL	LEGC
*Legionella *Urine Legionella Antigen Detection	Urine	Sterile urine container	20 mL urine	Urine (first morning) or at least 2 hrs after last urination			SDCL	LGU
**Legionella Serology	Blood	1 SST	2 mL serum	Acute (onset) and convalescent (1-3 weeks)			SDCL - Etobicoke TAT = 3 weeks	LEGAS
**Leishmaniasis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT = 4 weeks	LEISH
**Leptospira IgM Serology	Blood	1 SST	1 mL serum	Keep cold but not frozen.			SDCL – Winnipeg TAT = 3 weeks	LEPTO
Leukocyte Alkaline Phosphatase (LAP) CBC must be done at the same time	Blood	1 Green	Whole blood				Hematology - RGH	LAPSC
*Levetiracetam				See Kepra				
*LH				See Luteinizing Hormone				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Librium	Blood	1 Green	2 mL plasma	Aliquot			SDCL	LIBRI
*Lidocaine (Xylocaine) <i>See TDM section for ideal sampling times</i>	Blood	2 Red or 2 Green or 2 Mauve	3 mL serum or plasma	Aliquot. Do not use SST.	6-21 Toxic: 25-34	µmol/L	SDCL TAT = 3 days	LIDO
Lipase	Blood	1 SST or 1 Green	1 serum or plasma	Aliquot	Therapeutic: 114-286		SDCL TAT = 2 days	LIP
Lipid Profile (Chol, Trig, HDL, LDL)	Blood	1 SST	2 mL serum	Fasting specimen	See individual test reference ranges		Chem - RGH & PH	LIPID
*Lipoprotein Fractionation (Phenotyping) 14 hr fast.	Blood	3EDTA Collect only Monday and Tuesday	7 mL	Must be fasting for 14 hrs. Place tubes in ice water immediately after collection. Separate plasma within 1 hr of collection using 30 min. spin. Transfer to polypropylene vial and send cold, not frozen.			SDCL	LIPFR
*Lipoprotein A	Blood	1 SST	1 mL serum	Separate within 4 hr of collection. Freeze.			SDCL - Toronto	LIPOA
*Lipoprotein Electrophoresis	Blood	1 SST	1 mL serum	Not Available			SDCL	LIPEL
Lithium	Blood	1 SST	1 mL serum	Do not collect less than 8 hrs after last dose.	Therapeutic: 0.5-1.3 Toxic: >2.0	mmol/L	Chemistry - RGH	LI
*Liver/Kidney Muscle Antibodies (LKM)				See Anti Kidney & Anti Liver Antibodies				
Liver Panel (Hospital) (Bili, ALP, ALT, ALB)	Blood	1 SST	1 mL serum		See individual test reference ranges		Chem - RGH & PH	HLIVE
Liver Panel (Clinics) (Bili, ALP, ALT)	Blood	1 SST	1 mL serum		See individual test reference ranges		Chemistry - RGH	PLIVE
*Long Acting Thyroid Stimulator				See thyrotropin Binding Inhibitor Immunoglobulin				
*Long-Chain Fatty Acids (Very)	Blood	2 Red or 2 Mauve	2 mL serum or plasma Neonates: 0.5 mL serum or plasma	Aliquot and freeze			SDCL- Saskatoon	FALC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Lorazepam (Ativan)	Blood	2 Red	4 mL serum	Aliquot. Record time of collection on tube and req. Do not use SST.	Therapeutic: 560-740	nmol/L	SDCL TAT = 5 days	LOR
*LSD	Urine	Random					SDCL - Toronto	LOR
L/S Ratio				See Fetal Lung Maturity				
*Ludomil (Maprotiline)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST.	Therapeutic: 180-720 Toxic: >1800	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	MAPRO
*Luminal				See Phenobarb				
Lupus Anticoagulant	Blood	3 Blue (full) & 1 Red	4 mL plasma 2 mL serum	Double spin plasma and separate into 4 tubes. Freeze all plasma and serum tubes.			Hematology - RGH	LUPWS
Luteinizing Hormone (LH, Lutropin)	Blood	1 SST	1 mL serum		Male: 20-70 yr: 1.5-9.3 >70 yr: 3.1-34.6 Female: Follicular: 1.9-12.5 Mid-cycle: 8.7-76.3 Luteal: 0.5-16.9 Pregnant: <0.1-1.5 Postmenopausal: 5.0-52.3 Contraceptives: 0.7-5.6 Children: <0.1-6.0	IU/L	Chemistry - RGH	LHA
*Luteotrophic Hormone (LTH)				See Prolactin				
Lutropin				See Luteinizing Hormone				
Luvox	Blood	2 Red or 2 Green	4 mL serum or 4 mL plasma	Aliquot. Do not use SST. Record time of collection on tube and req.	Therapeutic: 90-500	nmol/L	SDCL TAT = 3 days	LUV
**Lyme Disease Total IgM and IgG Serology (Borrelia burgdorferi)	Blood	1 SST	2 mL serum	Lyme indeterminate specimens are referred to NML for supplemental testing.			SDCL (Indeterminate – NML, Winnipeg TAT = 3 weeks)	LYMES
*Lyme Disease CSF PCR	CSF	Sterile	1 mL	Freeze ASAP Ship ASAP to SDCL			SDCL to National Microbiology Lab Winnipeg	LYMEC
Lymphocytotoxic	Blood	1 Red top		Aliquot and freeze			Transplant Centre	SESTO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Antibodies								
Macroglobulin	Blood	1 SST	2 mL serum				Immunology - RGH	MACRG
Magnesium	Blood	1 SST or 1 Green	1 mL serum or plasma		0.70-1.10	mmol/L	Chem - RGH & PH	MG
Magnesium	Fluid		1 mL fluid	No Longer Available	None available	mmol/L	Chem - RGH & PH	
Magnesium State collection period	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 3.00-5.00	mmol/L	Chem - RGH & PH	MGUR (random) MG24 (24 hr)
Malaria	Blood	1 Mauve	Whole blood	Can use same tube as CBC			Hematology - RGH	MALAR
Malaria PCR	Blood	1 Mauve	2 mL EDTA whole blood				SDCL – Montreal TAT = 4 weeks	MALRP
*Malarial (Plasmodium falciparum) Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Montreal TAT = 4 weeks	MALRS
*Mandrax (Methaqualone)	Blood	2 Red	4 mL serum	Aliquot			SDCL	METHQ
*Manganese	Blood	1 – 7 mL Royal Blue EDTA) BD368381	3 mL plasma	Aliquot ASAP into polypropylene vial			SDCL - Toronto TAT = 2 weeks	MANG
Manganese	Urine	24 hr or random urine in acid washed container	10 mL	Aliquot. Record collection date, total 24 hr urine volume, if submitted, or random urine on req.			SDCL - Toronto TAT = 4 weeks	
*Maprotiline (Ludiomil)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST. Record time of collection on tube and req.	Therapeutic: 180-720 Toxic: >1800	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	MAPRO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Maternal Serum Screen (Maternal serum screening req. must be fully completed.	Blood	1 SST	2 mL serum	Random sample drawn between 15 & 20 weeks gestation. Optimum is 16-17 weeks.	Includes: AFP, bHCG, Estriol, Inhibin-A. Also known as QUAD screen.		SDCL TAT = 1 day	MSS
**Measles (Rubeola) IgM Serology	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	MEAMS
**Measles (Rubeola) IgG Serology	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	MEAIS
*Measles (Rubeola) Nasopharyngeal or Throat – Measles PCR	Nasopharyngeal or Throat	Swab in Universal Transport Medium		Leave swab in Universal Transport Medium. Ship to SDCL on ice pack or freeze at -70C. (Can be kept cold up to 24 hrs before specimen must be processed.)			SDCL – Winnipeg TAT = 3 weeks	MEA/R
*Measles (Rubeola) Urine Measles PCR	Urine	Sterile Urine Container -> Universal Transport Medium	50 mL	Centrifuge urine at 2500xg for 15 min. at 4C. Resuspend the sediment in 2 mL Universal Transport Medium. Freeze at -70C. (Can be kept cold up to 24 hrs before processing.)			SDCL – Winnipeg TAT - 3 weeks	MEA/U
Melanin	Urine	Random	10 mL	Frozen			SDCL- Specialty Lab in California	MELAU
*Mellaril	Blood	2 Red	4 mL serum	Aliquot			SDCL	MELLA
*Mercury	Blood	1 – 7 mL Royal Blue EDTA) BD368381	7 mL whole blood	Do not separate or freeze			SDCL - Toronto TAT = 4 weeks	MERC
*Mercury Assay of whole blood may be more reliable and is recommended	Urine	24 hr or Random acid-washed plastic container	10 mL 24 hr or random aliquot	Collect in plastic container. Record urine volume, collection period and date. State if 24 hr or random urine on req.			SDCL - Toronto TAT = 2 weeks	MERCU

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Metabolic Studies				See Amino Acids				
*Metanephrine (Catecholamines)	Urine	24 hr	25 mL aliquot	Refrigerate during collection. Adjust pH to 2-4 with 6N HCL or freeze. Record volume and collection period.	0-3 mo: Metanephrine: 0.03-0.19 Normetanephrin: 0.26-0.85 Total Metanephrine: 0.29-1.04 4-6 mo: Metanephrine: 0.03-0.21 Normetanephrin: 0.17-0.61 Total Metanephrine: 0.20-0.82 7-9 mo: Metanephrine: 0.06-0.21 Normetanephrin: 0.23-0.60 Total Metanephrine: 0.29-0.81 10-12 mo: Metanephrine: 0.04-0.51 Normetanephrin: 0.12-0.56 Total Metanephrine: 0.17-1.07 1-2 yr: Metanephrine: 0.03-0.26 Normetanephrin: 0.18-0.65 Total Metanephrine: 0.21-0.91 2-6 yr: Metanephrine: 0.06-0.50 Normetanephrin: 0.27-0.60 Total Metanephrine: 0.33-1.10 6-10 yr: Metanephrine: 0.28-0.70 Normetanephrin: 0.26-0.96 Total Metanephrine: 0.54-1.66 10-16 yr: Metanephrine: 0.20-1.23 Normetanephrin: 0.29-1.59 Total Metanephrine: 0.49-2.82 Adult: Metanephrine: 0.37-1.50 Normetanephrin: 0.57-1.93 Total Metanephrine: 0.94-3.43	µmol/d	SDCL TAT = 7 days	METAN
Methadone	Blood	1 Red		Collect peak 3-4 hr after dose			SDCL	METHS
Methadone	Urine	Random	20 mL		Negative		SDCL TAT = 2 days	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Methaqualone (Mandrax)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST. Record time of collection on tube and req.	Therapeutic: 2-20	µmol/L	SDCL TAT = 3 days	METHQ
Methemalbumin	Blood	2 SST	4 mL serum		0	mg/L	Special Chem - RGH	METHA
Methemoglobin	Blood	1 Mauve or 1 Green	1 mL whole blood		0-2	%	Special Chem - RGH	MTHGA
Met Hemoglobin Reductase Deficiency	Blood	1 Mauve or 1 Green	0.2 mL whole blood				Special Chem - RGH	METRD
*Methyl Alcohol (Methanol)	Blood	1 Grey	3 mL whole blood		Negative Panic value: >15	mmol/L	SDCL TAT: Routine 1 day Emerg. 2 hr	METH
Methotrexate	Blood	1 SST	1 mL serum		After high dose chemotherapy: Toxic: 24 hr post dose: >10 48 hr post dose: >1 72 hr post dose: >0.1 After regular therapy: Toxic: >0.1	µmol/L	Chemistry - PH	MTX
*Methylmalonic Acid (Patient must be fasting)	Blood	2 RED	3 mL serum	Aliquot into plastic tube ASAP and freeze. Send frozen. Serum must be separated from cells within 30 minutes.			SDCL –Alberta Children's Hosp, Calgary. TAT = 3 weeks	MMA
*Methylphenidate (Ritalin)	Urine	Random	20 mL	Refrigerate	Negative		SDCL - Toronto TAT = 7 days	RITAU
*Mexilitine (Mexitil) Collect trough just before next dose. Peak occurs 2-3 hr after last dose.	Blood	2 Red or 2 Green or 2 Mauve	3 mL serum or 3 mL plasma	Aliquot. Do not use SST.	Therapeutic: 4-11 Toxic: 11.2 Severe toxic: >34	µmol/L	SDCL TAT = 1 day	MEXIL

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Microalbumin	Urine	First Morning or random or 24 hr	10 mL urine	Samples contaminated with blood are not recommended. Indicate random or 24 hr on sample. For 24 hr, record volume and collection period. Rural sites: Send aliquot frozen.	Random: 0-20 24 hr: 0-30	mg/L mg/d	Chemistry - RGH	MIALB (random) MA24 (24 hr)
Microalbumin/ Creatinine Ratio	Urine	First Morning or random	10 mL	Samples contaminated with blood are not recommended. Rural sites: Send aliquot frozen.	Female: 0-2.8 Male: 0-2.0	mg/mmol	Chemistry - RGH	MA/C
Microbiology Tests				See Micro Section				
*Microsomal Antibody				See Anti-Thyroid Peroxidase				
*Mitotane	Blood	1 Red	2 mL	Refrigerate			SDCL- Mayo	MITOT
*Moclobemide (Menerix)	Blood	2 Red	4 mL	Aliquot			SDCL	MOCLO
*Modetin (Fluphenazine)				See Phenothiazines				
*Mogadon (Nitrazepam) To monitor therapy, draw trough specimen before next dose is given	Blood	1 Red or 1 Green	1 mL serum or plasma	Aliquot			SDCL - Toronto	MOG
*Molecular Testing (DNA)	Blood	Varies (check with supervisor)		Requires pathologist pre-approval			Reference Lab	MOLEC
Monotest	Blood	1 SST or 1 EDTA	0.5 mL serum or 2 mL whole blood				Hem - RGH & PH	MONO
*Morphine	Blood						SDCL	MORPH
*MPO				See P-ANCA				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
6-MP/GTG (Metabolite of Azathioprine - Crohn's drug) (Thiopurine Metabolites)	Blood	1 Mauve top	EDTA whole blood				California	6TGMP
Mucopolysaccharides	Urine	Random or 24 hr	10 mL urine	Freeze. State 24 hr or random on req. If 24 hr, record volume on req.			SDCL- Saskatoon TAT = 2 weeks	MUCO (random) MUC24 (24 hr)
**Mumps IgM Serology (Parotitis IgM)	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	MUMMS
**Mumps IgG Serology (Parotitis IgG)	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	MUMIS
*Mumps Urine Mumps PCR	Urine	Sterile Urine Container -> Universal Transport Medium	50 mL	Centrifuge urine at 2500xg for 15 min. at 4C. Resuspend the sediment in 2 mL Universal Transport Medium. Freeze at -70C. (Can be kept cold up to 24 hrs before processing.)			SDCL - Winnipeg	MUM/U
*Mycology Serology				Must indicate requested test on requisition. See: Aspergillus Blastomycosis Coccidioidomycosis Cryptococcal Antigen Histoplasmosis Sporotricosis				
*Mycophenlite	Blood	1 Mauve	2-3 mL plasma	Spin and Freeze			SDCL-Hamilton Sent Wednesdays	MYCPH
*Mycobacterium (TB) Blood Culture	Blood/Bone Marrow			See Blood Culture TB (Mycobacterium).				
*Mycoplasma hominis - Mycoplasma and Ureaplasma Culture (Ureaplasma	Cervical, Urethral, Respiratory (neonatal)	Universal Transport Medium					SDCL	UREMH

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
urealyticum, Mycoplasma genitalium)								
Mycoplasma pneumoniae Culture	Respiratory			No longer available.				MYCOP
**Mycoplasma pneumonia (IgM) Serology	Blood	1 SST	2 mL serum	If the acute is negative, submit convalescent in 5- 10 days.			SDCL	MYPMS
*Myelin Basic Protein	CSF		0.5 mL	Frozen			SDCL-Calgary	MBPCF
Myoglobin	Urine			No Longer Available				
*Mysoline (Primidone)	Blood	1 Red	3 mL serum	Aliquot			SDCL	MYSO
Nabferon(INF-B) Antibody(Beta Interferon)	Blood	1 Red	2 mL serum	Refrigerate. Sample needs to be collected before treatment with interferon or more than 24 hrs postdose	MUST BE APPROVED Patient should not be on steroid therapy for at least 2 wks prior to testing.		SDCL to Athena Diagnostics	
*Nalfon				See Fenoprofen				
*NAPA (N-Acetyl Procainamide) See TDM section for ideal sampling times	Blood	1 Red or 1 Green or 1 Mauve	1 mL serum or plasma	Do not use SST	Sum of Procainamide and NAPA Therapeutic range: 43-129	µmol/L	SDCL TAT = 1 day	PROC
*Naproxen (Naprosyn)	Blood	1 Red	2 mL serum	Aliquot			SDCL	NAPRO
*Neonatal Screen (PKU, thyroid function)	Blood	Card	Whole blood applied to lab supplied card				SDCL TAT = 3 days	PKU
*Neisseria gonorrhoeae - Urine Chlamydia and GC (NAAT)	Urine	APTIMA	20 -30 mL first catch void uine in collection cup	Using provided disposable pipette, add 2 mL of urine specimen to APTIMA tube. Urine level must be between black fill lines.			SDCL	CHLGC
*Neuromyelitis Optica Antibody	Blood	1 SST or 1 RED	1 mL serum Frozen	Freeze specimen.			SDCL-Calgary	ABNMO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Neuron-specific Enolase	Blood	1Red DO NOT USE SST	Serum	Do not use SST Aliquot and keep cold but not frozen. Send on ice packs.			SDCL-Mayo	ENONS
*Neurontin (Gabapentin) Collect 2 hr post dose after patient reaches steady state	Blood	1 non- SST or 1 Green	1 mL serum or heparinized plasma	Aliquot ASAP and freeze			SDCL – Hospital in Commons, Toronto TAT = 2 weeks	NEUR
*Niacin	Blood	1 EDTA	Whole Blood	Keep at Room Temp			SDCL – California	NIACN
Nickel	Blood	1 – 7 mL Royal Blue EDTA) BD368381	3 mL serum or plasma	Aliquot into polypropylene vial			SDCL - Toronto TAT = 2 weeks	NICKS
Nickel	Urine	Random or 24 hr acid- washed urine container	15 mL of 24 hr or random	Record collection datae and 24 hr urine volume, if submitted, or random urine on the req.			SDCL - Toronto TAT = 2 weeks	NICKU
*Nitrazepam (Mogadon) To monitor therapy, draw trough specimen before next dose is given	Blood	1 Red or 1 Green	1 mL serum or plasma	Aliquot			SDCL - Toronto	NITRA
Nitro Blue Tetrazolium (NBT)	Blood	Syringe		Collected only by Hematology staff			RGH	NBT

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
				Must be approved by Hematologist				
*Nitroprusside Therapy				See Thiocyanate				
*Noctec				See Chloralhydrate				
*Noradrenalin				See Catecholamines				
*Norclomipramine				See Clomipramine				
*Norepinephrine				See Catecholamines				NORPA
*Norovirus Stool Norovirus PCR	Stool	Sterile stool container with no viral transport or preservative	Walnut size stool portion	Stool must be collected within 48 hrs from onset of symptoms. When an institution suspects an outbreak, inform the Virology Section at (306)787-3138 prior to submitting specimens.			SDCL	STLNW
*Norpace	Blood	1 Red	1 mL serum	Aliquot			SDCL	NORPA
*Norpramin	Blood	2 Red	4 mL serum	Aliquot			SDCL	
*Nortryptiline (Aventyl)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST. Record time of collection on tube and req.	190-570 Toxic: >1800	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	NORTR
*Norverapamil				See Verapamil				
Nuclear Antibodies				See ANA				
5-Nucleotidase				Not available. Recommend GGT.				
Oligoclonal Bands	CSF		2.5 mL CSF				Special Chem - RGH	OLIGO
*Oligosaccharides	Urine	Random	10 mL urine	Freeze			SDCL- Saskatoon	OLISA
*Opiates	Urine	Random	20 mL urine	Refrigerate	Negative		SDCL TAT = 2 days	OPIAT
*Organic Acids Organic acids in serum are not available	Urine	Random	10 mL urine	Freeze			SDCL- Saskatoon TAT = 2 days	OGACU
*Orudis (Ketoprofen)	Blood	1 Red	2 mL serum	Aliquot			SDCL	KETOP
Osmolality	Blood	1 SST or 1 Green	1 mL serum or plasma		280-305	mmol/kg	Chem - RGH & PH	OSMO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Osmolality	Fluid		1 mL fluid		None available	mmol/kg	Chem - RGH & PH	OSFL
Osmolality	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	300-900	mmol/kg	Chem - RGH & PH	OSMRU (random) OSM24 (24 hr)
Osmolal Gap	Blood	1 SST or 1 Green	1 mL serum or plasma	Serum glucose and urea result required. Calculated Osmolality - Measured Osmolality	0-14	mmol/kg	Chem - RGH & PH	OSGAP
Osmotic Fragilities (Acid Glycerol Lysis Test is usually done instead)	Blood	2 Green (full)	Whole blood	Check with hematology before collection. Collect before 1300 hr			Hematology - RGH	OSMFR
Ostase				See Bone Specific ALP				
*Ovarian Antibodies				See Anti-Ovarian Ab				
*Oxalate Avoid large amounts of vitamin C for 48 hr prior to collection	Urine	24 hr Urine	25 mL urine aliquot	Adjust pH to 2-4 with 6N HCL or freeze. Record 24 hr volume on req.(If ordered with Citrate, send sep specimen and req)	Male: 80-490 Female: 40-320 7-14 yr: 140-420 <7: not determined	µmol/d	SDCL TAT = 7 days	OXU
*Oxazepam (Serax)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST.	Therapeutic: 0.6-5		SDCL TAT = 3 days	OXAZE
*Oxcarbazepine	Blood	1 Red	2 mL serum	Remove serum from cells as soon as possible.			SDCL	OXCRB
*P-ANCA (MPO)	Blood	1 SST	2 mL serum				SDCL - Saskatoon TAT = 2 weeks	PANCA
*Pancreatic Islet Cell Ab				See Anti-Islet Cells Ab				
Pancretic polypeptides (fasting)	Blood	2 mauve	3 mL EDTA plasma	Aliquot and freeze			SDCL	PAPEP
*PAPP-A Maternal Serum Screen (Maternal serum screening req. must be fully completed.	Blood	1 SST	2 mL serum	Random sample drawn between 11 & 14 weeks gestation.	Includes: PAPP-A, Free bHCG, and nuchal translucency test.		SDCL TAT = 1 day	PAPPA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Paragonimus Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT = 4 weeks	PARAG
*Parainfluenza	Naso-pharyngeal Aspirate, Washes - Throat			See Respiratory Virus Isolation or Detection. - See Throat Virus Isolation or Detection.				
*Paraneoplastic Disease Profile (Includes: HU, YO, RI, Amphyphysin and PNMA-2)	Blood	1 SST	1 mL serum frozen	Freeze and ship frozen	Includes: HU, YO, RI, Amphyphysin and PNMA-2		SDCL – Mitogen Diagnostics, Calgary	PNPDP
*Parasitology Serology	Blood			Must indicate requested test on requisition. See: Amoebiasis Babesiosis Cysticercosis Echinococcosis Filariasis Leishmaniasis Malaria PCR Malaria (P.falciparum) Paragonimus Schistosomiasis Strongyloidiasis Toxocariasis TORCH Toxoplasma Antibody Toxoplasma Total Trichinellosis Trypanosomiasis				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Parathyroid Hormone (PTH) Recommended specimen is Fasting (Collect blood after a minimum 12 h fast)	Blood	1 Plain Red-Top or 1 mauve, can use SST is aliquoted ASAP	1 mL serum or EDTA plasma	Centrifuge. Aliquot required serum amount into 12 x 75 mm plastic tube. Record collection date, time and fasting on specimen and req. Serum must be frozen within 6 h of collection. Store and send frozen. If specimens thaws, it is unsuitable for analysis. Transport specimen on ice packs or dry ice. Ship in accordance with Transport Canada Regulations for diagnostic specimen or infectious substance.			SDCL TAT = 3 days	PTH
*Parathyroid Hormone (PTH) Related Peptide	Blood	1 Na Heparin (Green)	1 mL Sodium (Na) Heparin plasma	Aliquot into plastic tube. Freeze.			SDCL - California TAT = 7 days	PTHRP
*Parietal Cell Antibody (Parietal Antibodies)	Blood	1 SST	2 mL serum	Send last B ₁₂ result with specimen			SDCL- Saskatoon TAT = 2 weeks	ABPCA
**Parotitis	Blood			See Mumps.				
**Parvovirus B19 IgM Serology (Fifth Disease IgM)	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	PAVMS
**Parvovirus B19 IgG Serology (Fifth Disease IgG)	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	PAVIS
*Paroxetine				See Paxil				
Partial Thromboplastin Time Anticoagulant status must provided on req	Blood	1 Blue	1 mL plasma	Draw is critical. 4.5 mL in a 5 mL tube. Remove plasma within 2 hr. If not analyzed within 4 hr, freeze.	24-36 55-80 (therapeutic range)	sec.	Hematology - RGH	APTT
Paul Bunnell	Blood	1 Red (full)					SDCL	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Paxil	Blood	2 Red or 2 Green	4 mL serum or plasma	Do not use SST. Record time of collection on tube and req.	Therapeutic: 94-188	nmol/L	SDCL TAT = 3 days	PAXIL
*PCP				See Phencyclidine				
*Pemphigoid (Pemphigous) Antibodies				See Anti-Skin Ab				
*Penicillin Allergen Test (Penicillin G/Penicillin V)	Blood		2 mL serum				SDCL- Saskatoon	
*Pentazocine (Talwin)				See Talwin				
*Pentobarbital	Blood	1 Red or 2 Green (full)	3 mL serum or plasma	Do not use seraclear for separating plasma (false positives)	Hypnotic: 4-22 Toxic: >44 Coma: 88-221	µmol/L	Special Chem - RGH	BARBQ
Pentothal (Thiopental)	Blood	1 Red or 2 Green (full)	3 mL serum or plasma	Do not use seraclear for separating plasma (false positives)	Hypnotic: 4-21 Toxic: >41 Coma: 124-413	µmol/L	Special Chem - RGH	BARBQ
*Pertussis *Nasopharyngeal Pertussis (Culture and PCR) (Bordetella pertussis)	Naso- pharyngeal	Regan Lowe Transport Medium					SDCL	PERTU
Pertussis Serology	Blood			No longer available.				PERTS
PFA	Blood	1 Blue	5 mL whole blood	Approval by Hematologist required Whole Blood "Unspun"			Special coag RGH	PFA
PH	Blood			See Blood Gases				
PH	Fluid		1 mL fluid	Specimen must be kept on ice	None available		Chem - RGH & PH	PHFL
*Phencyclidine (PCP)	Urine	Random Urine container	20 mL urine	Refrigerate	Negative		SDCL TAT = 3 days	PHENC
Phenobarbital <i>See TDM section for ideal sampling times</i>	Blood	1 SST or 1 Green	1 mL serum		64-172	µmol/L	Chemistry - RGH	PHENO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Phenothiazines Chlorpromazine (Largactil) Fluphenazine (Moditen) Mesoridazine Methotrimeprazine Perphenazine (Trilafon) Prochloroperazine (Stemetil) Promazine (Sparine) Thioridazine (Mellaril) Trifluoperazine (Stelazine) Trifluopromazine (Sequil) Trimeperazine	Urine	Random Urine container	20 mL urine		Negative		SDCL TAT = 3 days	PHEOZ
*Phenylalanine (PKU)	Blood	1 SST or 1 Green	1 mL serum or plasma or whole blood	Record date and time of collection on tube and req.	1 st week of life up to 360 µmol/L, thereafter 210	µmol/L	SDCL TAT = 2 days	PHALA
*Phenylbutazone	Blood	2 Red	4 mL serum	Aliquot			SDCL	PHEBZ
Phenytoin (Dilantin) Collect 0-1 hr before dose. <i>See TDM section for ideal sampling times</i>	Blood	1 SST	1 mL serum	Collect 0-1 hr before dose.	Therapeutic: 40-80 Toxic: ≥119	µmol/L	Chem - RGH & PH	PHENY
*Phenytoin - Free	Blood	1 Red	2 mL serum	Aliquot and freeze in plastic tube. Do not use SST.			SDCL	FRPTN
Phosphorus	Blood	1 SST	1 mL serum		<14 yr: 1.30-2.00 >14 yr: 0.75-1.55	mmol/L	Chem - RGH & PH	PHOS
Phosphorus	Fluid		1 mL fluid	No Longer available			Chem - RGH & PH	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Phosphorus State collection period	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: <14 yr: 16-26 >14 yr: 11-36	mmol/d	Chem - RGH & PH	PO4UR (random) PO424 (24 hr)
Phyantic Acid	Blood	1 Green	2 mL plasma	Freeze plasma			SDCL – Hospital in Commons	PHYTA
*Placidyl (Ethchlorvynol)	Blood	1 Red	2 mL serum	Aliquot			SDCL	ETHVY
Plasma Hemoglobin	Blood	1 Mauve	2 ml plasma	Centrifuge and remove from cells ASAP	0-70	mg/L	Special Chem - RGH	PLHB
Plasminogen				See Hypercoag				
Platelet	Blood	1 Mauve	Whole blood	Order CBC			Hem - RGH & PH	PLT
Platelet Aggregation				Special test - notify hematology			Special Coag Hematology - RGH	
Platelet Antibody		1 Red		Approval Required by Hematologist and must be pre-booked with Saskatoon at 306 655-5205			Saskatoon	PLABS
**Pneumococcal Serology	Blood	Pre - 1 SST Post – 1 SST	2 ml serum	Requires both pre- and post-immunization samples before sending out. Give vaccination date and clinical history.			SDCL – Cadham Prov Lab, Manitoba TAT = 4 weeks	PNEUS
P-Neutrophil Cytoplasmic Antibodies				See P-ANC				
*Polio Neutralization Test	Blood	1 SST	1 ml serum				SDCL	POLNT
*Polymerase Chain Reaction (PCR) for Hepatitis C (RNA)	Blood	1 Mauve	1 mL plasma	Remove plasma ASAP. Freeze and ship on dry ice.			SDCL	PCR
*Polyomavirus – BK Virus,	Blood CSF Urine			See BK Virus.				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Porphobilinogen (PBG)	Urine	Random Frozen	5 mL urine	Keep urine in the dark	0-9	µmol/L	Special Chem - RGH	PBG
Porphyrins	Blood	2 Mauve (EDTA)	10 mL plasma	Protect from light by wrapping in tin foil. Send plasma frozen.			SDCL - Toronto TAT = 3 weeks	PORPP
Porphyrins - Fractionation	Urine	24 hr Urine	50 mL urine aliquot	Preservative: 5 g Na ₂ CO ₃ . Freeze. Collect in brown bottle. Wrap aliquot in tin foil. Record collection time and volume. Keep refrigerated during collection.	Uroporphyrin I: 0-44 Uroporphyrin III: 0-20 Heptacarboxyl Porphyrin: 0-16 Hexacarboxyl Porphyrin: 0-2 Pentacarboxyl Porphyrin: 0-2 Coproporphyrin I: 5-90 Coproporphyrin III: 15-242	nmol/d	SDCL TAT = 7 days	PORPH
Porphyrins Screen	Urine	Random	5 - 10 mL	Collect in brown bottle and wrap in foil. Freeze			Special Chemistry- RGH	PORSC
Porphyrins (Qualitative) Quantitation done if screen positive	Feces	Fecal Fat Container	50 g of well-mixed feces	Protect from light (use dark container or wrap in tin foil). Must be sent in a sealed container.			SDCL - Toronto	PORPS
*Porphyrins (Quantitation)	Feces	Fecal Fat Container	50 g of well-mixed feces	Send frozen. Protect from light – as above.			SDCL - Toronto TAT = 3 weeks	PORPF
Potassium (K)	Blood	1 SST or 1 Green or Syringe with electrolyte balanced dry heparin	1 mL serum or plasma or 1.5 mL whole blood for adults or 0.6 mL for neonates in syringe		3.5-5.0	mmol/L	Chem - RGH & PH	K (serum) ABLK (whole bld)
Potassium (plasma)	Blood	1 Green – Lithium Heparin	1 mL plasma	Only order on request by physician or instruction in LIS.				KHEP
Potassium	Vitreous Fluid only		1 mL fluid		None available	mmol/L	Chem - RGH & PH	KFL

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Potassium State collection period	Urine	Random or 24 hr Urine	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 25-125	mmol/d	Chem - RGH & PH	KURA (random) K24 (24 hr)
PRA (Plasma Renin Activity)				See Renin				
PreAlbumin	Blood	1 SST	1 mL serum				SDCL - Toronto	PREAL
Pregnancy Test (hCG)	Blood	1 SST	1 mL serum		Positive/negative Sensitivity 25 IU/L		Chem - RGH & PH	SPREG
Pregnancy Test (hCG)	Urine	Random Urine	5 mL urine		Positive/negative Sensitivity 25 IU/L		Chem - RGH & PH	PREGU
*Pregnanediol				Replaced by Progesterone				
*Pregnanetriol				No Longer Available				
Prenatal Antibody Screen (Maternal or Paternal)	Blood	2 Mauve	Whole blood	Label samples with patient's full name and one of the following: PHN, MRN or DOB. Sign and Date Req.			CBS	
*Primidone (Mysoline) <i>See TDM section for ideal sampling times</i>	Blood	1 Red or 1 Green	1 mL serum or plasma	Aliquot. Do not use SST.	23-55 Toxic: >55	µmol/L	SDCL TAT = 1 day	PRIMO
Prion Analysis (PRNP Analysis)	Blood	3 ACD (yellow glass tube)	25 mL Whole blood	Store at room temp. Do Not Freeze. Ship at ambient temp. Requisition for Prion Diseases Program required. Consent form required.			SDCL - Winnipeg	PRNPA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Procainamide (Pronestyl) See TDM section for ideal sampling times Performed simultaneously with NAPA.	Blood	1 Red or 1 Green or 1 Mauve	1 mL serum or plasma	Aliquot. Do not use SST.	Therapeutic: 17-43 Toxic: >43 Sum of Procainamide & NAPA: 43-129	µmol/L	SDCL TAT = 1 day	PROC
*Prochlorperazine (Stemetil)				See Phenothiazines				
*Progesterone	Blood	1 SST	1 mL serum	Avoid hemolysis	Normal Menstruating Female: Follicular phase (preovulation): <0.32-0.95 Luteal phase (postovulation): 3.82-50.6 Postmenopausal: <0.32-0.64 Pregnancy: 1 st trimester: 8.9-468 2 nd trimester: 72-303 3 rd trimester: 89-771 Male: <0.32-0.64	nmol/L	SDCL TAT = 3 days	PROGE
*Prograf				See Tacrolimus				
*Proinsulin	Blood	1 SST	1 mL serum	Avoid hemolysis. Collect after 12 hr fast. Freeze			SDCL -Toronto TAT= 90 days	PROIN
Prolactin	Blood	1 SST	1 mL serum	Avoid hemolysis	Male: 2.6-18.1 Female: 1.2-29.9	µg/L	Chemistry - RGH	PROLC
*Promazine (Sparine)				See Phenothiazines				
*Pronestyl	Blood	1 Red	1 mL serum				SDCL	PRONE
*Propafenone (Rythmol)	Blood	2 Red	3 mL serum	Aliquot			SDCL TAT = 5-14 days	PROPA
*Propoxyphene (Darvon)	Blood	2 Red	4 mL serum	Aliquot. Record time of collection on tube and req. Do not use SST.	Therapeutic: 150-600	nmol/L	SDCL TAT = 3 days	PROPO
*Propranolol (Inderal) Peak occurs 2-3 hr after last dose. Collect trough level just before the next dose.	Blood	2 Red or 2 Green or 2 Mauve	4 mL serum	Aliquot. Do not use SST.	Therapeutic: 190-770	nmol/L	SDCL TAT = 3 days	PROPR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Propyl Alcohol	Blood	1 Grey	3 mL whole blood	Do not use alcohol swab			SDCL TAT = 1 day	PROPY
Prostatic Specific Antigen (PSA)	Blood	1 SST	1 mL serum	Free PSA done if PSA >4 and =10	0-4	µg/L	Chemistry - RGH	PSA
Protein	Blood	1 SST	1 mL serum		<3 mo: 46-70 3-12 mo: 45-65 1-2 yr: 54-75 2-3 yr: 53-80 >3 yr: 60-80	g/L	Chem - RGH & PH	TP
Protein	CSF		0.5 mL CSF		0.15-0.60	g/L	Chem - RGH & PH	PROCF
Protein	Fluid		1 mL fluid		None available	g/L	Chem - RGH & PH	TPFL
Protein State collection period	Urine	Random or 24 hr Urine	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 0.00-0.15	g/d	Chemistry - RGH	TPUR (random) TP24 (24 hr)
Protein/Creatinine Ratio	Urine	Random	5 mL urine	Samples contaminated with blood are not recommended	Hypertensive Disorders of Pregnancy: < 30mg/mmol	mg/mmol	Chemistry – RGH	TP/C
Protein Electrophoresis	Blood	1 SST	1 mL serum		Albumin: 30-50 Alpha ₁ globulin: 1-4 Alpha ₂ globulin: 4-8 Beta globulin: 6-11 Gamma globulin: 7-17	g/L	Immunology - RGH	SPE
Protein Electrophoresis	CSF		1 mL CSF		CSF Albumin: 111-483 CSF IgG: 6-86 IgG/Albumin Ratio: 0.07-0.25	mg/L	Immunology - RGH	IMCSF
Protein Electrophoresis	Urine	24 hr Urine	50 mL urine aliquot	Record 24 hr urine volume and collection period			Immunology - RGH	TPEU
Protein C				See Hypercoag				
Protein S				See Hypercoag				
Prothrombin Time Anticoagulant status must be provided on the req	Blood	1 Blue (full)	1 mL plasma	See INR	11.9-13.8	sec.	Hem - RGH & PH	PT

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Protoporphyrin (Erythrocyte)	Blood	1 Mauve	5 mL whole blood EDTA	DO NOT SPIN. Keep in the dark.	0.30-1.80	µmol/L RBCs	Special Chem - RGH	TEP
*Prozac (Fluoxetine)	Blood	2 Red	4 mL serum	Aliquot			SDCL	FLUOX
PSA				See Prostatic Specific Antigen				
Pseudocholesterase (If ordered with Dibucaine #)	Blood	1 SST			Dibucaine No: 78-89 Fluoride No: 62-71		Special Chem - RGH	PSDIN
Pseudocholesterase	Blood	1 SST	1 mL serum				SDCL	PCHOL
*Psittacosis Serology (Chlamydia psittaci, Chlamydia psittaci)	Blood	1 SST	1 mL serum				SDCL – Winnipeg TAT = 4 weeks	PSIAS
*PTH				See Parathyroid Hormone				
*PTH Related Peptide				See Parathyroid Hormone Related Peptide				
PTMUT	Blood	1 Mauve	Whole blood	See Hypercoag				
*Purkinje Cyto Ab				See Anti-Yo				
*Pyridoxine				See Vitamin B6				
*Pyruvate (Pyruvic Acid) NO LONGER AVAILABLE								
*Pyruvate Kinase (PK)	Blood	1 Mauve	5 mL whole blood	Ward (NICU), will collect on newborn. Collect on Monday and Tuesday			SDCL - Toronto	PK
*Q Fever	Blood			See Rickettsial Serology.				
*Quinidine <i>See TDM section for ideal sampling times</i>	Blood	1 Red or 1 Green	1 mL serum or plasma	Do not use SST. Aliquot. Refrigerate.	Therapeutic: 6-15 Toxic: >15	µmol/L	SDCL TAT = 1 day	QUIN
*Quinolinic Acid	Blood	2 Green	Plasma	Freeze plasma			SDCL- Saskatoon	QUINO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Rabies Serum Serology	Blood	1 SST	2 mL serum	Aliquot ASAP and send frozen. Human Rabies Serology Requisition must be completed by ordering physician.			SDCL - Winnipeg TAT = 4 weeks	RABIS
*Rabies CSF Rabies Serology	CSF	Sterile leak proof tube	2 mL CSF	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis. Human Rabies Serology Requisition must be completed by ordering physician.			SDCL - Winnipeg TAT = 4 weeks	RABIC
*Rapamycin Trough specimen must be drawn immediately pre-dose	Blood	1 Mauve	3 mL whole blood	Refrigerate immediately. Ship on ice packs.			Chemistry-RGH	SIROS
*Rapid Plasma Reagin				See RPR				
Rast Test Special sheet must accompany specimen	Blood	1 SST	Serum	100 µL serum required for each test ordered			SDCL- Saskatoon	RAST
Red Cell Fragility (Osmotic Fragility) Acid Glycerol Lysis Test is usually done instead	Blood	1 Green	Whole blood	Check with hematology before collection. Collect before 1200.			Hematology - RGH	OSMFR
Reducing Substances	Urine	Random	5 mL urine	Fresh or frozen			Chemistry - RGH	RDSU
Reducing Substances	Feces	Random	2 g	Fresh or frozen			Chemistry - RGH	RDSF
*Renal Calculus				See Calculi				
Renal Panel (urea, creatinine, electrolytes)	Blood	1 SST	1 mL serum		See individual tests for reference ranges		Chem - RGH & PH	HRENA (hospital) PRENA (PML sites)

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Renin Direct (replaces renin activity)	Blood	2 Mauve room temp	3 mL plasma Neonates: 750 uL	Separate and Freeze plasma ASAP. Collect between 0700-1000			SDCL - Edmonton TAT = 10 days	RENIN
*Respiratory Syncytial Virus (RSV)	Naso-pharyngeal Aspirate, Washes - Throat			See Respiratory Virus Isolation or Detection. - See Throat Virus Isolation or Detection.				
Reticulin Ab				See Anti-Reticulin Ab				
Reticulocytes	Blood	1 Mauve	Whole blood	Can use same tube as CBC			Hem – RGH & PH	RETIC
Rheumatoid Factor (RA Latex, Latex Fixation)	Blood	1 SST	1 mL serum				Immunology - RGH	RF
*Rhythmadon	Blood	1 Red or 1 Green	3 mL serum or plasma	Aliquot			SDCL	RHTHY
*Riboflavin	Blood			See Vitamin B2				
*Rickettsial Serology (Rickettsia rickettsii, Rickettsia typhi, Rocky Mountain Fever, Q Fever, Coxiella burnetii)	Blood	1 SST	2 mL serum	Screen includes Q Fever (Phase I & II), Coxiella burnetii, Rickettsia rickettsii IgG and Rickettsia typhi IgG specific assays.			SDCL - Winnipeg TAT = 6 weeks	RICKT
Ristocetin Cofactor				Test is part of BLDWS				
*Ritalin	Urine or Blood	Random Urine or 2 Red	20 mL urine 4 mL serum	Urine is preferred. Aliquot			SDCL	RITAU
*Rivotril (clonazepam)	Blood	2 Red	4 mL serum	Aliquot			SDCL	CLONZ
*Rocky Mountain Spotted Fever	Blood			See Rickettsial Serology.				
**Roseola IgM & IgG Serology (HHV-6, Human Herpes 6 Virus)	Blood	1 SST	1 mL serum	Screen includes Roseola IgG and IgM. Viral Exanthemata Requisition must be completed by ordering physician before specimen is forwarded.			SDCL – Winnipeg TAT = 3 weeks	ROSEO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*RPR (VDRL) Rapid Plasma Reagin	Blood	1 SST	1 mL serum				SDCL	VDRL
*RSV (Respiratory Syncytial Virus)	Naso-pharyngeal Aspirate, Washes - Throat			See Respiratory Virus Isolation or Detection. - See Throat Virus Isolation or Detection.				
**Rubella IgM Serology	Blood	1 SST	2 mL seum	If acute is negative, submit convalescent in 5-10 days.			SDCL	RUBMS
**Rubella IgG Serology	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	RUBIS
**Rubeolla	Blood			See Measles (Rubeolla).				
Russell Viper Venom			See DRVVT				RGH	
*Rythmodan (Disopyramide)	Blood	2 Red	3 mL serum	Aliquot				DISOP
*Rythmol				See Propafenone				
*Sabril				Not available				SABRI
Salicylate <i>See TDM section for ideal sampling times</i>	Blood	1 SST or 1 Green	1 mL serum or plasma		Therapeutic: 1.10-2.20 Toxic: >2.3 Usually lethal: >5.0 N.B. Children are more sensitive to the effects of salicylate	mmol/L	Chem – RGH & PH	SALI
SARS	Blood			No longer available.				SARSG
*SARS Nasopharyngeal or Throat - SARS	Naso-pharyngeal or Throat	Universal Transport Medium		Phone SDCL at (306)787-3131 to pre-approve testing prior to shipping.			SDCL	SARSR
*SBG				See Sex Hormone Binding Globulin				
*Schistosomiasis Serology (Bilharzia, Bilharziosis, Snail Fever)	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT = 4 weeks	SCHS
Scleroderma-70	Blood	1 SST	2 mL serum				Immunology-RGH	SCL70
Sedimentation Rate with CBC	Blood	1 Mauve (full)	Whole blood	Can use same tube as CBC Test within 8 hrs of collection			Hematology - RGH	ESR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Selenium	Blood	1 – 7 mL Royal Blue EDTA) BD368381	3 mL plasma	Separate plasma ASAP Send in metal-free polypropylene tube			SDCL- Toronto TAT = 20 days	SELEN
*Selenium	Urine	24 hr urine container	10 mL	Freeze specimen within 4 hr of completing 24 hr collection			SDCL – Mayo TAT = 2 weeks	SELUN
*Serotonin Patient to be on a low tryptophan diet for 2 days prior to collection. Patient to be off all drugs for 3 days prior to collection, if possible. Foods high in tryptophan Include avocados, bananas, tomatoes, plums, eggplant, hickory nuts, walnuts, pineapple and mollusks.	Blood	1 SST	2-1mL serum aliquots	Centrifuge and separate into 2 aliquots ASAP. Freeze.			SDCL - Toronto TAT = 4 weeks	SEROS
*Serotonin See above diet for restrictions	Urine	24 hr Urine		Add 20 mL 6N HCL to brown bottle before collection. Do not use Boric Acid. Record volume and collection period. Aliquot urine and freeze.			SDCL - Toronto	SEROU
*Serpax	Blood	2 Red	4 mL serum	Aliquot			SDCL	SERPA
*Severe Respiratory Illness (H1N1)	Naso- pharyngeal , aspirate, washings			See FLU test for Severe Respiratory Illness.				
Sex Hormone Binding Globulin (SHBG, SBG)	Blood	1 SST	1 mL serum		Male: 13-71 Female: 18-114	nmol/L	SDCL TAT = 5 days	SHBG
**Shingles	Blood -			See Varicella Zoster. -				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
	Lesion			See Viral, Lesion.				
Sickle Dex (Sickle Cell) All specimens with a Sickle Dex request should also have Hb electrophoresis studies done as well as a CBC.	Blood	1 Mauve	2 mL whole blood				Hematology - RGH	SICKC
*Silver	Urine	24 hr Urine (acid- washed plastic container)	7 mL aliquot	Add 20 mL of 6N Nitric Acid at start of collection			SDCL TAT = 3 weeks	SILVE
*Sin Nombre Virus	Blood CSF			See Hantavirus.				
*Sinequon (Doxepin)	Blood	2 Red or 2 Green	5 mL serum or plasma				SDCL	DOX
*Siquil (Triflupromazine)				See Phenothiazines				
*Sirolimus				See Rapamycin				
Smith-Lemli Opitz Screen				See 7-Dehydrocholesterol				
Sodium	Blood	1 SST or 1 Green or Syringe with electrolyte balanced dry heparin	1 mL serum or plasma or 1.5 mL whole blood for adults or 0.6 mL for neonates in syringe		135-145	mmol/L	Chem - RGH & PH	NA (serum) ABLNA (whole blt)
Sodium	Fluid		1 mL fluid	No Longer Available	None available	mmol/L	Chem - RGH & PH	

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Sodium State collection period	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 43-217	mmol/d	Chem - RGH & PH	NAURA (random) NA24 (24 hr)
*Somatomedin-C (IGF-1)	Blood	1 SST	2 mL serum	Separate ASAP. Divide specimen into two equal aliquots and freeze.			SDCL - Toronto TAT = 2 weeks	SOMC
*Somatostatin	Blood	1 EDTA	2 mL plasma	Keep on Ice. Separate and Freeze immediately.			SDCL - California	SOSTA
*Somatotropin				See Growth Hormone				
*Sominex	Blood	2 Red	4 mL serum	Aliquot			SDCL	SOMIN
Specific Gravity	Fluid		1 mL fluid		None available		Chem - RGH & PH	SGFL
Specific Gravity	Urine		5 mL urine		1.002-1.030		Chem - RGH & PH	U/A
*Sperm Antibodies				See Anti-Sperm				
Spinal Fluid				See individual tests (glucose, protein, lactic acid, LD, protein electrophoresis)				
*Sporotricosis Serology	Blood	1 SST	3 mL serum				SDCL – Edmonton TAT = 3 weeks	SPORS
*Stelazine	Blood	2 Red	3 mL serum	Aliquot			SDCL	TRIFL
*Stemetil				See Phenothiazines				
Stones				See Calculi				
*Streptozyme	Blood			See Anti-Streptoysin (ASO).				
*Strongyloidiasis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT – 4 weeks	STRON
*Strychnine	Blood	1 RED	2 mL serum				SDCL	STRYC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Strychnine	Urine		10 mL random urine				SDCL	STRYU
Sucrose Lysis	Blood	2 Red & 1 Mauve		Usually ordered with Ham's Test			Hematology - RGH Special Chem - RGH	HAMSU
Sugar Chromatography	Blood			No longer available				SUCRP
Sugar Chromatography	Feces	Random	3 g feces	Freeze if not tested within 24 hr.s			Special Chem - RGH	SUCRF
Sugar Chromatography	Urine	Random	5 mL urine	Freeze if not tested within 24 hrs.			Special Chem - RGH	SUCRU
*Sulfaethoxazole				See Sulfonamides				
*Sulfatide Auto-Antibodies	Blood	1 SST	2 mL serum	Freeze			SDCL - California	ABSUL
(Sulfamethoxazole) (Septra) (Bactrim) Trough - just before dose. Peak - 3-4 hr after dose.	Blood	1 Red	1 mL serum	Aliquot	Therapeutic: 400-730	µmol/L	Special Chem - RGH	SULFA
*Sulfonyl Ureas				Ward must state which one (i.e. glyburide, tolbutamide, cholpropromide). Freeze.			SDCL - Etobicoke	SULUR
Sulfhemoglobin with Methemoglobin	Blood	1 Mauve or 1 Green	1 mL whole blood		Sulfhemoglobin: 0 Methemoglobin: 0-2	%	Special Chem - RGH	SHB METHB
*Surmontil (Trimipramine)	Blood	2 Red	5 mL serum	Aliquot			SDCL	TRIM
Sweat Chloride	Sweat			Book with special chemistry at RGH (766-4497)	96% of children: 0-35 4% of children: 35-60	mmol/L	Special Chem - RGH	SWCL
*Syphilis MHA-TP Syphilis IgG (Treponema pallidum)	Blood	1 SST	2 mL serum		Non-reactive		SDCL TAT = 2-3 days	
*T3 (Triiodothyronine) (Total T3)	Blood	1 SST	1 mL serum Neonate – 100 µL	Order after consultation with endocrinologist or SDCL consultant biochemist	0-89-2.44	nmol/L	SDCL TAT = 3 days	TT3PL

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*T4 (Thyroxine) (Total T4)	Blood	1 SST	1 mL serum Neonate – 100 µL	Order after consultation with endocrinologist or SDCL consultant biochemist	63-151	nmol/L	SDCL	TT4PL
Tacrolimus State drug dosage and time of dose	Blood	1 Mauve	3 mL whole blood	Collect before dose given. Done daily Mon-Fri	3.0-15.0	µg/L	Chemistry - RGH	TACRS
*Talwin For suspected Talwin/ Ritalin abuse only - ritalin urine screen is done	Urine or Blood	Random or 2 Red or 2 Green	4 mL urine or serum or plasma	Aliquot. Do not use SST.	Serum/Plasma: Therapeutic: 170-700 Toxic: >1500 Urine: Negative	nmol/L	SDCL TAT = 3 days	TALWU
*Tambocor (Flecainide)	Blood	2 Red	3 mL serum	Aliquot			SDCL	FLECA
Tay Sachs Test				See Hexoaminidase				
*TBII				See Thyrotropin Binding Inhibitory Immunoglobulin				
TAU protein				All Beta 2 transferrin				
*TB (Mycobacterim) Blood Culture	Blood/Bone Marrow			See Blood Culture TB (Mycobacterium).				
*TBG				See Thyroxine Binding Globulin				
*Teichoic Acid	Blood	1 Red	1 mL serum	Aliquot and freeze.			SDCL - California. TAT = 4 weeks	TECHO
Tegretol	Blood	1 SST	1 mL serum		Therapeutic: 17-50	µmol/L	Chemistry - RGH	CARBA
Tenolin (Tenormen)				Test not available				
*Testosterone	Blood	1 SST	1 mL serum	Submit as a separate sample. Avoid hemolysis.	Male: 5.8-28 Female: 0.45-3.74	nmol/L	SDCL TAT = 14 days	TESTO
*Tetanus Antitoxin	Blood	2 SST	5 mL serum	Capital Health Requisition			SDCL- Edmonton TAT = 3 weeks	TETAT
Thallium	Blood	1-10mL GLASS Sodium heparin tube (BD366480)	7 mL whole blood	Do not separate or freeze			SDCL - Toronto TAT = 20 days	THALS

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Thallium	Urine (24 hr or random)	24 hr or random acid-washed container	10 mL	Use polypropylene vial. Record collection date and total 24 hr urine volume, if submitted, or random on the req.			SDCL - Toronto TAT = 2 weeks	THALU
Theophylline <i>See TDM section for ideal sampling times</i>	Blood	1 SST	1 mL serum		Therapeutic: <1 mo: 28-83 >1 mo: 28-85 Toxic: ≥111	µmol/L	Chemistry - RGH	THEO
*THC (Tetrahydrocannabinol)				See Cammabompods				
*Thiamine				See Vitamin B1				THIAM
*Thiocyanate	Blood	1 SST	1 mL serum	Record time of collection on tube and req.	Normal: Non-smoker: 0.02-0.21 Smoker: 0.05-0.21 Toxic: >1.75	nmol/L	SDCL TAT = 1 day	THIO
Thiopental				See Pentothal				
Thiopurine Methyltransferase, RBC	Blood	1 EDTA	5 mL whole blood	Keep refrigerated but not frozen. Collect Tues or Wed. morning and must be at SDCL by noon Wed.			SDCL – Mayo Cl. – Promethius lab	THIOM
*Thioridazine				See Mellaril				THIOR
*Thorazine	Blood	2 Red	3 mL serum	Aliquot				THORA
Thrombin Time	Blood	1 Blue (full)	1 mL plasma	Same tube for PT & APTT			Hematology - RGH	TT
*Thyroglobulin Includes antithyroid peroxidase (microsomal Ab and thyroglobulin autoantibodies)	Blood	1 SST	1 mL serum				SDCL	THYGL
*Thyroglobulin Level	Blood	2 SST	4 mL serum	Freeze serum aliquot			SDCL - Edmonton	THYGB
*Thyroid Antibodies	Blood	1 SST	2 mL serum		<100	IU/mL	SDCL TAT = 2-3 days	ABTH
*Thyroid Peroxidase Ab				See Anti-Thyroid Peroxidase				
Thyrotropin				See TSH				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Thyrotropin Binding Inhibitory Immunoglobulin	Blood	1 SST	1 mL serum frozen.	Aliquot and freeze serum. Indicate thyroid status of patient including presence of exophthalmos on req.			SDCL - Toronto TAT = 3 weeks	TBII
Thyroid Receptor Ab (Thyrotropin)				See Thyrotropin Binding Inhibitory Immunoglobulin				
Thyroid Stimulating Hormone				See TSH				
*Thyroid Stimulating Immunoglobulin				See Thyrotropin Binding Inhibitory Immunoglobulin				TSI
Thyroxine - Total				See T4				
*Thyroxine - Free				See Free T4				
*Thyroxine Binding Globulin (TBG)	Blood	1 SST	1 mL serum				SDCL - Toronto TAT = 3 weeks	TBG
Thyroxine Stimulating Hormone Receptor Ab				See Thyrotropin Binding Inhibitory Immunoglobulin				
TIBC				See Iron				
*Tissue Transglutaminase Antibody (IGA)	Blood	1 SST	1 mL serum				SDCL TAT = 2 weeks	ABTTG
Tobramycin	Blood	1 SST	1 mL serum	Trough – usually drawn ½ hr before drug is administered. Peak – usually drawn 1 hr after drug is administered, but physician may vary. Daily – 6 to 14 hrs after dose.	Therapeutic: Pre: 0.0-2.0 Post: 5.0-10.0	mg/L	Chemistry - RGH	TOBRA TPBPR TOBPO
*Tofranil (Imipramine)	Blood	2 Red	5 mL serum	Aliquot			SDCL	IMIPR
*Tolbutamide	Blood	1 Green	2 mL plasma	Aliquot and freeze			SDCL	TOLBU
*Topiramate (Topomax)	Blood	1 non-SST	1 mL serum	Aliquot and freeze			SDCL- Hosp. In Commons, Toronto TAT = 2 weeks	TOPIR

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*ToRC screen *TORCH (Toxoplasma, Rubella, CMV) (Herpes Simplex)	Blood	1 SST	3 mL serum 0.5 ml neonates	If unable to collect 0.5 mL on neonates serum, specify which tests are most important.			SDCL	TORCH
*Total Carnitine	Blood	1 SST or 1 Green	1 mL serum or plasma	Separate from cells. Avoid hemolysis. Freeze	Adult: 21-74 <12 yr: 22-60	µmol/L	SDCL TAT = 10 days	CARNS
Total Iron Binding				See Iron				
*Toxocariasis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Montreal TAT = 4 weeks	TOXOC
*Toxoplasma Antibody Confirmation Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL - Montreal TAT = 4 weeks	TOXIS
**Toxoplasma Total IgM and IgG Serology	Blood	1 SST	2 mL serum	If the total antibody is present, a specific IgM test will be performed.			SDCL	TOXOP
*TPHA	Blood	1 Red	2 mL serum	NO LONGER AVAILABLE			SDCL	TPHA
*TPO				See Anti-Thyroid Peroxidase				
*Transcobalamine	Blood	1 SST	2 mL serum	Separate immediately. Keep cool.			SDCL - Toronto	TRANS
Transferrin	Blood	1 SST	1 mL serum		1.32-3.02	g/L	Immunology - RGH	TFER
Transferrin - Isoelectric Focusing	Blood	1 SST	1 mL serum	Freeze			SDCL - Saskatoon	TRISO
Transglutaminase Ab				See Tissue Transglutaminase				
*Trazodone	Blood	2 Red	4 mL serum	Aliquot			SDCL	TRAZO
Treponema Pallidum				See Syphilis				
*Triazolam (Halcion)	Blood	2 Red	4 mL serum	Aliquot			SDCL	TRIAZ
*Trichinellosis Serology	Blood	1 SST	3 mL serum aliquot	Aliquot.			SDCL - Montreal TAT = 4 weeks	TRICS
*Trichloroethanol				See Chloralhydrate				
*Triiodothyronine (T3)				See T3				
*Triiodothyronine- Free				See Free T3				

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Tricyclic Drugs (TCA)	Blood	2 Red	4 mL serum	Aliquot			SDCL	TRICY
*Triflupromazine				See Phenothiazines				TRIPR
Triglycerides Collect fasting	Blood	1 SST	1 mL serum	Fasting specimen	0.35-1.70	mmol/L	Chem - RGH & PH	TRIG
Triglycerides	Fluid		1 mL fluid		None available	mmol/L	Chem - RGH & PH	TRFL
*Trilafon				See Phenothiazines				
*Trimipramine (Surmontil)	Blood	2 Red	4 mL serum	Aliquot. Do not use SST.	Therapeutic: 170-680 Toxic: >1800	nmol/L	SDCL TAT: Emerg = 4 hr Routine = 3 days	TRIM
Triple Screen				See Maternal Serum Screen				
Troponin I	Blood	1 SST	1 mL serum	Aliquot	<=0.02 ug/L	ug/L	Chem-RGH	TROPA
Trypsin	Feces			NO LONGER AVAILABLE			Chemistry - RGH	TRYPS
Trypsin	Fluid			NO LONGER AVAILABLE			Chemistry - RGH	TRYFL
*Trypanosomiasis Serology	Blood	1 SST	3 mL serum	Aliquot.			SDCL – Montreal TAT – 4 weeks	TRYPA
Tryptase Collect 1 hr post-allergic reaction	Blood	1 SST	1 mL serum	Aliquot and freeze			SDCL - Toronto	TTASE
Tryptophan				See Amino Acid				
TSH	Blood	1 SST	1 mL serum 100 µL neonate		0.49-4.67	mIU/L	Chemistry - RGH (SDCL does neonate testing)	TSHSC (screen) TSHFU (follow-up)
TSH with T3 and T4	Blood	1 SST	1 mL serum 600 µL neonates				Chemistry - RGH (SDCL does neonate testing)	NETSH (to SDCL)
*TSH Receptor Ab				See Thyrotropin Binding Inhibitory Immunoglobulin				
Tumor Necrosis Factor	Blood	1 Red	1 mL serum	Freeze at –80 C. Send on dry ice.			SDCL-Toronto	TNF

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
**TWAR	Blood			See Chlamydoiphilia pneumoniae IgM and IgG.				
Tylenol				See Acetaminophen				
Tyrosine	Blood	1 Green	1 mL plasma		25-200	µmol/L	SDCL- Saskatoon	AACID
*Unconjugated Estriol (Performed only as part of Maternal Serum Screen)								
Urea	Blood	1 SST or 1 Green	1 ml serum or plasma		0-12 months: 1.4-6.8 1-15 yrs: 2.2-7.0 >15 yr: 3.0-7.1	mmol/L	Chem - RGH & PH	UREA
Urea	Fluid		1 mL fluid		None available	mmol/L	Chem - RGH & PH	UREFL
*Ureaplasma - *Mycoplasma and Ureaplasma Culture	Cervical, Urethral, Respiratory (neonatal)	Universal Transport Medium					SDCL	UREMH
Urea State collection period	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 250-600	mmol/L	Chem - RGH & PH	URURA (random) URE24 (24 hr)
Uric Acid	Blood	1 SST	1 mL serum		Male: 200-500 Female: 145-430	µmol/L	Chem - RGH & PH	URIC
Uric Acid	Fluid		1 mL fluid		None available	µmol/L	Chem - RGH & PH	URAFI
Uric Acid State collection period	Urine	Random or 24 hr	10 mL urine	Indicate on Requisition if Random or 24 hr urine. Record Collection Time, Date and Volume (if 24 hr). Rural sites: Send aliquot frozen	24 hr: 1.2-4.5	mmol/L	Chem - RGH & PH	URAUR (random) URA24 (24 hr)
Urinalysis	Urine	Random	10 mL		Glucose: negative Bilirubin: negative Ketones: negative SG: 1.002-1.030	µmol/L	Chem - RGH & PH	U/A

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
					Blood: negative PH: 5.0-8.0 Protein: negative UBG: 3-17 Nitrite: negative Leucocyte esterase: negative			
*Urine Free Cortisol (UFC)				See Free Cortisol				
Urobilinogen	Urine	Random	5 mL urine	Keep in dark	Done as part of urinalysis		Chem - RGH & PH	U/A
*Uroporphyrin				See Porphyrins				
*Uroporphyrinogen Synthetase	Blood	2 Green	10 mL whole blood	Protect from light by wrapping in tin foil			SDCL TAT = 14 days	UPS
*Valium (Diazepam)	Blood	2 Red	5 mL serum	Aliquot			SDCL	DIAZ
Valproic Acid (Depakane, Epival) <i>See TDM section for ideal sampling times</i>	Blood	1 SST or 1 Green	1 mL serum or plasma	Collect 0-1 hr before dose.	350-700 Significant liver enzyme elevation and thrombocytopenia may occur at levels >1000	µmol/L	Chemistry - RGH	VALPR
*Vanadium	Urine	Random or 24 hr urine container, acid-washed	10 mL urine	Wash container with 500 mL of 10% solution of nitric acid. Rinse container twice with deionized water.			SDCL - Toronto	VANAD
Vancomycin Trough and peak NOTE: Record exact date and time of last does and exact date and time of collection <i>See TDM section for ideal sampling times</i>	Blood	1 SST	0.5 mL serum	Trough - Usually drawn ½ hr before drug is administered. Peak - usually drawn 1 hr after drug is administered, but physician may vary.	Trough: 5.0-15.0 Peak: 20.0-40.0 Toxic Peak: >=60.0 Toxic Trough: >=20.0	mg/L	Chemistry - RGH	VANCO VANPR (trough) VANPO (peak)

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Vanillyl Mandelic Acid (VMA) State weight with pediatric specimens. State collection period.	Urine	24 hr Urine	25 mL urine aliquot	Refrigerate during collection. Adjust pH 2-4 with 6N HCL or freeze. Record volume and collection period. Do not over acidfy.	Adult: 9-34 Children: 7-30 d: up to 0.9 30 d-6 mo: up to 1.2 7 m-10 yr: up to 0.8	µmol/d µmol/ kg/day	SDCL TAT = 3 days	VMA
*Varicella Zoster (H. Zoster, VZV, Herpes Zoster, Chickenpox, Shingles)	Lesion			See Viral, Lesion.				
**Varicella Zoster IgM Serology (H. Zoster, VZV, Herpes Zoster, Chickenpox, Shingles)	Blood	1 SST	2 mL serum	If acute is negative, submit convalescent in 5-10 days.			SDCL	HZVMS
**Varicella Zoster IgG Serology (H. Zoster, VZV, Herpes Zoster, Chickenpox, Shingles)	Blood	1 SST	2 mL serum	Convalescent (Immune status)			SDCL	HZVIS
*Vasoactive Intestinal Polypeptide (VIP) (Collect after an overnight fast)	Blood	2 Mauve	3 mL plasma (EDTA)	Separate from cells ASAP. Freeze. Record fasting plasma on req.			SDCL - Mayo TAT = 4 weeks	VIP
*Vasopressin				See ADH				
*VDRL (STS & FTA Absorption)	Blood			SEE Syphilis				
*VDRL	CSF	Sterile Tube	0.5-1 mL	Refrigerate. Provide patient symptoms and onset, recent vaccinations on requisition	Non-reactive		SDCL TAT = 1 week	CSFVD
Venlafaxine				See Effexor				
Very Long Chain Fatty Acids	Blood	2 Red or 2 Mauve	2 mL serum or plasma 500 µL neonates	Send frozen			SDCL- Saskatoon	FALC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Verapamil Draw 1-2 hr after last dose (peak value)	Blood	2 Red	5 mL serum	Aliquot and freeze			SDCL - Mayo	VERAP
*VIP (Vasoactive Intestinal Polypeptide) Fasting specimen	Blood	2 Mauve (pre-chilled)	3 mL plasma	Collect on ice. Separate ASAP and freeze. Send on dry ice. Record fasting plasma on req.			SDCL - Mayo TAT = 4 weeks	VIP
*Viral CSF Virus Isolation (Enterovirus)	CSF	Sterile leak proof tube.	2 mL CSF	Do not freeze CSF for viral isolation.			SDCL	CSFVC
*Viral Eye Virus Isolation or Detection	Eye swab	Universal Transport Medium					SDCL	EYEV
*Viral Genital Lesion Virus Isolation or Detection (Viral Lesion, Lesion, Herpes, Herpes Simplex, HSV)				NOT AVAILABLE – see Lesion Viral Isolation or Detection			SDCL	
*Viral Other Lesion Virus Isolation or Detection (Viral Lesion, Lesion, Herpes, Chickenpox, Shingles)				NOT AVAILABLE - see Lesion Viral Isolation or Detection			SDCL	
*Viral – Lesion Isolation or Detection	Lesion swab, aspirate or scrappings	Universal Transport Medium		Include specimen source, patient symptoms and date of onset on the requisition.			SDCL	LESVC
*Viral Respiratory Virus Isolation or Detection (Adenovirus, Influenza A & B, Parainfluenza, Respiratory Syncytial Virus-RSV, Enterovirus)	Naso-pharyngeal Aspirate, Washings	Universal Transport Medium		(See Viral, Throat Virus Isolation or Detection.)			SDCL	RESVC

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Viral Stool Viral Isolation or Detection (Enterovirus, Coxsackie)	Stool	Sterile stool container with no viral transport or preservative	Walnut size stool portion	(See Norovirus PCR).			SDCL	STLVC
*Viral Throat Virus Isolation or Detection (Adenovirus, Influenza A & B, Parainfluenza, Respiratory Syncytial Virus-RSV)	Throat swab	Universal Transport Medium					SDCL	THWVC
*Viral Tissue Virus Isolation	Tissue	Universal Transport Medium		-STAT(Urgent) protocol- Phone SDCL at (306)787-3131 to pre-arrange testing prior to shipping.			SDCL	TISVC
*Viral Urine Viral Isolation or Detection	Urine	Sterile Urine Container	20 mL urine (random)	(See CMV Urine).			SDCL	URVC
**Viral Acute Serology				NOT AVAILABLE – order specific viral serology			SDCL	
**Viral Convalescent Serology				NOT AVAILABLE – order specific viral serology			SDCL	
*Viral Meningitis (Eastern Equine, Japanese Encephalitis)	Blood CSF			See Encephalitis (Viral).				
Viral Surveillance	Blood	3 Blue tops 2 Red tops		Require completion of consent and questionnaire			Transfusions - RGH	STVIR
Viscosity	Blood	1 Red	2 mL serum	Send within 3 hr of collection. Separate from cells ASAP. Freeze.	1.1-1.3	cps	Hematology - RGH	VISCO
*Vitamin A	Blood	1 Red	1 mL serum	Protect from light by wrapping in tin foil. Freeze. Transport on ice packs within 24 hr.			SDCL - Toronto TAT = 2 weeks	VITA

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Vitamin B1 Physician must first justify test to Dr. Lehotay (787-7900)	Blood	1 Mauve	2 mL plasma	Freeze. Wrap in tin foil			SDCL - Toronto	VITB
*Vitamin B2 (Riboflavin) Patient must fast for 12-14 hr and refrain from alcohol for 24 hr before collection	Blood	1 Mauve or 1 SST	1 mL plasma or serum	Freeze			SDCL	VITB2
*Vitamin B3				Not available				
*Vitamin B6 (Pyridoxine) Physician must first justify test to Dr. Lehotay (787-7900)	Blood	2 Mauve	3 mL plasma	Freeze. Wrap in tin foil within 5 min. of collection.			SDCL - Toronto	VITB6
Vitamin B12	Blood	1 SST	1 mL serum		Deficient: <116 Borderline: 116-138 Normal: 138-781	pmol/L	Chemistry - RGH	B12AX
Vitamin B12 & Folates				See B12 & folates				
Vitamin C				See Ascorbic Acid				
*Vitamin D1,25 Dihydroxy	Blood	1 RED	2 mL serum	Aliquot and freeze serum in Light Sensitive Brown tubes(protect from light). If specimen thaws it is unacceptable.			SDCL - Calgary TAT = 4 weeks	VD125
*Vitamin D2	Blood	1 SST	2 mL serum	Aliquot and freeze in Light Sensitive Brown tubes.			SDCL	VITD2
*Vitamin D 25 (25Hydroxy Vit D3)	Blood	1 SST	2 mL serum or plasma	Aliquot and freeze in Light Sensitive Brown tubes Send Frozen			SDCL-Chemistry TAT= 10 days	VID25
*Vitamin D 25 Hydroxy	Blood	1 SST or 1 Green	2 mL serum or plasma	Aliquot and freeze in Light Sensitive Brown tubes. Send Frozen.			SDCL TAT = 10days	VD25
*Vitamin D (Vitamin D3)	Blood	1 SST or 1 Green	2 mL serum or plasma	Aliquot and freeze in Light Sensitive Brown tubes.			SDCL - Toronto	VITD3

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
*Vitamin E	Blood	1 SST	2 mL serum	Protect from light by wrapping in tin foil. Aliquot and freeze.			SDCL - Toronto TAT = 4 weeks	VITE
Vitamin K				Not available. Replacement test is protime.				
*VMA				See Vanillyl Mandelic Acid				
**VZV	Blood - Lesion			See Varicella Zoster. - See Viral, Lesion.				
*Water Deprivation Test				See ADH				
WBC and Diff.	Blood	1 Mauve	Whole blood	Order CBC			Hematology - RGH	
*West Nile Virus IgM Serology	Blood	1 SST	2 mL serum	Acute Initial test for diagnosis of suspect West Nile Virus.			SDCL	WNVAS
*West Nile Virus IgG Serology	Blood	1 SST	2 mL serum	Convalescent			SDCL	WNVCS
*West Nile Virus – Plasma PCR (only for immunocompromised/ encephalitis / meningitis patients)	Blood	1 Mauve	1 mL EDTA plasma	Separate ASAP and freeze plasma. Ship on ice. Plasma must be received frozen.			SDCL	WNPCR
*West Nile Virus CSF West Nile Virus PCR	CSF	Sterile leak proof tube.	2 mL CSF	Freeze CSF ASAP. If specimen thaws, it is unsuitable for analysis. (For symptomatic or immunocompromised patients.)			SDCL	WVPCR
*WNV	Blood CSF			See West Nile Virus.				
Xylose Specimens include fasting, and 1hr after D-Xylose drink	Blood	2 SST	5 mL serum	Freeze serum	Children at peak: >20 (0-10 yr) Adults: at least 1.67 should be reached after 2 hr	mmol/L	SDCL to Edmonton	XYLO

Test Name	Specimen	Container	Volume	Specimen Requirements	Reference Range	Units	Testing Site	LIS Code
Xylose Fasting. D-Xylose drink to be given	Urine	5 hr collection after drink	10 mL urine	Collect urine for 5 hrs post dose, no preservative. Record volume. Freeze and send 10 mL.	Adults: 21-31% excretion/5 hr		SDCL to Edmonton	XDU
*Xylocaine (Lidocaine)	Blood	1 Red	3 mL serum	Aliquot			SDCL	LIDO
Yersina Serology				No longer available.				
*Zarontin (Ethosuximide)	Blood	1 Red	1 mL serum	Aliquot			SDCL	ETHOL
*Zinc	Blood	1 – 7 mL Royal Blue EDTA) BD368381	3 mL plasma 500 µL for neonates	Separate plasma ASAP. Pour into polypropylene tube. Indicate on req. that specimen is sodium heparin plasma.			SDCL - Toronto	ZNS
*Zinc	Urine	24 hr or random urine container acid-washed	10 mL urine aliquot	Send in polypropylene container. Record on the req. the collection date, total 24 hr urine volume, if submitted, or random urine.			SDCL - Toronto TAT = 3 weeks	ZNU
*Zinc Protoporphyrin Recommend that lead be ordered simultaneously to detect lead exposure (may not be a good indicator of lead exposure in women and children)	Blood	1 – 7 mL Royal Blue EDTA) BD368381	10 mL whole blood 500 µL for neonates	Specimen must be analyzed within 5 days of collection. Suggest ordering LEAD			SDCL - Toronto TAT = 2 weeks	ZPORP