Department of Laboratory Medicine

Saint John Area

400 University Avenue
Saint John, New Brunswick
E4L 4L2

Laboratory User Manual

Version 22.0

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Section 1: General Laboratory Information

Laboratory Contact Directory

Laboratory Administration and Management

Central line 506-648-6501
Fax 506-648-6592

Central Receiving/ Specimen drop-off & Referrals 506-648-6575

Sussex Health Centre Laboratory

General Inquiries 506-432-3102

Charlotte County Hospital

General Inquiries 506-465-4486

Laboratory Hours of Operation

Laboratory	Saint John Regional Hospital - Operational Hours		
Transfusion Medicine, Hematology & Clinical Chemistry	Monday - Friday	0830 - 1630	Full Service
	Monday - Friday	1600 - 0800	STAT Service
	Weekends & Holidays	24 hours	STAT Service
SJRH Specimen Collection	Monday - Friday	0730 - 1530	Full Service
Cytogenetics	Monday - Friday	0800 - 1600	Full Service
Cytology	Monday - Friday	0800 - 1600	Full Service
Flow Cytometry	Monday - Friday	0800 - 1600	Full Service
Pathology	Monday – Friday	0800-1630	Full Service
	Monday – Friday	1630 - 0800	Pathologist On – Call
	Weekends	24 hours	Pathologist On - Call
Microbiology	Monday - Friday	0730 - 1600	Full Service
	Monday - Friday	1600 - 2300	Reduced/Emergency Service
	Monday - Friday	2300 - 0730	Technologist on-call
	Weekends & Holidays	0800 - 1600	Reduced/Emergency Service
	Weekends & Holidays	1600 - 0800	Technologist on-call
Molecular Diagnostics	Monday - Friday	0800 – 1600	Full Service
Morgue	Monday - Sunday	0800 -1600	Full Service

Satellite Facility Laboratories			
Facility	**Operational Hours**		
Sussex Health Center	Monday - Friday	0700 - 1500	Full Service
	Monday - Friday	1500 - 2330	STAT Service
	Monday - Friday	2330 - 0700	Technologist on-call
	Weekends & Holidays	0700 - 2330	STAT Service (Inpatients + ER)
	Weekends & Holidays	2330 - 0700	Technologist on-call
	Monday - Friday	0700 - 1430	**Specimen collection**
	Monday - Friday	0700 - 1500	Specimen drop-off
Charlotte County Hospital	Monday - Friday	0700 - 1600	Full Service
	Monday - Friday	1600 - 2400	STAT Service (Inpatients + ER)
	Monday - Friday	2400 - 0700	Technologist on-call
	Weekends & Holidays	0730 - 2330	STAT Service (Inpatients + ER)
	Weekends & Holidays	2330 - 0730	Technologist on-call
	Monday - Friday	0700 - 1430	**Specimen collection**
	Monday - Friday	0700 - 1500	Specimen drop-off
SJH-Specimen Collection	Monday - Friday	0700 - 1500	Full Service
KV Clinic Specimen Collection	Monday - Friday	0730 - 1500	Full Service

PROVISION OF LABORATORY SERVICES

ROUTINE SERVICES

Routine services are managed according to the schedule of tests as set forth in this manual with test results being reported as soon as possible. In some cases, batching of tests is necessary for the most efficient use of resources. Most tests ordered as routine are performed the same day if received by the laboratory before 1500 hours or as otherwise specified in this manual.

Point of Care Testing falls under the direction and supervision of the laboratory, as mandated by Standards for Hospitals in New Brunswick, Section 7. For information pertaining to POC testing please contact the coordinator at 506-648-2858 or consult the Regional POC Manual on Skyline.

WEEKEND AND HOLIDAY SERVICES

- The number of working staff is reduced on Saturdays, Sundays, and holidays. Test requests should be limited to those tests listed under **Section 3: Listing of Tests Available on a 24-Hour Basis**

EMERGENCY SERVICES

- Emergency services are available on a 24-hour basis, seven days a week.
- An emergency or "STAT" test is one whose results will immediately determine or influence a therapeutic decision. When a test is ordered as an emergency during regular working hours, the routine work is immediately deferred in favor of the emergency test. It is, therefore, necessary to exercise a great deal of discrimination before the test is labeled as an emergency in order to avoid unnecessary disruption of routine work and possible increased costs.
- **Specimens that require emergency testing must be accompanied by a requisition/order on which the words "Emergency" or "STAT" are clearly indicated.** The properly labeled specimen and requisition must be delivered immediately to the laboratory.
- Only those tests on the Emergency Test List are considered clinical emergency tests. Physicians must consult with the head of the appropriate division when requesting tests as emergencies that are not found on this list.
- Contact information of technologists and pathologists on standby duty will be provided on a weekly basis to Admitting, Operating Room, Administrative Officers and Switchboard as well as all laboratory departments.
- **Urgent tests requiring more prompt processing than the usual routine service format, but on which an immediate report is not required should be marked "ASAP".** Such tests are given priority over routine procedures but are not ordinarily drawn and processed immediately. The time of completion depends upon the number of tests so ordered.

REFERRAL SERVICES

- Certain tests are referred to external reference laboratories when it is not practical to perform such tests on site. The turnaround time of these test results depends on the organization of the laboratory to which the test is sent. Tests referred are so indicate in “Section 13: Laboratory Tests – Alphabetical List”.

- Contact information of pathologists on standby duty will be provided on a monthly basis to Admitting, Operating Room, Administrative Officers and Switchboard as well as all laboratory departments.

AUTOPSY SERVICES

- The SJRH laboratory provides autopsy services 7 days a week for hospitals in the Saint John Area, as well as for the Department of Justice. Autopsies are performed on the same day providing the deceased and the consent form arrive by 1000 hours.

- The pathologist on call must be contacted.

PRIVATE AUTOPSIES

- Autopsies may be performed at the family’s request after consultation with the pathologist. The cost will be the family’s responsibility.

- The fee for this service is $1,500 and is to be paid at the business office before the autopsy begins. On Saturdays, when payment may be impossible, the laboratory will inform the accounting department who will bill the family the first of the next week.

The report will be withheld until payment is confirmed.

Priority in HIS	STAT Note: STAT prints on label	TIME Critical- STAT Note: RUSH prints on label	TIME Critical- Routine	ROUTINE
Definition	Indicates the results are needed immediately because of a medical emergency	Indicates sample collection is time sensitive and results are needed immediately	Indicates sample collection is time sensitive but results can be reported when available	Indicates routine processing
Time of collection	*N/A	A specific time is required	A specific time is required	*N/A
Specimen Label Print Time	Label to print right away	Label will print 2 hours before specified collection time	Label will print 2 hours before specified collection time	For inpatients - Label to print on next scheduled run For outpatients- label to print immediately
Collected	Immediately	Collection time on label	Collection time on label	As needed
Lab analysis	STATS processed first	Handled same as a STAT – processed first	Processed in routine manner	Processed in a routine manner
Lab reporting	**Results available ASAP	**Results available ASAP	**Reported in routine manner, as available	**Reported in routine manner, as available (For specific TAT please refer to section 13)

Reviewed June 2022

* - Not Applicable
** - Results available in HIS

Access to the Department of Laboratory Medicine

Access and visits to the laboratory are controlled due to the confidential nature of the work performed, the presence of potentially hazardous reagents and chemicals, as well as the risk of exposure to infectious substances.

PROCESS:

- Access to the Saint John Area lab sites must be approved the Administrative Director or Clinical Department Head.
- Access to the main laboratory will be restricted to authorized persons only.
- Visitors must sign in and sign out in Central Office or in the reception area at Satellite Sites and require an escort by a laboratory employee during their entire stay within the Department.
- Visits may be restricted or suspended if required, to support specific work being performed.
- Unless part of a pre-approved tour of the lab, visitors under sixteen (16) years of age must be accompanied by a parent or legal guardian and may not access areas where specimens, chemicals or other hazardous substances are handled.
- Visits will be ended if any concern surrounding the safety and security of staff, physicians or the operation is detected. Saint John area Safety Services will be engaged as required.

Authorized Personnel:

- Saint John Regional Hospital staff with job duties requiring them to have direct access to the main laboratory area. Examples may include Laboratory, Maintenance, Clinical Engineering, Environmental Services and Security Staff.

Authorized Visitor:

- Individual having laboratory related duty or function. Authorized Visitors are not permitted direct access into the main Laboratory; they must first present themselves at the laboratory Central Office. Authorized Visitors include Service & Technical Representatives, approved tour groups and approved official visitors. ***Family and friends are not authorized visitors.***

Visitor:

- Individual without laboratory related duty or function. Visitors are not permitted entry into the main laboratory area. These individuals include former staff, staff family members, general public, law enforcement (without warrant), etc.

INPATIENT SERVICES

Saint John Regional Hospital/St. Joseph's Hospital/CCH/SHC

Orders are placed in the HIS and results are available in the HIS for viewing. Paper reports may be printed from HIS, LIS, or ERD depending on the patient location and the testing ordered.

Specimens are delivered to the Central Laboratory Receiving area located on Level 2 of Tower C.
If the door is locked, use either:

- The telephone located outside the door for assistance
- The buzzer to alert staff who will unlock the door for entry

STAT Testing for Emergency and In-patients:

- **Clinical Chemistry, Hematology, Transfusion Medicine:**
  Order the test STAT in HIS and send appropriate specimen to the department.

- **Microbiology:**
  Order the test STAT in HIS and send appropriate specimen to the department during the following working hours:
    - Monday to Friday 0730-2300h
    - Saturday, Sunday, and Statutory Holidays 0800-1600h

  All other times call Hematology (506-648-6883) who will contact the technologist on-call. On-call service for STAT testing is provided for clinically important samples, such as time-dependent specimens from the Operating Room (i.e., Stat Gram smear results), and Stat Gram smear results on cerebrospinal fluids. Many tests are not performed on a call-back basis and will be prioritized on the next working day.

- **Pathology**
  For urgent consultation during regular working hours call the Pathology office at 506-648-6516. After hours, or on weekends or holidays, call Locating at 506-648-6111 to locate the Pathologist on call.

All Other Locations in the Saint John Area

If an order cannot be placed into the HIS, manual requisition forms must be completed when laboratory work is ordered. Specimens and requisitions should be delivered directly to the laboratory, or requisitions may be taken to the laboratory where laboratory personnel collect specimens.

SHC

Regular work hours are Monday to Friday (except statutory holidays): 0700-2330h
Work hours on Saturday and Sunday plus statutory holidays: 0730-2330h
Outside of these hours a technologist is on-call. The technologist may be contacted by the switchboard operator for emergency work only.

CCH

Regular work hours are Monday to Friday (except statutory holidays): 0700-2400h
Work hours on Saturday and Sunday and statutory holidays: 0730-2330h

Outside of these hours a technologist is on-call. The technologist may be contacted by the switchboard operator for emergency work only.

OUTPATIENT SERVICES

SPECIMEN DROP-OFF

Specimens collected at Doctor's offices, clinics, Extra- Mural Programs, etc. may be dropped off at laboratories at the following times only:

SJRH: 24 hours daily at the Central Laboratory Receiving area on Level 2, Tower C. If the window is closed, use the buzzer located on the wall opposite the steel window in order to drop off specimens.

Patients can deliver specimens to the Outpatient Laboratory Monday to Friday (except statutory holidays) from 0730-1530h, and to the Emergency Department registration desk out of regular hours.

SJH: Monday to Friday (except statutory holidays) from 0700-1500h at the Laboratory Receiving area on Level 3.

KV: Monday to Friday (except statutory holidays) from 0715-1445h at the reception desk

SHC: Monday to Friday (except statutory holidays) from 0700-1500h at the Laboratory Reception desk on the ground floor.

CCH: Monday to Friday (except statutory holidays) from 0700-1500h at the Laboratory Reception desk on the main level.

SPECIMEN COLLECTION

Patients must have a written order on the Saint John Area Laboratory Medicine Program Test Orders Form (SJA Test Orders form) or another Authorized form from their ordering provider to access this service.
The SJA Test Orders form can be obtained as follows:

- Directly from the SJRH print shop by ordering form number 34740
- Calling Laboratory Reception at the following numbers

    - SJRH Lab Administration: 506-648-6538 or 506-648-6501
    - SJH: 506-532-5579
    - SHC: 506-432-3102
    - CCH: 506-465-4430

SPECIMEN COLLECTION CLINIC INFORMATION

Specimen Collection Clinic Hours of Operation			
SJRH	7:30-3:30PM	By appointment only	506-648-6681
SJH	7-3PM	By appointment only	
KV	7:30-3PM	By appointment only	
Market Place Wellness	Tues, Wed 8-3PM	By appointment only (Closed from 12-1PM)	
Hope Wellness Centre	Wed only 8-3PM	By appointment only (Closed from 12-1PM)	506-632-5695
SHC	7-2:30PM	By appointment only	506-648-6681
CCH	7-2:30PM	By appointment only	506-648-6681
FHC	Mon-Sat 8-10:30AM	By appointment only	506-456-4200
Campobello	Mon, Wed, Thurs	By appointment only (Tues 10-10:30AM)	506-752-4100
Deer Island Clinic	Tues 8-9:30AM	By appointment only	506-747-4150
GMH	Mon, Wed, Fri 7-9AM	By appointment only	506-662-4060
SJRH, SJH, KV, SHC and CCH are open Monday to Friday. Closed on holidays.			

Tests NOT performed at St. Joseph's Hospital or KV Health Services.		
ACTH - Adrenocorticotrophic hormone	Cryoglobulins/Cryofibrinogen (can only be booked at SJRH Mon-Thurs mornings)	Methotrexate
Vitamins: B3, B6, and vitamin C	Fatty Acids, Long chain	Nickel
Amino Acids, Plasma		pH: Stool
Ammonia	Heparin Induced Thrombocytopenia (HIT)	Plasma, Metanephrines, Free
Baby PKU blotter card	Histamine	Platelet aggregation/Function
Blood gases	Homocysteine	Renin Activity
C1 Esterase Inhibitor		
C-1 Esterase Inhibitor Functional Assay (this is a send out test)	Lactate	Semen (Fertility and Post Vasectomy)
Catecholamines (plasma)	Lactose tolerance	Thrombin Time
CD34	Methemoglobin	Zinc
Copper		

Utilization Management: Horizon Health Network, with direction from its physician leaders, has implemented some limitations on the frequency that certain lab tests can be ordered/ repeated. The goal is to improve efficient use of these lab tests and avoid unnecessary and costly duplication. This chart outlines Laboratory Medicine Program's utilization management for laboratory testing in the Saint John Area.

Division	Utilization Rule: ▪ Order Rule ▪ Frequency Limitation ▪ Specimen Limitation	Test Name	Details
CHEMISTRY	Frequency limitation	HbA1c	80 days
		Lipid Profile (fasting and non-fasting)	6 weeks
		ApoB	
		Ferritin	4 weeks
		Iron Profile	
		Vitamin B12	12 weeks
		Serum Folate	1 year
		25 (OH) Vitamin D	
		Serum/Urine Protein Electrophoresis	3 weeks
		CEA	12 weeks
		CA 125	
		CA 19-9	
		PSA	4 weeks or >75 years of age
		NT-proBNP	7 days ED/Inpatients 6 weeks Outpatients
		TSH	6 weeks
	Order Rule	Free T4/T3	Available to endocrinologists and other select specialists only, unless ordered as an exception.
		Urea	Outpatients Only: If urea and creatinine are ordered together, only creatinine will be performed.
		AST*	Available to select specialists only unless ordered as an exception
		GGT*	No longer available unless ordered as an exception
		Amylase*	Has been replaced with lipase. Orders for amylase will be tested for lipase instead
CYTOLOGY	Order rule	HPV and Reflex HPV specimens - in-house (Zone 2)	• Patients must be 30 years or older • Reflex HPV will be done on ASCUS results over 30 yrs of age and LSIL results over 50 yrs of age.
HEMATOLOGY	Order rule	ESR*	Cannot be ordered in conjunction with CRP, unless ordered as ESR Exception
MICROBIOLOGY	Frequency limitation	C difficile screen	Repeat testing not performed within 28 days of a positive toxin result
		Ova and Parasite examination (stool)	One specimen processed per collection day

Division	Utilization Rule: ▪ Order Rule ▪ Frequency Limitation ▪ Specimen Limitation	Test Name	Details
		C/S (stool)	One specimen processed per collection day
		H. pylori serology	Not routinely performed. Requires approval by Medical Microbiologist.
	Test limitation	C difficile screen	Procedure not validated for children under 1 year of age – test not performed.
MOLECULAR GENETICS AND CYTOGENETICS	Order rule	Hemochromatosis	Testing of minors (<18 years of age) will not be performed unless approved by the Clinical Division Head.
		CALR	Indicated for patients with potential Myeloproliferative neoplasms who are BCR-ABL fusion and JAK2 V617F negative
		TPMT Genotyping	Indicated prior to prescribing thiopurine class drugs (6-mercaptopurine, 6-thioguanine and azathioprine)
		DPYD Genotyping	Indicated prior to prescribing fluoropyrimidine (antimetabolite) class cancer drugs.

Section 2: Listing of Tests Available on a 24-Hour Basis

The following laboratory tests are available on a 24/7 basis.
If required in an emergent/urgent situation, the tests must be ordered STAT.

Biochemistry	SJRH	SHC	CCH	Biochemistry	SJRH	SHC	CCH
Abuse Screen	✓			Toxic Screen (each analyte can also be tested individually):	✓		
Albumin	✓	✓	✓	• Acetaminophen	✓	✓	✓
Alkaline Phosphatase	✓	✓	✓	• Ethanol	✓	✓	✓
ALT	✓	✓	✓	• Salicylate	✓		
AST	✓			• Osmolality			
Ammonia	✓	✓	✓		✓		
Beta-Hydroxybutyrate	✓			Other Therapeutic Drugs:			
Bilirubin	✓	✓	✓	Carbamazepine	✓		
Calcium, ionized	✓	✓	✓	Digoxin	✓		
Calcium, total	✓	✓	✓	Gentamicin	✓		
Cannabinoids, urine (THC)_	✓			Lithium	✓		
Carboxyhemoglobin	✓	✓	✓	Methotrexate	✓		
CO2, Total	✓	✓	✓	Phenytoin	✓		
Cortisol	✓			Theophylline	✓		
Creatinine	✓	✓	✓	Valproic Acid	✓		
Creatine Kinase (CK)	✓	✓	✓	Vancomycin	✓		
CRP	✓	✓	✓	**Haematology**	**SJRH**	**SHC**	**CCH**
CSF-glucose/protein	✓			Body fluid/CSF cell count	✓		
Electrolytes	✓	✓	✓	CBC and platelets	✓	✓	✓
Blood Gases	✓	✓	✓	Differential (LKC) count	✓	✓	✓
Glucose	✓	✓	✓	Coagulation factor assays*	✓		
hCG	✓	✓	✓				
Hemoglobin, urine	✓			D-Dimer test	✓	✓	✓
Iron and IBC	✓			Fibrinogen-quantitative	✓		
Lactate	✓	✓	✓	Malarial parasites	✓		
Lipase	✓	✓	✓	Mono test	✓	✓	✓
Magnesium	✓	✓	✓	Partial thromboplastin time	✓	✓	✓
Methemoglobin	✓	✓	✓	Prothrombin time/INR	✓	✓	✓
Myoglobin, plasma	✓			Sickle cell screen (prior to surgery)	✓		
Myoglobin, urine	✓			**Transfusion Medicine**	**SJRH**	**SHC**	**CCH**
NT-proBNP	✓			Crossmatch	✓	✓	✓
Phosphate	✓	✓	✓	Direct Antiglobulin test (DAT)	✓		
Parathyroid Hormone	✓			ABO/Rh and AB Detection	✓	✓	✓
Pregnancy Test (Urine)	✓	✓	✓				
Protein, Total	✓	✓	✓				
Troponin-T	✓	✓	✓				
TSH and FT4	✓						
Urea	✓	✓	✓				
Urinalysis	✓	✓	✓				

* Will be processed only when accompanied by supporting information from the physician.

Section 3: Proper Patient & Specimen Identification

Correct labelling of all patient specimens and requisitions is the most crucial step in specimen collection and specimen testing. Laboratory specimens must be identified, labelled and statused correctly to reduce the risk to patients. Failures in accurate patient identification can have serious and adverse consequences for patients, including incorrect treatment, lack of treatment, injury, disability, and even death. Unique identification is required to ensure results are reported on the correct patient. The collection agent must ensure that the specimen being collected is from the patient indicated on the label. Misidentification of a patient along with subsequent testing may be life threatening as diagnoses and therapies depend on test results. Specimens must also be statused at time of collection in order to allow the test results to archive on the patients record in the correct order; and also, to provide the laboratory with the correct collection time which is needed for time-sensitive procedures.

PATIENT/CLIENT IDENTIFICATION:

Outpatient Department

1. Confirm the patient/client's identity by having the patient/client state their full name, Medicare and date of birth
2. Compare unique numbers to label and requisition (if applicable)
3. Compare information on **each** test label for that patient/client.
4. Correct any discrepancies before blood is drawn.
5. After collection, label all specimens with patient/client information in the presence of the patient/client, using computer generated labels, identification tags from manual requisitions, or manually write on the specimen collection tubes.

Inpatients and Emergency Department Patient/Clients

1. Confirm patient/clients' identification by having patient/client state their full name and date of birth. Compare information on **each** test label for that patient/client.
2. Check patient/client's hospital armband for name, birth date and unique identifier. Compare information on **each** test label for that patient/client. If the patient/client **does not have an armband have unit staff place an appropriate armband on patient/client before proceeding.** In rare cases it may not be possible to attach a band to the patient/client (Burn patient, neonatal…). In these cases, check the issued armband and have the patient/client identified by nursing. Document that the patient/client was identified in this manner on the requisition, (paper or electronic), and include name of the person verifying identification
3. Correct any discrepancies before blood is drawn
4. After collection, label all specimens with patient/client information in the presence of the patient/client, using computer generated labels, identification tags from manual requisitions, or manually write on the specimen collection tubes.

Note: HHN-PC-004 Deaf and Hard of Hearing Patients policy offers sign language interpretation and/or assistive listening devices for all patients who identify themselves as Deaf or hard of hearing.

Patient/client who is unidentified (John/Jane Doe):
The patient/clients will be assigned a name and given a unique identifier until positive identification is established **NOTE**: Once the patient/client is positively identified it is the responsibility of Health Records Management to merge the accounts. There may be a time period in which the patient/client may have 2 arm bands (correct positive identification arm band and the John/Jane Doe armband).

Laboratory Requisition and Specimen Criteria (page 1 of 2)

Requisitions must be legible and include:

1. The **first and last name** of the **Ordering Provider** with ordering privileges, which include:
   - Physicians with ordering privileges that have been issued by the College of Physicians and Surgeons of New Brunswick
   - Nurse Practitioners – within Horizon Health Network or working directly under a privileged Physician by the New Brunswick College of Physicians and Surgeons
   - Pharmacists within hospitals (not community-based pharmacists)
   - Midwives employed by Horizon Health Network
2. **Sufficient information to identify the patient,** which must include **all** of the following:
   - First and last name - abbreviations and/or nicknames are not acceptable; middle names are encouraged when patients have common names
   - Date of birth
   - Sex
   - At least one of the following **unique** Identifier's:
     - ❖ NB Medicare or other provincial health card
       NOTE: Pictures or photocopies of Medicare Cards are not acceptable as per NB Medicare policy YourNewBrunswickMedicareCard. Exceptions are given to Nursing or Special Care Home residents
     - ❖ Medical Record, Permanent Patient/Client Record Number, or Chart Number (patient hospital identification number unique to the facility or area, such as PPRN)
     - ❖ RCMP or Military number
     - ❖ Correctional Institute identification number
     - ❖ Interim Federal Health Program Number (IFHP)
     - ❖ US Health Insurance

     NOTE: Passport number, immigration or refugee number and drivers' licenses are only accepted if no other numbers or identification exists for the patient/client. If patient presents with no identification, the Patient Identification Confirmation Form **LAB-1237-18-F00004 Patient Identification Confirmation Form** must be complete, as per the **Regional Phlebotomy Manual**
3. Legibly written/denoted examination(s) requested
4. Specimen type (blood, urine, etc.)
5. The date and time the specimen was collected
6. Legible identification of who collected the specimen (TM specimens require full signature)
7. Clinical information relevant to the testing, as required (i.e., medication)
   NOTE: Specialty requisitions may require/request additional relevant clinical information
8. Anatomic site of origin (as required)

ADDITIONAL Information for Transfusion Medicine Specimens Used for Blood/Blood Products (call 6535 with any questions):

- First and last name of collecting agent (signature)
- Transfusion/Obstetrical history within the previous 3 months
- Transplant history
- Blood products required
- Date of required transfusion
- Location of transfusion

Laboratory Requisition and Specimen Criteria (page 2 of 2)

Specimens that accompany a requisition must include:

1. Each specimen shall be labelled at the time and point of collection and in the presence of the patient.
2. Each firmly attached label shall contain:
   - the patient's first and last name (or unique code number in the case of anonymous testing).
   - one unique numerical identifier
   - the date of collection.
   - the time of collection.
   - Clinical information as it pertains to the specimen collected.
   - anatomic site of origin (if/as indicated on the requisition).
   - the identity of the person who collected the specimen.
     This must be written on each specimen at the time of collection if not indicated in the LIS
     NOTE: When requisitions provided by the laboratory are used (that contain an adhesive detachable specimen label at the bottom), only the patient's full name and unique numerical identifier are required on the specimen as the label contains a unique requisition number that can be used to match the specimen to the requisition to obtain the other required information.

LABELING Transfusion Medicine Specimens: Use the label on the requisition which has the same number as the requisition. Write the required patient information on the label which must match the patient information on the requisition.

When MORE THAN ONE tube of blood is collected for Transfusion Medicine, in the case of antibody patients:

- Use a patient label that includes the patient's first and last name, PPRN or Medicare number
- Write the requisition number on the label
- Firmly apply the label to the patient's blood tube

IMPORTANT: Requisitions and specimens that do not contain the required minimum information will **not** be processed and specimens will **not** be retained for future testing.

Exceptions may only be granted through established laboratory policy, by laboratory staff and only when recollection is:

- Not possible – lab will follow existing policy
- Not clinically appropriate – recollection of bone marrow collection, cerebral spinal fluid or other non-easily obtained body fluids.

If permission is granted to label or re-label a specimen for the purposes of providing proper identification, the person who labels or re-labels the specimen must do so in the presence of laboratory personnel and must sign an authorized laboratory form which is provided by lab staff. NOTE: Exceptions will not be granted for any Transfusion Medicine specimens.

Additional information required for requisitions used for TRANSFUSION MEDICINE/ Blood/ Blood products includes (call 506-648-6535 with any questions):

- First and last name of collecting agent (signature)
- Transfusion/Obstetrical history within the previous 3 months
- Transplant history
- Blood products required
- Date of required transfusion
- Location of transfusion

Additional/Specialty Laboratory requisition requirements

Histopathology requisitions must include:

- Type of tissue
- Source of tissue
- Patient's clinical history
- Initials of the person completing the requisition
- Operative findings

- **Tissue requisitions must be signed by the physician**

Microbiology requisitions must include:

- Source of specimen
- Initials of the person completing the requisition
- Currently used antibiotics
- Clinical data pertinent to appropriate processing of specimen

Cytology

- All Cytology specimens submitted MUST HAVE the patient's full name and Healthcare Number on the specimen for identification**.**

Gynecological (Pap tests, etc.) **requisitions must include:**

- Date of patient's last menstrual period (LMP) or menstrual status
- Specimen site
- Name and/or initials of the person completing the requisition
- Pertinent history, treatment, and clinical findings (suspicious-looking cervix, palpable mass, etc.)

Non-Gynecological (sputum, FNA's, fluids, etc. **requisitions must include :**

- Pertinent patient history (previous Ca, x-ray findings, treatment, etc.)
- Name and/or initials of the person completing the requisition
- Specimen site
- Clinical findings (hemoptysis, effusion, etc.)

HPV DNA Test requisitions:

- History of abnormal Pap smear and/or biopsy
- HPV vaccination status
- Source or site of specimen
- Name and/or initials of the person completing the requisition
- Collection medium (SurePath, Thin Prep, etc.)

Cytogenetics

- Oncology and Constitutional Cytogenetics Requisitions are available upon request. Please contact the lab at 506-648-6882 for the most up to date copies

Ordering Laboratory Request Forms/Requisitions

Manual request forms for each laboratory division are obtained from SPD. The appropriate forms are:

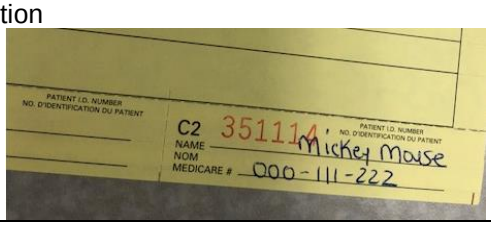
REQUEST FORM	SPD STOCK NUMBER
Chemistry	0015642
Cytopathology	0015621
Hematology	0015639
Histopathology	0015648
Transfusion Medicine Procedures	0015618
Transfusion Medicine Blood Products	0015586

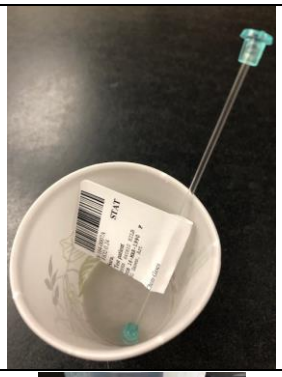
Electronic forms exist for:
Microbiology, serology, molecular diagnostics, and cytogenetics
External users can find all requisitions and Test order Forms at For Staff and Physicians - Horizon Health Network (horizonnb.ca) under “Clinical Resources” tab

Ordering the Saint John Area Laboratory Medicine Test Orders Form 34740

The “Saint John Area Laboratory Medicine Test Orders Form” 34740 is available by ordering from the Print Shop located at the Saint John Regional Hospital.

Appendix A: Guidelines for Specimen Labelling

• **Specimen type**	• **Notes**
• A sample in a container that will be given to the patient for collection (urine, stool, etc.)	• Instruct patient to fill out **<u>all fields</u>** on the requisition **and** collection container directly. • MUST include the <u>date and time of collection</u>. • Instruct patient to apply adhesive specimen label to the container.
• Specimens such as **urine, stool, CSF** etc. (Excluding Anatomical Pathology specimens) 	• Apply the label to the container (not lid) • Include the site that the sample is taken from if clinically significant • If there are consecutive samples from the same area (i.e. CSF) ensure the specimens are numbered as such.
• Samples for Anatomical Pathology/ Cytology/ Cytogenetics/ Molecular Diagnostics	• See each specific departmental section included in this manual for detailed collection/labelling instructions
• **If the label is**	• **Then the specimen label**
• Computer generated (HIS) with patient demographics and barcode	• <u>Must</u> be statused as collected by the collecting agent
• Adhesive Identification tags from bottom of manual requisition 	• Place label on the specimen Must include: • Patient's first and last name • Unique patient identifier (PPRN/Medicare) • Collection date and time if not recorded on the requisition
• No specimen label available (manual requisition only)	1. Patient's full name, 2. Medicare/Healthcare number 3. Date and time of collection must be included on specimen
	**For vacutainers and other similar collection containers:** • Place label on tube so that the barcode is visible and readable by a barcode scanner. The specimen label should be placed near the top of the container(supplier) label • Wrinkled, folded, or faded barcodes can result in significant delays in reporting

	**Blood Cultures:** • Apply label in manner that enables the level of the sample to be visible. • **Ensure manufacture's barcode label is not obscured (remains visible)** • Indicate collection site on label (i.e., right side/ left side)
	**For capillary tubes:** • Apply label around capillary tube • Transport to the laboratory in in aStyrofoam cup or urine cup, • Transporting through the PTS: in a urine cup then inside the plastic pouch.
	**For Microtainers**: • Label must be placed directly on tube • Specimens will not be accepted for testing unless label is firmly attached to specimen.
	**For ESR tubes:** • The label must be placed directly below the black cap and above the fill lines. **DO not place the label on the black lines** as it will cover the reading area of the test and will not be processed.
	**For blood gas syringes:** • Specimen label must be wrapped directly around syringe **covering the manufactures barcode**

STATUSING OF SAMPLES AS COLLECTED

All specimens collected in a Saint John Area healthcare facility must be statused as collected in LIS immediately after collection by the healthcare professional that collected the specimen. The username of the person who performs this task in Millennium is attached to the specimen, and this person is responsible for the proper collection and identification of the specimen. Specimens not statused as collected will be rejected as this is a patient safety issue. Some exceptions may apply for irretrievable specimens which will be handled and processed according to lab policy which requires documentation and a signature of the collecting personnel. Refer below to Appendix B – How to Status a Specimen as Collected

Specimens for "pathology tissue request" orders or specimens from patients registered to a "Referred In" visit type (specimen and manual request form dropped off for registration and order entry) are set to "collected" automatically.
If collection takes place at a healthcare facility with HIS capabilities, immediately status the specimen as having been collected. (SJRH, CCH, SHC, SJH, KVLB)

Note: Exception is made when there is a designated recorder such as in an emergency / code situation (See: Horizon Health Network Interdisciplinary Documentation Standards (2015), p.32).

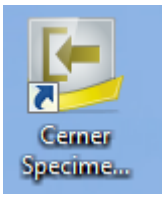
ALL Transfusion Medicine samples MUST be statused as collected. There will be NO exceptions for Transfusion Medicine specimens that are not statused as collected.

Transfusion Medicine Electronic Requests:

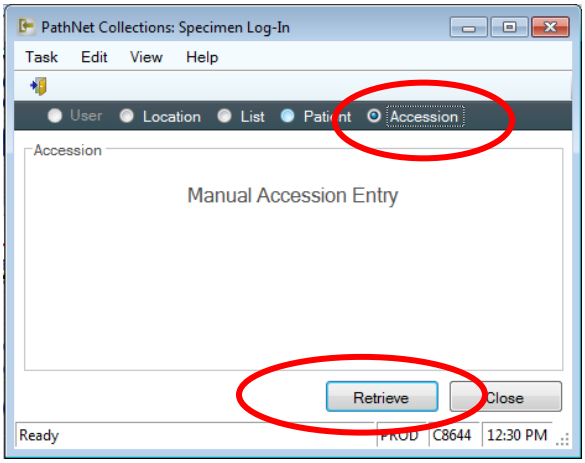
To prevent specimen rejection, the phlebotomist of Transfusion Medicine specimens using HIS for the electronic order, must also status the specimen as collected using their own computer access code. The access code will be used as the identification of the phlebotomist. In the event that there is an issue surrounding the collection of the specimen, the name of the phlebotomist associated with the access code will be traced.

Appendix B: HOW TO STATUS A SPECIMEN AS COLLECTED

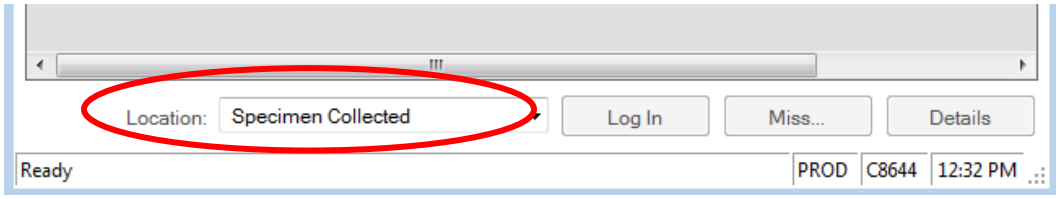
1. Sign into "Cerner Specimen Log In"



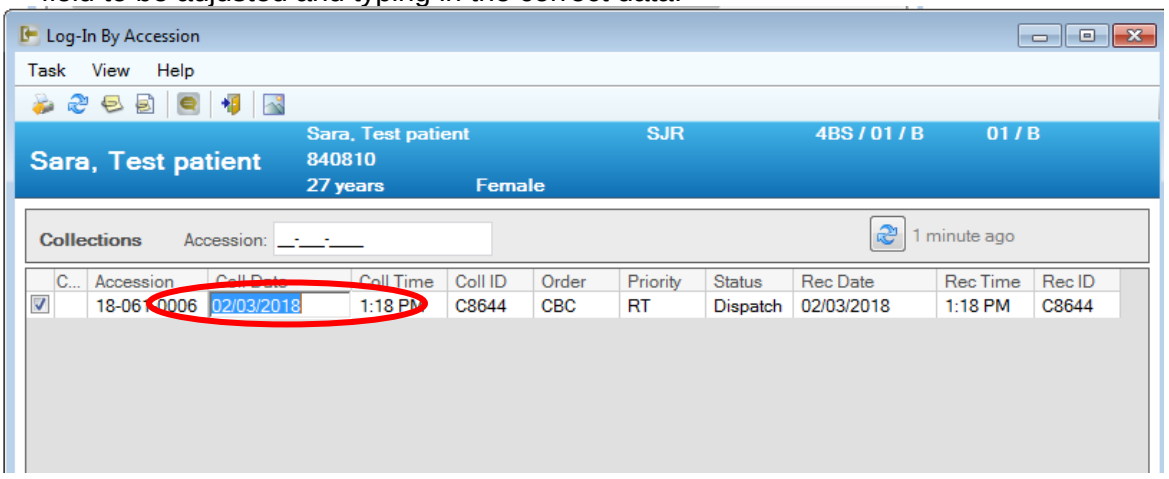
2. Ensure “Accession” is selected and Select "Retrieve"



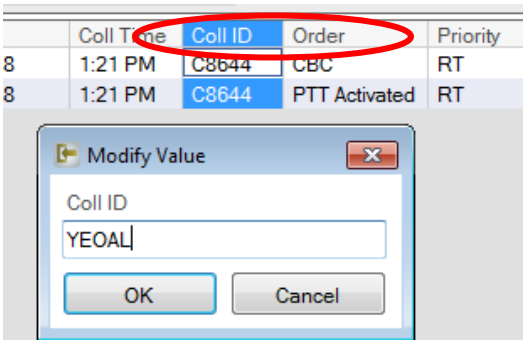
3. Scan or manually type the accession number into the "Accession" field.
4. Ensure that the "Location" field is set to "Specimen Collected".



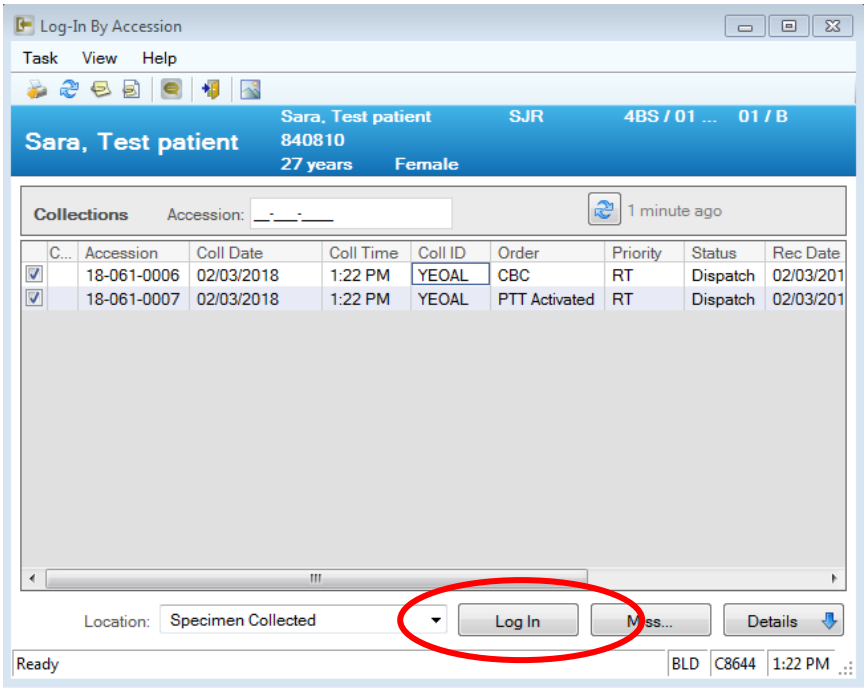
5. If needed, the collection date, collection time, or collection ID may be changed by clicking on the field to be adjusted and typing in the correct data.



TIP: If there are several specimens entered, and the data in one column is to be corrected for all of these specimens, click on the header of that column, and change the data. This change will be applied to all specimens in the list.



6. once finished, select "Log In"



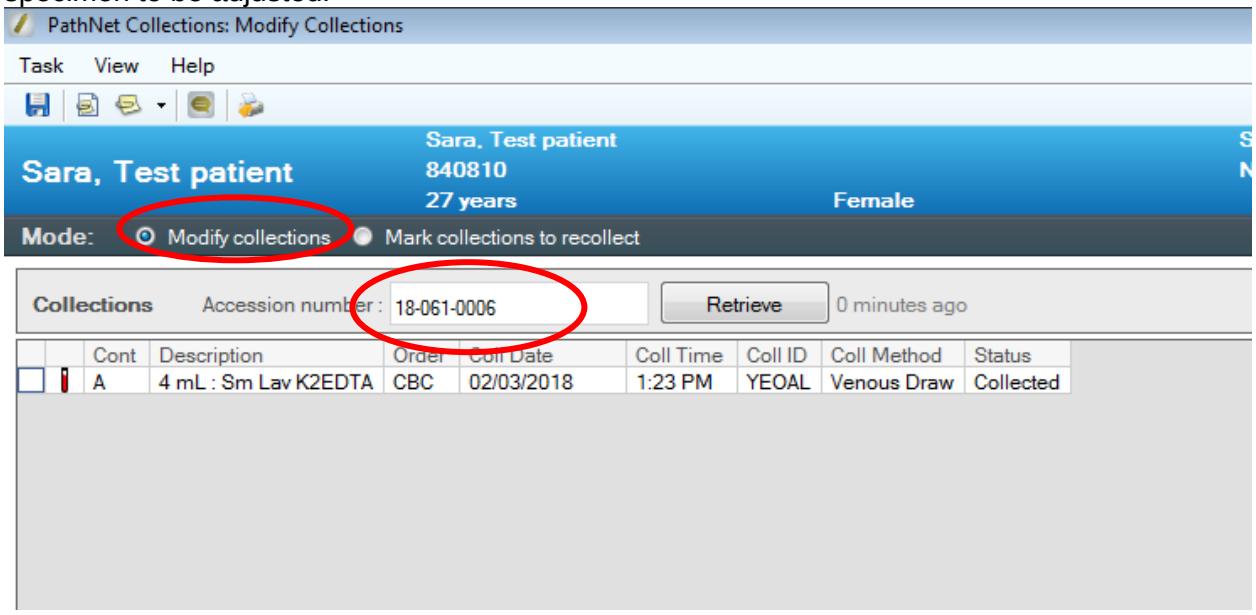
It should be noted that changes can only be made **before** the "Log In" button is selected. If these have already been logged in, you must use the **"Modify Collections Millennium" application.**

See next page

"Modify Collections Millennium" Application

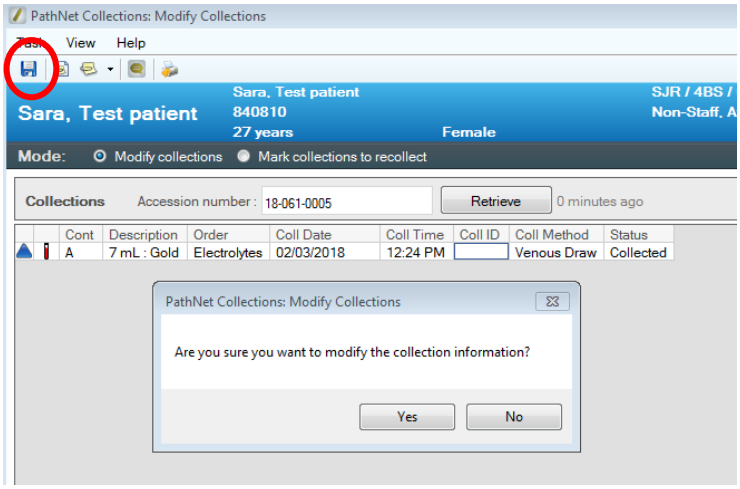
Sign into the “Modify Collections” App

1. Ensure that the "Modify" radio button is selected and enter the accession number of the specimen to be adjusted.



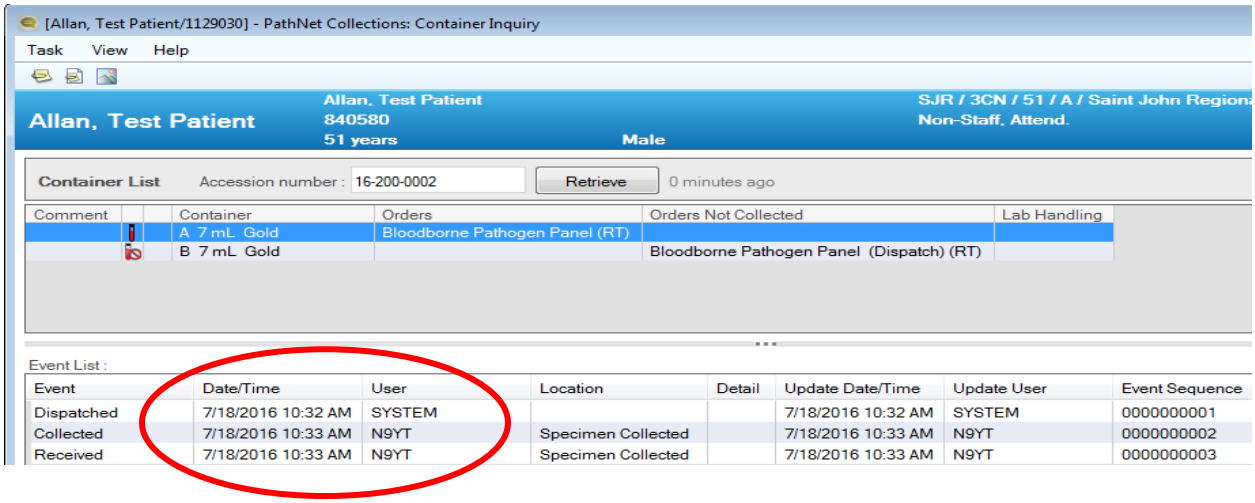
In this application, data can be changed by clicking in the field and making the changes, or by clicking the field header and changing the data.

2. Click the "Save" button to save your changes.
3. Click Yes



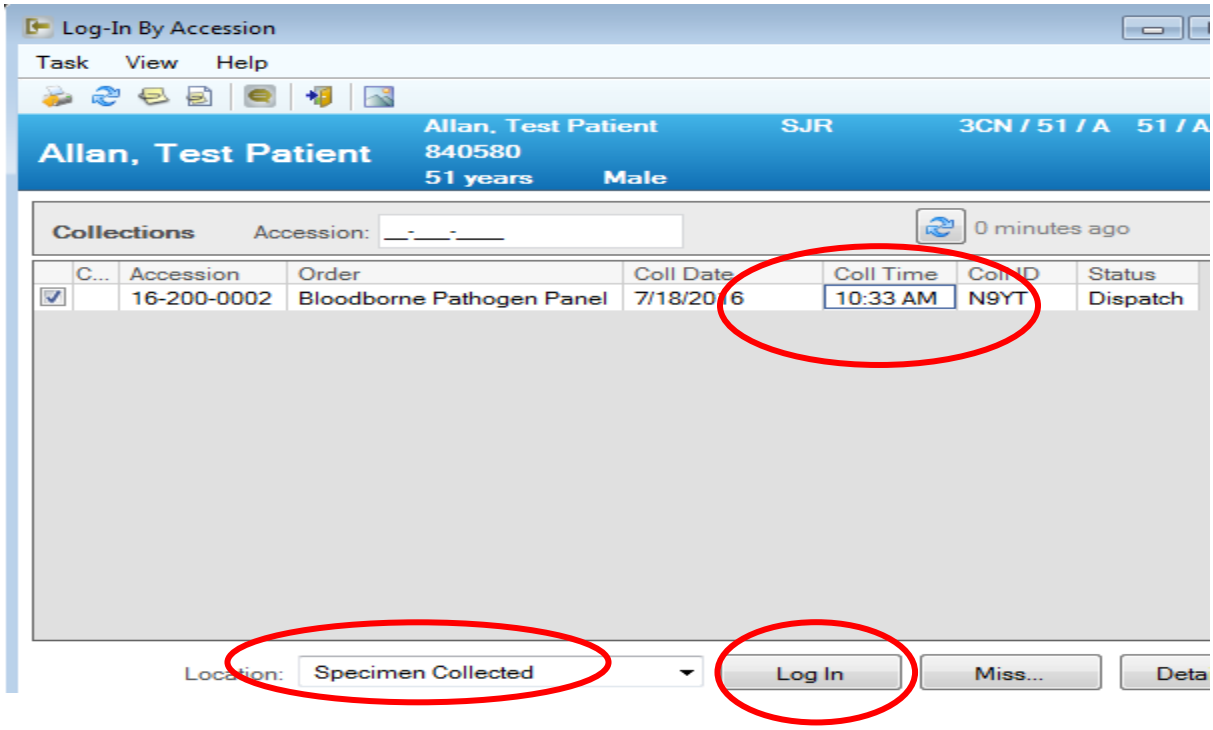
How to status a second (A or B) specimen from the same accession number, as collected

1. Look up the specimen that was statused as collected in Container Inquiry and note the ID of the collection personnel, and the collection date and time.

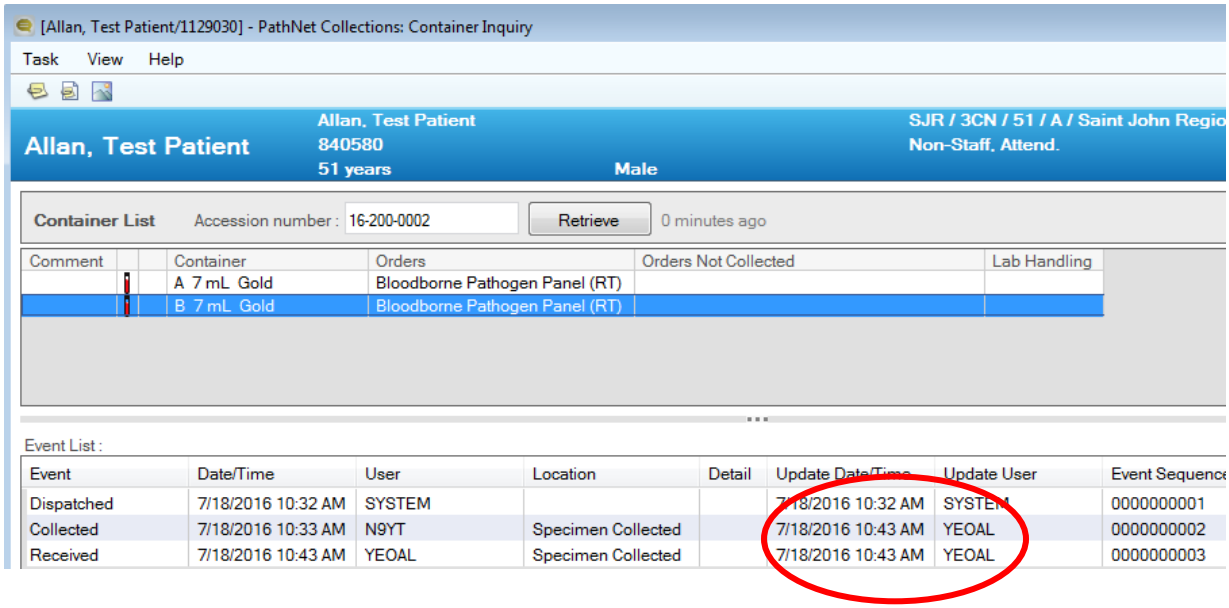


2. Scan the un-statused specimen into Specimen Log-In, but do not click the Log In button.

3. Change the collection date, time, and ID to match the information from the first specimen, change the Location to "Specimen Collected", then click the Log In button.



4. You should now be able to log the specimen into "SJR Core Log-in" and process. Container Inquiry will show the second specimen with the same collection personnel as the first specimen but will show the ID of the person who updated the system.



Section 4: Standards for Packaging of Specimens to Hospital or Reference Laboratories

Standards for Packaging Specimens Directed to SJRH from Satellite Labs

This policy has been developed to provide for the safety of those who deliver specimens to SJRH Laboratories and to protect laboratory staff who receive them.

The Transport Canada Dangerous Goods Act requires all biological specimens to be classified as either Category A, UN2814 Infectious Substances Affecting Humans or Category B, UN3373 Biological Substance Category B or Human Exempt. As most Category A Micro-organisms must be in culture form to be included in this list, the specimens our satellite labs send us will be classified as either Exempt Human Specimen or UN3373 Biological Substance Category B. Patient samples for which there is minimal likelihood that pathogens are present will be classified as Exempt Human Specimens. Specimens that have orders for Viral Load testing will be classified as UN3373 Biological Substance Category B. We pack UN3373 Biological Substances Category B and Human Exempt according to IATA Packing Instructions 650

A person who handles, offers for transport, or transports Dangerous Goods must be adequately trained and hold a TDG certificate (Transport Canada Regulations, Part 6).

The following procedure applies to the specimens which are shipped to SJRH Department of Laboratory Medicine.

The specimens must be in a means of containment that is manufactured, selected, and used in accordance with CGSB-43.125.

A. Packing

Package must consist of the following components:

1. Leak proof primary receptacle
2. Leak proof secondary Packaging
3. An outer packaging with at least one surface of the outer packaging having a minimum dimension of 100 mm x 100 mm

Either the secondary Packaging or the Outer Packaging must be rigid.

1. **Primary Receptacle:**
   - The primary receptacle(s) (specimen containers) must be leak proof/sift proof, ensure that caps are properly applied and tightened.
   - Must be labeled – Information that identifies the patient sample and relates it to the accompanying requisitions or orders is imperative. **Must have Patient Name and Medicare # on the specimen label as per LAB-2-ADM-05-00025 Labeling, Identification and Statusing of Lab Specimens.**

2. **Leak proof Secondary Container:**
   These are used to enclose the primary containers. If multiple fragile primary containers are placed in a single secondary packaging, they must be either individually wrapped or separated (Styrofoam Tray) to prevent contact between them.

- The secondary packaging must be watertight so that if the specimen container itself should happen to leak, the secondary container will contain the specimen(s). It must contain absorbent material sufficient to absorb all fluids present in the primary receptacles should a leak occur.

3. **Outer Container:**
   Enclose the secondary container in this final outer container.

   - It must not contain more than 4 L. This quantity excludes ice or dry ice when it is used to keep specimens cold.
   - It must be able to withstand traveling conditions without being damaged.
   - The secondary container must be packaged in this outer container so as not to rattle around loosely.
   - An itemized list of contents (or the requisitions) must be enclosed between the secondary packaging and the outer packaging.
   - At least one surface of the outer packaging must have a minimum dimension of 100 mm x 100 mm (4 in x 4 in).

   When packing solids an absorbent is not needed and the total weight cannot exceed 4 kg, excluding ice or dry ice.

B. Labeling

- Apply shipper's and consignee's address and telephone numbers.
- Apply a Hazard Mark and corresponding Hazard Description for all the classes of dangerous goods contained in the shipment. (UN3373, Biological Substance Category B, Human Exempt Specimen, Dry Ice as Refrigerant etc.

C. Cytology

Properly labeled Pap smear slides may be sent fixed in a cardboard tray - no zip-lock bag is required. It is permitted for requisitions to be wrapped around the trays.

D. Contamination

CONTAMINATION OF CONTAINERS AND REQUISITIONS

The receipt of specimen containers and/or requisition forms contaminated with blood, urine, faeces, etc. represents a substantial hazard for the transmission of disease. Contamination of documents and the outside of specimen containers with human fluids and excretions can easily be avoided using proper collection techniques. However, if contamination should occur, to avoid both delays in testing specimens and the risk of discarding important specimens, senders must use appropriate disinfectant to clean the outside of contaminated containers before sending them to the laboratory.
For the safety of our staff, it may be necessary to discard specimens which leak and cause contamination. In such cases the sending location will be notified promptly.

REFERENCES:

IATA Dangerous Goods Regulations, 60th Edition (2019)
Transport Canada Regulations, Transportation of Dangerous Goods
CAN/CGSB-43.125-2016

Shipping and Receiving of Specimens

Scheduled Deliveries

- Routine pre-scheduled pick-up and delivery of specimens has been established using the Region 2 transport system during regular working hours Monday through Saturdays (8 a.m. to 10 p.m.) including Holidays. The laboratory, which prepares the specimens for transport, is responsible for ensuring pick-up of the specimens.
  A shipping manifest, available from lab, must be completed and sent with each shipment.

ROUTINE DELIVERY SCHEDULE			
Location	**Departure Time**	**Delivery Time**	**Mode of Transport**
St. Joseph's	09:00	09:30	SJRH Transport
	10:30	11:00	
	11:30	12:00	
	13:30	14:00	
	14:30	15:00	
	15:30	16:00	Vet's Taxi
CCH/Fundy	10:30/11:15	12:30	JMS Delivery Courier
Grand Manan (Mon/Wed/Fri)	10:45	14:15	Independent (SJRH)
KV Clinic	10:00	10:30	JMS Delivery Courier
	12:45	13:15	
	15:15	15:45	
Moncton City	11:00	14:30	Courier Service
George Dumont	10:30	14:30	Courier Service
Sussex	11:30	13:00	JMS Delivery Courier
	14:30	16:00	
DECH	15:00	21:00	Maritime Bus Lines

Late or Unreceived Scheduled Deliveries

When SCHEDULED deliveries **DO NOT ARRIVE**:

- Central Receiving is responsible for telephoning the site from which the samples are expected and investigating the cause of the delay within an hour of their expected time of arrival. All divisions at the SJRH are to be notified of the problem. Occurrences and investigations shall be documented by lab on an Occurrence Laboratory Report form.
  NOTE: When unusual circumstances occur (e.g., snowstorms) the laboratory sending the specimens will contact the receiving laboratory and inform them if the specimens will not be arriving or will be arriving late.

Unscheduled Deliveries

- For STATS or unscheduled pick-up and delivery of routine specimens, the laboratory which prepares the specimens for transport is responsible for ensuring pick-up of the specimens. A

phone call must be made to Central Receiving (ext. 6575) to notify them of the impending arrival of samples. --- continue to next page

- Once notification has been received, the staff member who receives the call must complete and post a Record of Unscheduled Specimens in Transit form to document the caller's name, date, time, and location of expected delivery of the specimens, and/or a contact person who will be delivering the specimens etc.
- **The person receiving the call is accountable to ensure appropriate follow-up occurs, including if the delivery does not arrive**. Occurrences and investigations shall be documented on LAB-2-ADM-02-F00120 Occurrence Laboratory Report

Sending Specimens using the PNEUMATIC TUBE SYSTEM (PTS)

NOTE: All carriers must be opened and checked for any specimens or other items before sending to the laboratory. The carrier should be checked after receiving specimens as well. Pay particular attention for the small Microtainer samples.

Equipment and Materials:

- Absorbent material: Serves as absorbent material in case of any specimen leakage.
- Ziploc bag/ primary specimen bag
- Hard-plastic zipper pouch

Primary Receptacle:
A Plastic Ziploc Bag shall serve as the primary receptacle and shall contain:

- **One** urine or stool container per bag
- Blood samples or swabs from **one** patient

Leak proof Secondary Container:
These are used to enclose the primary containers

- The secondary packaging must be watertight so that if the specimen container itself should happen to leak, the secondary container will contain the specimen(s). It must contain absorbent material sufficient to absorb all fluids present in the primary receptacles.

LABORATORY SPECIMENS SENT BY PORTER

Blood specimens not approved to be sent through the Pneumatic Tube System (PTS) will be:

- Placed upright after collection in designated racks on the floors
- Delivered to the laboratory by Porters, as either Stat or Routine Runs

All patient blood specimens will be delivered to the Laboratory upright in racks, using transport containers for this purpose, whenever possible. PTS is available at Saint John Regional Hospital only.

When non-laboratory sites and collection clinics are packing specimens and requisitions for transport to the SJRH for testing (i.e., nursing home, after-hours clinic, door to door collection)

- Only specimens collected on the same patient can be packed in the same zip-locked baggie/specimen bag. If specimens have an accompanying requisition, the requisition shall be in a secondary outer bag (i.e., tube in one bag, sealed, and placed in a second bag with the matching requisition).
- **Do not** place specimens on more than one patient in the same primary bag.
- **Do not** place all requisitions in one bag.

Shipping manifest

The 24-Hour **Emergency Contact Number** for all Parcels is 506-648-6575, option 5

Date of Shipment: _____ (DD / MM / YYYY)

Method of shipment: ☐ Motor Services (HHN) ☐ Vet's Taxi ☐ Maritime Bus ☐ Other_____

Parcel(s) shipped from:

☐	**St. Joseph's Hospital** 130 Bayard Dr Saint John NB E2L 3L6 506-632-5579	☐	**Saint John Regional Hospital** 400 University Ave Saint John NB E2L 4L2 506-648-6575 opt. 5	☐	**Campobello Health Centre** 640 Route 774 Welshpool NB E5E 1A5 506-752-4100
☐	**Charlotte County Hospital** 4 Garden St St. Stephen NB E3L 2L9 506-465-4444	☐	**Sussex Health Centre** 75 Leonard Dr Sussex NB E4E 2P7 506-432-3102	☐	**Deer Island** 999 Route 772 Fairhaven NB E5V 1P2 506-747-4150
☐	**KV-Health Services** 175 Hampton Rd, Rothesay, NB E2E 4Y7 506-848-4610	☐	**Fundy Health Centre** 34 Hospital St Black's Harbour NB E5K 1K2 506-456-4200	☐	**Grand Manan Hospital** 196 Route 776 Grand Manan, NB E5G 1A3 506-662-4060
☐	**Other:**				

Parcel(s) shipped to:

☐	Charlotte County Hospital	☐	Sussex Health Centre	☐	Saint John Regional Hospital
☐	Other:				

NOTE: In case of accident or delay, please notify the destination, as indicated above.

Total number of parcels	Indicate # of boxes	CONTENTS (Please check all that apply)	Comments
		UN3373 Biological Substance, Category B	
		UN1845 Dry Ice	
		Exempt Human Specimen	
		Other:	

"I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, are properly classified and packaged, have dangerous goods safety marks properly affixed or displayed on them, and are in all respects in proper condition for transport according to the Transportation of Dangerous Goods Regulations."

Shipper's Signature: _____
Courier's Signature: _____

Two copies of this document must accompany all parcels, one for the Courier and one for the Destination.
Note: Original is stored at the origin of shipment for 2 years.

Section 5: Anatomical Pathology

Hours of Operation

The Anatomical Pathology (AP) Division of Laboratory Medicine provides a comprehensive diagnostic pathology service for Southern New Brunswick and a consultation service for all other regions of the province. This service includes surgical pathology, operating room consultations, autopsy, and cytopathology. See Cytopathology, Section 6.

Hours of Operation: 8:00 – 1630 Monday to Friday except statutory holidays

Contact us:	Pathology Office	506-648-6516
	Pathologists	506-648-6516
	Histology Laboratory	506-648-7568
	Pathology Manager	506-648-7150
	Morgue	506-648-6515
	Pager	506-647-2906
After hours:	Hospital Switchboard	506-648-6111

A pathologist is on-call for after hours and on weekends for emergency consultation service. They can be reached by calling the hospital switchboard.

Specimen Delivery

Routine Specimens: Routine specimens for Anatomical Pathology (AP) are delivered to Central Receiving in the laboratory. Staff from Central Receiving will stamp the time of arrival and transport the specimens to Pathology for processing. Specimens from the Operating Room are sent directly to the Pathology laboratory via the lift located in the pathology grossing room. These specimens must be sent in TissueFx (10% Buffered Formalin) fixative. Recommended volume of fixative is 10 to 20 times the specimen size.

Non – Routine Specimens: Special Procedures such as Intraoperative consultations (frozen sections), specimens requiring special studies such as soft tissue tumors, pediatric tumors, skin, kidney, muscle, lymph node biopsies and specimens requiring photography must be sent “fresh” (without formalin) to the laboratory for immediate processing. Skin biopsies for Immunofluorescence studies are sent in saline or Michael’s solution.

The pathology laboratory **must** be called and/or a consultation with a pathologist arranged prior to sending a fresh specimen to the laboratory. Refer to contact numbers above.

***NOTE*:** DO not send fresh (unfixed) specimens to the laboratory after hours, on weekends or on holidays, unless **prior arrangement** with the laboratory staff or pathologist has been made. If a fresh specimen is left unattended for an extended period, it will spoil, and a diagnosis will not be possible.

Specimen Rejection: The AP laboratory will not process any specimen where there is doubt as to whom it belongs**.** Doubt may be caused by non-labeling, incomplete labeling, mislabeling of a specimen container, and/or incorrect specimen or requisition information relating to the specimen. Physicians, if known, will be notified.

Utmost care should be taken by those responsible for labeling pathology specimens. Surgical specimens, unlike blood or urine samples cannot be recollected. All patient information must be accurate and identical on the requisitions and on the specimen container labels.

Requisition Requirements

All surgical pathology cases **must** have a requisition containing, as a minimum, the following information**:**

1. Surname and previous last name where applicable
2. First name and middle initial
3. Date of birth
4. Sex
5. Medicare number/PPRN
6. Name of attending physician
7. Name of ordering physician (if different from attending)
8. Name of physician(s) to receive report
9. Date and time of specimen collection
10. Source of specimen
11. Relevant clinical history/diagnoses

Electronic Requisitions are generated when an order with all pertinent patient and clinical information is entered in the Hospital Information System (HIS), a hard copy of the requisition prints in the pathology lab and specimen labels print at the floor or clinic submitting the specimens to identify each specimen and send to pathology.

Manual Requisitions are received mainly from doctor's offices or from in-house when the HIS is down. Requisitions must include full patient's name, address, DOB, Sex, Phone, Medicare number, and name of ordering physician and family doctor, to whom and where the report should be sent to, date and time of specimen collection, who completed the requisition, exact source of specimen, diagnosis/clinical history signed by the physician. For each manual requisition there are multiple stick-on labels at the bottom of the page with a red number that is identical to the number on the requisition. These are to be attached to the specimen containers. See specimen labeling section for cases submitted with more than 2 specimen containers.

Specimen Labeling

- Specimen containers submitted with electronic HIS generated requisitions arrive in the lab with a label that matches the information on the e-requisition. Patient's full name, PPRN, Medicare #, date of birth and source of specimen. Multiple specimen containers from the same case are to be submitted to the laboratory, uniquely identified with an assigned letter and source of the specimen: i.e. A- Right Tonsil, B- Left Tonsil, C- Uvula. This information must also appear on the requisition.

- Specimen containers submitted with manual requisitions**:**
  All Pathology specimens must have a label affixed to the container with the patient's full name, source of specimen and the requisition number. At the bottom of the manual requisition there are multiple self-adhesive labels with a number in red that corresponds to the number on requisition. Affixing this label to the specimen container after writing the patient's name and the source of specimen is considered proper identification provided the requisition is filled correctly. The numbers on the label must correspond to the requisition number.

- Cases submitted with manual requisitions that have more than 2 specimen containers:
  Use as many additional manual requisition forms as needed to include all specimens, strikethrough the additional requisition number(s) and re-label with the number of the first requisition, do the same on the adhesive labels at the bottom of the page before attaching to the specimen containers. (Transposed numbers will not be accepted.)

Ensure that multiple specimen containers from the same case are submitted to the laboratory uniquely identified with an assigned letter and source of the specimen: i.e., A- Right Tonsil, B- Left Tonsil, C- Uvula. This information must also be entered on the requisition.

Specimen labeling errors must be corrected before specimens can be processed.
Errors will be communicated to the nursing unit, department, or physician's office. An authorized staff member from the department concerned must come to the pathology laboratory to make the necessary corrections, a signature is required.

Unlabeled surgical specimens, the responsible clinician who removed the specimen from the patient, must examine, identify, and label the specimen container in the AP laboratory. Clinicians and any other staff member authorized to correct errors take full responsibility for the accuracy of the corrections and are required to sign the requisition. The changes will be noted in the final pathology report.

Additional Information Forms:
Additional clinical data (other than that provided with the HIS electronic requisition or manual requisition) may be required and /or documented in the Histopathology Data Collection Sheet or specific forms as listed below.

Please ensure that these forms are sent to the pathology laboratory with the specimen.

FORMS TO BE USED FOR PATHOLOGY SPECIMENS	AVAILABLE FROM	FORM #
Histopathology Data Collection Sheet	Print Shop	33631
Intraoperative Consultation Form (Frozen Sections/Fresh Tissue Form)	Print Shop	34820
Request for Placental Examination Form	Pathology 648-6516	LAB-2S-AP-F05285
Colorectal Surgical Pathology Form	Print Shop	35569
Lung Surgical Pathology Requisition Form	Print Shop	35570
Breast Surgical Pathology	Print Shop	35571 NS

Specimen Fixative

1. **Routine specimens** sent to AP laboratory for processing are placed in **TissueFx**- (10% buffered formalin) available from SPD. ***Do not use Cytolyte fixative*** for tissue specimens as it is specific for cell suspensions for Cytology.

2. **Non-routine specimens** (specimens for Special Procedures/Investigations) must be sent fresh to the laboratory for immediate processing. **Send STAT**.

Specimen Containment and Transport

Place surgical specimens in leak-proof containers with the appropriate fixative ratio. Use the correct size container to achieve proper tissue preservation. The recommended ratio is 1 part tissue to 20 parts Tissue Fix. With less formalin, tissues will not fix properly, and diagnosis may be compromised. SPD has various sizes of containers with formalin fixative to suit your requirements.

To prevent contamination, requisitions and additional information forms should not be wrapped around the container. They are to be placed in the external pouch of a double pouch bag from SPD # 0251766 with pocket. Use a double pouch bag and place requisitions in the external pocket. Specimens leaking formalin or contaminated with visible blood on the outside of the container, or on the requisition and other forms, will be returned to the sender for re-packing and re-submission.

Please refer to the table on page 6 for a Summary of the Requirements for Pathology Specimens

Specimens for Special Procedures/Investigations (Non-Routine Specimens)

1. Intraoperative consultations (Frozen Sections)

The service is available **during regular working hours, from 0800-1630 h, Monday to Friday, except holidays.** It is always advisable to schedule frozen sections with the AP laboratory even during regular working hours. The clinical history and request for frozen sections should be indicated on the O.R. list for pathologists' information.

Call the AP laboratory at 506-648-7568 or 506-648-6516, before the fresh specimen is sent. Include in the ***Intraoperative Consultation Request Form*** the OR telephone number where the surgeon can be reached to receive the frozen section verbal diagnosis. A hard copy of the written diagnosis, signed by the pathologist, is sent to the OR to confirm the verbal diagnosis. This report is to be placed in the patient's chart.

When frozen sections are requested from facilities outside the Saint John Regional Hospital lab must receive **prior notification to the lab is required.** Specimens must be placed FRESH in an airtight container**.** The container is then placed in a larger container with wet ice surrounding the smaller container. Call pathology at 506-648-7955 and notify the specimen is being sent STAT. A written frozen section diagnosis report will be faxed and or called to the facility submitting the specimen

After hours request: On an emergency basis only, the clinician in consultation with the pathologist may request a frozen section after hours. Bear in mind that it may take the pathologist some time to find a technologist to callback and report for duty as there are no technologists on call.

2. Muscle Biopsies

All muscle biopsy requests require prior arrangement with the Anatomical Pathology laboratory and the neuropathologist. You must contact the Anatomical Pathology Division (506) 648-7568. It is a mandatory requirement to fax a copy of the neurology consult report(s) and pertinent clinical history to the neuropathologist to 506-648-6514. Muscle biopsies are submitted fresh (without fixative) and transported immediately to the laboratory to prevent loss of enzyme reactivity. Careful dissection of the muscle is required as proper orientation of the muscle fibers is required so that both sections and longitudinal fibers are examined. Phone the Anatomical Pathology lab at 506-648-7568 to notify when the specimen is being sent and expected time of arrival.

1. The muscle biopsy specimen should be two longitudinal pieces of muscle 0.8 to 1.0 cm in diameter (just thicker than a pencil) and 1.5 - 2 cm in length.

2. Place the specimen on a tongue blade or stiff paper and cover the muscle with Telfa or gauze moistened with saline. The specimen must NOT be immersed in saline.

3. Muscle clamps should NOT be used unless the surgeon is experienced with their use. The muscle does not need to be sutured to the tongue blade.

4. Place the specimen with the cardboard or tongue blade in a container (Petri dish or specimen jar) (use a separate container if there are multiple specimens)

5. Place the specimen in a tightly covered plastic container or bag. Label with patient's name, DOB, PPRN, or Medicare # and source e.g., deltoid muscle biopsy.

6. Place the bagged specimen in wet (regular) ice (enough to last transport) in a sealed Styrofoam container and send immediately to the laboratory. Histochemical enzyme testing will be done from these samples.

7. Specimen should arrive at the Saint John Regional Hospital Pathology laboratory within 4 hours of the biopsy procedure, and no later than 3:00PM.

8. If you anticipate any delays, please ask your surgeons to re-schedule the procedure for the following working day.

To discuss handling, transportation and expected time of arrival, notify the pathology lab at (506) 648-7568.

3. Nerve Biopsy

All nerve biopsy requests require prior arrangement, scheduling with the pathology laboratory and a consultation with the neuropathologist. The sural nerve is most frequently biopsied. Peripheral nerve biopsies are usually performed to evaluate peripheral neuropathy; the final diagnosis should be correlated with clinical and neurophysiologic data (e.g., a history of an inherited metabolic disease or biopsy of other tissues, etc.) Typical stains used in evaluation of nerve biopsies include paraffin processing for hematoxylin and eosin, trichrome and amyloid stains. Elastic and PTAH stain as well as extra levels should be ordered if suspicion of vasculitis is high.

The nerve is received fresh, in a container with a small amount of saline, on wet ice. A completed Histopath Data Collection Requisition and detailed patient history shall be faxed to the Pathology office prior to the procedure by the Neurologist requesting the consultation (506-648-6514). Ensure the specimen container is labeled correctly (refer to Specimen Labeling page 38)

The referral site shall communicate the time in which the specimen leaves the facility for transport to the Saint John Regional Hospital by calling 506-648-7568.

4. Lymph Nodes for Lymphoma Protocol

Surgically excised lymph nodes for possible malignant lymphoma usually require extensive special studies and as such must be submitted fresh and transported to the laboratory as soon as possible. The pathology laboratory must be phoned at 506-648-7568 and informed ahead of time that a lymph node for lymphoma protocol will be arriving.

Lymph node biopsies from a facility outside the Saint John Regional Hospital, specimens must be placed FRESH in an airtight container. The container is placed in a larger container filled with **wet ice** and transported **STAT** to the laboratory. The laboratory must be phoned and told that the specimen is on its way and its approximate time of arrival.

Please refer also to Flow Cytometry Immunophenotyping for Lymphoma Section 10.

5. Pediatric tumors, Soft Tissue tumors and all other tumors for special procedures/investigations

Pediatric, soft tissue tumors and all other tumors requiring biological studies **(**e.g., specimens for **electron microscopy, molecular or cytogenetics studies)** require special handling**.** The tumors are to be sent **fresh** and transported immediately to the laboratory. The laboratory must be notified in advance of the impending arrival of the fresh tissue.

6. Specimens requiring immunofluorescence (IF) procedures i.e., kidney, or skin biopsies

Kidney biopsies: The laboratory must be notified when a renal biopsy is to be performed. A pathologist must be available to evaluate the needle cores under a dissecting microscope in order to sample the specimen for electron microscopy, immunofluorescence studies, and routine histology. The cores must be submitted **fresh in a small amount of saline** to keep the cores from drying and transported **immediately** to the laboratory with a manual requisition (if it is a referral case) and a complete clinical history.

Skin biopsies for IF must be submitted in Michel's solution, or fresh in a small amount of saline. If in saline, the specimen must be transported **STAT** so it can be frozen. Michel's solution is a medium that allows the specimen to be in transit for up to 3 days prior to processing

7. Fetal /Stillbirth Pathology

Fetuses not meeting stillbirth criteria should be submitted in 10% Buffered formalin. The placenta should also accompany the fetus. Please ensure that the Request for Placental Examination Form (60137) is completed and sent with the specimen to the laboratory.

Stillbirths: No fixative is required. The Postmortem Examination Consultation Request (form 31070) and the Authorization for Autopsy (form 31030) forms must be completed. The placenta should also accompany the stillbirth. Please ensure that the request for Request for Placental Examination Form (60137) is completed and sent with the stillbirth to the morgue. The patient's Medical Records are required by the pathologist and should be sent to the Morgue.

For both, fetuses, and stillbirths, include on the Surgical requisition or, postmortem requisition any known requests/plans for disposition of the remains, whether by private family Funeral arrangements or by arrangement by the Pathology Division.

Requirements for Pathology Specimens		
SPECIMEN	**FIXATIVE**	**REQUIREMENT**
Routine Histology	10% Buffered Formalin Available from SPD, in containers of various sizes	Place order in HIS to generate an electronic requisition in pathology. Complete a *'Histopathology Data Collection Sheet' form* or complete a Manual Pathology form with relevant clinical information. Make sure the fixative covers all the tissue. Do not force large specimens in small bottles. The fixative will not penetrate. A ratio of 1 volume of tissue to 20 volumes of fixative are required. Tissue should be immersed in fixative a soon as it is removed.
Frozen Sections for rapid diagnosis Service available (0800-1630 hrs.) Monday-Friday except holidays.	Send fresh	Provide a manual requisition / completed Intraoperative Consultation Request Form, provide the surgeon's phone number in the O.R. for the pathologist to call in the report. Contact the Pathology laboratory 506-648-7568. Send specimen with a Send specimen STAT.
Kidney core biopsies for Immunofluorescent staining	In a small amount of saline.	Phone pathology laboratory 648-7568. Send specimen STAT. Handle cores with extreme care as they are very fragile.
Lymph Nodes for suspected lymphomas	Send fresh	Provide a manual requisition / Send specimen with a completed Intraoperative Consultation Request Form; provide the surgeon's phone number in the OR for the pathologist to call in the report if needed. Phone Pathology at 506-648-7568. Send specimen STAT for Lymphoma Protocol.
Muscle Biopsies	Send fresh	Contact Pathology to schedule. Send clinical information and consult with the neuropathologist. On the day of biopsy collection: Complete a manual requisition and an I*ntraoperative Consultation Request Form*. Send the specimen STAT Phone pathology laboratory 506-648-7568.
Nerve biopsies	Send fresh	Contact Pathology to schedule. Send clinical information and consult with the neuropathologist. On the day of biopsy collection: Complete a manual requisition / Intraoperative *Consultation Request Form*. Send the specimen STAT. Phone Pathology laboratory 506-648-7568.
Soft tissue tumors and Pediatric tumors	Send fresh	Consult with pathologist. Send clinical information. Complete an HIS e-requisition and an I*ntraoperative Consultation Request Form*. Send specimen STAT. Phone pathology laboratory 506- 648-7568.
Skin Biopsies for Immunofluorescence.	Michel's Transport media or saline.	Complete an HIS e-requisition or manual requisition. Transport to pathology laboratory STAT if in saline or if in Michel's solution within three (3) days.
Fetal Pathology. - Not meeting stillbirth criteria.	10% Buffered formalin	Complete an HIS e-requisition or manual requisition. Send fetus to pathology laboratory along with the placenta and a 'Request for Placental Examination' form.
Stillbirths	Send to Morgue	The 'Postmortem Examination Consultation Request', authorization for Autopsy and request for Placental Examination forms are required for autopsy. Phone Safety Services 506-648-6614. Transport stillbirth to Morgue along with the placenta.
Breast For Malignancy or Suspicious for Malignancy	10% BUFFERED FORMALIN	SPECIMENS MUST BE DELIVERED TO THE PATHOLOGY LAB WITHIN 1 HOUR OF REMOVAL FROM THE PATIENT. This is the Cold Ischemic Time or CIT: the time from collection to when the tissue is opened for optimal fixation of the tumor site with formalin.

Autopsy Service

Autopsies are performed either:

- By order of the coroner (Coroner's case)
- At the request of a physician on an in-patient (House Case)

Coroner's Cases:

- Any death that falls under Section 4 of the Coroner's Act must be reported to the coroner. Refer to Coroner Notification HHN-SA-021
- Autopsies on Coroner's cases are performed at the request and authorization of the coroner. Any information regarding the coroner's case is to be addressed to the coroner in charge of the case.
- The deceased is admitted to the morgue by Safety Services and is released only upon the authority of the coroner.
- Contact the Coroner if there is doubt that the case is reportable
  - In cases where the coroner does not require an autopsy, it may still be requested by the attending physician (see House Cases)

House Cases

- If a death is not reportable to the coroner, an autopsy may be requested by the attending physician. Consent for an autopsy by the patient's substitute decision maker is required.
- Documentation Required for House Cases:
  - Consent and Authorization for Autopsy (Form 31030S/11) is signed by the substitute decision maker. It is the responsibility of the attending physician to obtain a signed valid Autopsy Consent. In person, consent must be witnessed by one other individual. Telephone consent requires two witnesses.

  - Postmortem Examination Consultation Request (Form 34390s 01/11). This form is to be completed and signed by the attending physician and must include an adequate summary of the clinical history, a list of questions the autopsy is to resolve, and alert the pathologist to any potential risks in performing the autopsy. Special procedures must be followed for autopsies with known or suspected highly infectious diseases and other potential hazards e.g., Patient with history of radiation therapy.

The patient's medical record is required for both House and Coroner cases.

Treating physicians including house staff are encouraged to attend the autopsy. This can be discussed with the autopsy pathologist. Contact the Anatomic Pathology Division at 506-648-6516 during regular working hours (Monday to Friday, 0800-1600), or call Locating at 506-648-6111 on weekends and after-hours. If the pathologist is unavailable, ask to speak to the Director of Autopsy Services.

Registration / Release of bodies from the morgue is the responsibility of the Anatomical Pathology Division in collaboration with Safety Services personnel.

- All decedents admitted to the SJRH morgue are registered by the Anatomical Pathology Division and released in collaboration with Safety Services personnel. (506-648-6614)
- Once the autopsy is completed, and the body is prepared for release, the name is added to the "Ready for Release" document, and the Amit / Release spreadsheet is updated.

Autopsy Reports:

House Cases:

Preliminary autopsy findings are usually available within 24 hours of the autopsy. Final autopsy reports should be completed within 90 days. Contact the pathology department as soon as possible, if the results are required for Morbidity and Mortality reviews and rounds. The reports can be accessed through the Health Records Department.

Coroner's Case:

Coroner's reports are only released to third parties (i.e., anyone **who is not** the next of kin) with the consent of the coroner. Provincial laws do not give treating physicians automatic rights or access to coroner's reports. Information regarding a Coroner's Case must be addressed to the coroner responsible for the case or the Chief Coroner. All requests for autopsy reports under the jurisdiction of the Provincial Coroner System must be directed to the office of the coroner.

Relevant Documents

- Postmortem Examination Consultation Request form 34390s is available from the SJRH Print shop
- Consent and Authorization for Autopsy form 31030s /11 is available from the Print Shop
- Coroner's Notification Policy (HHN-SA-021)
- LAB-2S-AP-09002 Autopsy Scope of Service and Hours of Operation
- Coroner's Act RSNB 1973, c. C-23. http://laws.gnb.ca/en/showpdf/cs/C-23.pdf

Section 6: Cytology

All primary specimen containers must be properly labelled with the patient's full name and a unique 2nd patient identifier (i.e., Medicare, PPRN).

Unlabelled specimens may not be processed

All specimens must be accompanied by a requisition or an HIS order. Information on the requisition should include patient name, age, physician name, source of specimen, date and time of collection and any relevant clinical history.

All cytology specimens except for CSFs must be fixed immediately upon collection. Any delay may render the specimen unsatisfactory for diagnosis.

All Non-Gynaecological specimens should be transported to the laboratory as soon as possible.

Spatulas, brushes, liquid-based pap test solution, "Specimen for Cytology" containers and requisitions are available from SPD at the Saint John Regional Hospital.

GYNECOLOGICAL

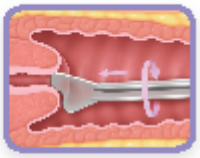
Specimen	Container	Requirements
Pap Test	Thin-Prep PreservCyt Solution Vial	• Obtain sample from ectocervix using plastic spatula. • Rinse the spatula in PreservCyt vial vigorously. • Obtain sample from endocervix using brush device. Slowly rotate ¼ or ½ turn in one direction. **Do not over-rotate the brush.** • Rinse the brush in PreservCyt vial vigorously. • Close and tighten cap. • Label specimen with name and one other unique identifier. • Record patient information and medical history on requisition. • Place the vial and requisition in specimen bag for transport to lab. ****Please see pages 49-50 for manufacturers instructions and lubricant compatibility****

NON-GYNECOLOGICAL

Specimen	Container	Requirements
Body Fluids: Pleural, Peritoneal, Pericardial, Synovial	"Specimen for Cytology" container with fixative	Add fluid (up to an equal volume) to the liquid fixative in the container. For larger volumes use more than one container.
Bronchial Washings and Brushings	"Specimen for Cytology" container with fixative	Add fluid and/or brush to the liquid fixative in the container. Shake vigorously several times. **Any slides prepared during the procedure should be sprayed <u>immediately</u> (see pap smear requirements).**
CSF (Spinal Fluid)	A minimum of 2-3ml of CSF should be sent to the lab FRESH (i.e., not in fixative) using a sterile screw cap container or labelled specimen tube.	**Stability Ambient - 24hrs** **Stability Refrigerated - 72hrs** All CSF specimens collected outside the designated viability limits should be sent to the Cytology laboratory for evaluation. In certain circumstances, it may be acceptable to perform testing on a CSF specimen collected outside of the established parameters.
Fine Needle Aspiration (All body sites)	"Specimen for Cytology" container with fixative	Put entire specimen into the liquid fixative, rinsing the needle several times in the fixative.
Gastric Washings	"Specimen for Cytology" container with fixative	<u>Patient Preparation</u> – In patients with pyloric obstruction, several lavages should be performed until the returns are clear. In other patients, fasting for 8 hours is sufficient. The entire returns are collected and put (up to an equal volume) into the liquid fixative. Use more than one container for larger volumes. Shake the container vigorously, several times.
Sputum	"Specimen for Cytology" container with fixative	A deep cough, "fasting" early morning specimen is put directly into the liquid fixative. The cap is secured, and container shaken vigorously, several times**.** The procedure should be repeated on 3 consecutive mornings. For the patient's convenience, all 3 containers may be brought to the laboratory together.
Urine	"Specimen for Cytology" container with fixative	Discard the early morning specimen. A later voided specimen is preferable. Put an equal volume of urine in the liquid fixative. **Please indicate if urine is voided or catheter specimen.**

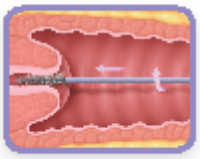
Protocol: endocervical brush/spatula

Quick reference guide



Obtain an adequate sample from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Apply water-soluble, carbomer-free gel lubricant sparingly to the posterior blade of the speculum if necessary.[1,2] Select the contoured end of the plastic spatula and rotate it 360 degrees around the entire ectocervix, while maintaining tight contact with ectocervical surface.

Rinse the spatula as quickly as possible into the PreservCyt® Solution vial by swirling the spatula vigorously in the vial 10 times. Discard the spatula.



Obtain an adequate sampling from the endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottom-most fibers are exposed. Slowly rotate 1/4 or 1/2 turn in one direction. **DO NOT OVER-ROTATE THE BRUSH.**

Rinse the brush as soon as possible in the PreservCyt Solution by rotating the device in the solution 10 times while pushing it against the PreservCyt vial wall. Swirl the brush vigorously to further release material. Discard the brush.

Tighten the cap so that the torque line on the cap passes the torque line on the vial.

Record the patient's name and ID number on the vial.
Record the patient information and medical history on the cytology requisition form.

Place the vial and requisition in a specimen bag for transport to the laboratory.

ThinPrep PAP TEST

HOLOGIC®

ThinPrep® Pap Test Lubricant Compatibility List

The use of lubricants with the ThinPrep Pap test is not recommended. However, if a lubricant is necessary the following lubricant brands are validated by Hologic, Inc. for use with the ThinPrep Pap test when used as instructed.[1*]

		Lubricant	Manufacturer	Contains Carbomer?
Preferred†	✓	Pap Test Lubricating Jelly	Aseptic Control Products	No
	✓	Surgilube Surgical Lubricant	HR Pharmaceuticals	No
	✓	CerviLube Lubricant	Sion Brands	No

		Lubricant	Manufacturer
Not Approved‡	⊗	Aquagel Lubricating Gel	Parker Laboratories, Inc.
	⊗	Astroglide (Physician Formula)	BioFilm, Inc.
	⊗	Astroglide (Personal Formula)	BioFilm, Inc.
	⊗	HR Lubricating Jelly	HR Pharmaceuticals, Inc.
	⊗	Lubricating Gel	Henry Schein
	⊗	Lubricating Jelly	McKesson
	⊗	MediChoice Lubricating Jelly	Owens & Minor
	⊗	PDI Lubricating Jelly I and II	PDI Healthcare
	⊗	PSS Select (also known as Triad)	PSS World Medical, Inc.
	⊗	Rite Aid Pharmacy Lubricating Gel	Rite Aid Corp.
	⊗	Allegiance	Medline Industries, Inc. (formerly Triad/H&P Industries)
	⊗	Aplicare Sterile Lubricating Jelly (also known as Operand Lubricating Jelly)	Aplicare Inc./Clorox Professional
	⊗	Aqua Lube Personal Lubricant	Mayer Laboratories
	⊗	DynaLube Lubricating Jelly	Dynarex Corporation
	⊗	E-Z Lubricating Jelly	Chester Packaging
	⊗	IMCO Lubricating Jelly	Medline Industries, Inc. (formerly Triad/H&P Industries)
	⊗	Lubricating Jelly	DUKAL Corporation
	⊗	Lubri-Gel	Sheffield Pharmaceuticals
	⊗	Maxilube Personal Lubricant	Mission Pharmacal
	⊗	NovaPlus	Medline Industries, Inc. (formerly Triad/H&P Industries)
	⊗	Pro Advantage Lubricating Jelly	National Distribution & Contracting, Inc.
	⊗	ReliaMed Lubricating Jelly	ReliaMed

*The use of lubricants (including personal lubricants) should be avoided prior to specimen collection. Lubricants may adhere to the filter membrane and may cause poor cell transfer to the slide. If its use is unavoidable, the lubricant should be used in minimum amounts.

†Validated lubricants have multiple lots run through periodic testing to ensure compatibility.

‡Not approved lubricants have either been tested and deemed incompatible or excluded from testing because they contain carbomer.

Reference: 1. ThinPrep 2000 System Operator's Manual. MAN-02585-001. Marlborough, MA: Hologic, Inc.; 2017.

ThinPrep®
PAP TEST

Section 7: Cytogenetics and Molecular Genetics

The Division of Molecular Diagnostics at the Saint John Regional Hospital is responsible for the delivery of both molecular and cytogenetic testing. Molecular testing uses DNA or RNA and sometimes other metabolic markers to identify inherited or acquired disease causing mutations or pathogens. Cytogenetic testing examines a person's chromosomes including their structure, number, and arrangement. The role of both types of testing is to determine health or disease status, identify a predisposition for disease, or assist with determining best treatment or management. Molecular testing uses DNA or RNA extracted from cells, whereas cytogenetic testing requires the use of live or intact cells, therefore the requirements for collection and handling of specimens is different for these two laboratories.

All cytogenetic testing requires samples be collected using sterile technique. Cytogenetic tests often require culturing therefore cells must be viable and intact. Depending on the type of test, molecular testing can often accommodate less than optimal samples. Consult the laboratory with any questions pertaining to cytogenetic and molecular tests.

Hours of Operation

Cytogenetics Laboratory:

Monday to Friday (except statutory holidays): 0800-1600 h
Phone 506-648-6882, Fax 506-649-2536

Molecular Diagnostics Laboratory:

Monday to Friday (except statutory holidays): 0800-1600 h
Phone 506-649-2823, Fax 506-649-2536

After hours call the Haematology laboratory 506-648-6881

Types of Specimens

All specimens sent to Molecular Diagnostics **must have** a paper **requisition** fully completed and signed by the attending/referring physician or be ordered electronically in the correct manner by the attending/referring physician. Specimens with incomplete clinical information, unlabelled or mislabelled will not be accepted.

Requisitions are available in paper or electronic format by request to the Division of Molecular Diagnostics (506-648-6882).

If samples are being shipped from an external site to the laboratory, send at room temperature for receipt within 24 hours. Please refer to each test for specific instructions on day and time restrictions, collection, handling, and shipping. Call 506-648-6882 for assistance.

For all Molecular Diagnostic tests care must be taken to place blood or bone marrow samples in preservative as soon as possible with proper mixing.

Clotted samples will compromise analysis and may be rejected.

1. **Blood:**
    - For **Cytogenetic/FISH** studies, collect a **minimum of 3.0 mL** in a **heparinized** (green top) tube BD# 366481. Send promptly to the laboratory.

    - **Molecular diagnostic testing** – collect a minimum of **4.0 mL, 0.5-3.0 mL for infants/newborn**, in an **EDTA** (lavender top) tube BD# 367861. Send promptly to the laboratory.

2. **Bone Marrow:**
    - **Cytogenetics:** >1.0mL (minimum) marrow in a sodium heparin (green top) tube BD# 367871. Note: **Sample must be from the first draw or a relocated needle**. Second or third aspirates from the same site are unlikely to contain sufficient cells for culture. Send promptly to the laboratory.

    - **Molecular testing**: >1.0 mL marrow in **EDTA** (lavender top) tube BD# 367861. Send promptly to the laboratory.

3. **Amniotic Fluid:**
    Collect **20 mL** in **two** sterile 15 mL plastic centrifuge tubes for karyotyping (Corning Brand with orange screw cap). Send promptly to the Cytogenetics laboratory. If AFP is required, place 2-3 mL of amniotic fluid in a plain red top tube BD# 366430.

4. **Tissue:**
    Note: If tissue is being submitted for cytogenetics, molecular genetics and for pathological examination, be sure to complete any of the following requisitions as applicable:
    - **Cytogenetic, Molecular Diagnostic or Genetic Oncology Requisition and**
    - **Pathology requisition and Histology Data Collection sheet**
    - **Request for Placental Examination form**

For any clinical situations not given below where genetic testing may be required, please contact the laboratory. Consult the Anatomic Pathology section of the Laboratory Manual for additional information.
Sterile media for collection can be obtained in advance from the laboratory, call 506-648-6882.

i) <u>For Oncology studies</u>: Specify Tissue Type on Requisition

- Frozen Tissue, >5mm^3 snap frozen, ship on dry ice,
- Fresh Tissue, >5mm^3 sent in sterile media, call laboratory
- Paraffin Embedded Tissue, 5 x 5-15µm unstained slides and 1 H&E slide
- Cytogenetic or molecular genetic examination may be appropriate for some malignant tumours. Please consult with the laboratory on specific cases. Select **3-5 mm of non-necrotic tissue**, place in sterile physiological saline or media for transport to Pathology.

ii) <u>Skin Biopsies</u>:

Cytogenetic or molecular genetic analysis may be warranted in some clinical situations. Please consult the laboratory on these specific cases **<u>PRIOR</u>** to sample collection.

iii) <u>Cheek Swabs or Oral Washes</u>:

Molecular genetic analysis may be possible on these alternative specimen types, which may be used an alternative to blood collection for some tests. Consult the laboratory **<u>PRIOR</u>** to sample collection.

iv) <u>For Sudden Death or Postmortem-Non-Obstetric Cases</u>:

Submit 1 cm^3 of skeletal muscle (e.g., deltoid) and completed Molecular Diagnostic requisition. Sample will be banked for future investigations if needed. Send promptly to the laboratory. Consult with Head of the Division, if necessary, about alternative tissues on a case-by-case basis if required.

v) <u>For Obstetrical Cases</u>:

Note #1: Tissue specimens are to be submitted to the Anatomical Pathology laboratory where the pathologist will dissect the tissue and place it in culture medium.

Note #2: The following applies to cytogenetic testing, for molecular genetic testing less optimal and alternative tissues can be submitted for testing or banking. Please contact the laboratory.

a. **Spontaneous abortions** or **Prostaglandin induced terminations** that exhibit congenital anomalies or relevant family history of anomalies in siblings or previous pregnancies are suitable for analysis. **Tissue for culture:** <u>Fetal and/or Placental membrane or Pericardium and cartilage</u>.

   Open neural tube defects (ONTD) cases are processed **only if other congenital anomalies are present.**

   <u>Please note</u>: If a history of habitual first or second trimester abortions is present (X3), the recommended sample for Cytogenetic testing is **blood from the parents.**

b. **Suctioned or saline induced abortions** samples are **<u>NOT</u>** suitable for genetic analysis. For these termination cases, we recommend **10 to 20 mL** of **amniotic fluid**, collected under sterile conditions, immediately prior to the termination.

c. **Postmortem tissue**: **Tissue for culture**: Pericardium and cartilage. Skin is not recommended. Place in two separate sterile containers using sterile physiological saline or media.

d. **Stillbirths**: Only selected cases are processed, generally those with congenital anomalies and/or pertinent family history.

Tissue for culture: Fetal and/or placenta membrane or Pericardium and cartilage. Tissue from the stillborn fetus is usually not viable. If placenta is not available, cartilage is acceptable. Collect in sterile physiological saline or media.

5. **For Next Generation Sequencing**

a. Hematologic and Germline (Constitutional) testing:

i. Peripheral Blood: 0.5 – 3 mL in EDTA Tube
ii. Infant/Newborn: 4 – 8 mL in EDTA Tubes
iii. Bone Marrow: 2-5 mL minimum in EDTA Tube

b. Solid Tumor Testing

i. H&E Slide:
   1. Must be provided with each sample to be tested
   2. The area of tumor (entire tissue section or a subset of the tissue section) must be marked (circled) clearly by a pathologist
   3. The percent tumor (either in the entire tissue or in a selected areas on the slide) must be estimated by the pathologist and written on the request form as well as the slide

ii. Tissue may be received as follows.
   1. Formalin Fixed Paraffin Embedded blocks
   2. Curls or scored curls:
      a. Biopsies: 3 x 10 µm
      b. Resections: 2X 10 µm
   3. 12 unstained slides at 5 µm

6. **Molecular Microbiology**

For molecular identification of pathogens please consult with Dr. Sameh El Bailey, clinical microbiologist (506-649-2773), Ms Janet Reid, Manager, Microbiology (506-648-7630), or Dr. Duncan Webster (506-648-6807) for instructions and referral criteria.

Specimen Handling

All samples should be transported immediately to the laboratory at room temperature.
Samples for **cytogenetic testing** are accepted from **Monday 8am to Thursday 3pm**. Please call the laboratory for samples which will arrive outside of these hours.

Samples for **molecular genetic testing** are accepted from **Monday 8am to Friday 3pm**.
Note: samples for RNA based testing **must** be received within 24 hours.

For samples which cannot be received during these times:

a) Store until the next working day.

- Heparinized blood for Cytogenetics/FISH studies at room temperature.
- EDTA blood for molecular diagnostic testing at Room Temperature.
- Tissues in physiological saline (sterile) at 4-8°C.
- Amniotic Fluids at room temperature.
- Heparinized bone marrow for Cytogenetics at room temperature.
- EDTA bone marrow for molecular diagnostics at Room Temperature.

b) Use sterile techniques for transferring tissue to sterile physiological saline in sterile containers.

c) All tissue samples submitted for cytogenetic studies must be sent in **physiological sterile saline** to pathology. Please mark the outside of the container "**IN SALINE".**

Specimens collected after regular work hours should be kept in saline in the fridge and sent to Pathology **first thing the next regular working day.**

Pathology hours: 0800-1700h, Monday to Friday (except statutory holidays). **There is no one in Pathology to receive specimens after hours, on weekends or holidays.**

Indications for Cytogenetic or Molecular Testing

Please contact the Head of the Division if required for information on genetic testing recommendations.

1. Indications for Cytogenetic Testing:
   - physical, mental, or social developmental delay
   - recurrent spontaneous abortions (X3)
   - infertility
   - primary and secondary amenorrhea
   - premature menopause
   - gonadal dysgenesis (i.e., Klinefelter)
   - congenital anomalies (prenatal or postnatal)
   - late maternal age or maternal serum screen positive pregnancy
   - haematological malignancy

2. Indications for Molecular Testing:
   - Individual history of genetic disease or disease with acquired genetic changes, for diagnosis, prognosis, and management,
     e.g., developmental delay, hemochromatosis, hematologic malignancy
   - Carrier testing, identify unaffected carriers of genetic disease,
     e.g., cystic fibrosis
   - Presymptomatic/Predictive testing, identify individuals at increased risk of genetic disease,
     e.g., familial breast cancer, Huntington's disease, Factor V Leiden
   - Pathogen detection/identification,
     e.g., 16S rDNA

3. Specific Indications/Test Eligibility

   i) Microarray Analysis for Developmental Disability/Autism Spectrum Disorder/Congenital Anomalies

Microarray genomic hybridization should be the first line laboratory investigation for the patient whose DD/MR, autism, multiple congenital anomalies, or dysmorphic features is unexplained after a thorough history and physical examination.

For patients who have a clinically identifiable syndrome where specific targeted genetic testing is available and less expensive, microarray testing should not be used as a first line test.

Chromosome studies and FISH tests are not routinely required for the investigation of the above-mentioned patients who have normal microarray genomic hybridization studies.

Microarray studies replace the previous testing modalities of chromosome analysis by G-banding and FISH for targeted microdeletions or subtelomeric rearrangements.

This testing should not be performed on patients suspected of having a common standard aneuploidy or triploidy. Microarray is not recommended for the investigation of the child or adult suspected of having either Down syndrome, trisomy 13, trisomy 18, Turner syndrome, Klinefelter syndrome, XXX or XYY, since, in many cases, confirmatory chromosome studies would be required if the diagnosis were made with array genomic hybridization. This is especially true for Down syndrome and trisomy 13, which can be associated with Robertsonian translocations not detectable by array genomic hybridization.

Parental studies may be required to determine if a deletion or duplication is de novo and/or to rule out a parental balanced rearrangement as a cause of a deletion/duplication in the proband. Family studies may be required to provide supportive evidence for the association between an abnormal array genomic hybridization finding and the clinical presentation.

ii) Familial Breast and Ovarian Cancer

Individuals must meet one of the categories below before being eligible for testing. Confirmation of cancers occurring in family members should be done by inspection of pathology reports where possible. Genetic counseling through Medical Genetics at the IWK in Halifax is recommended prior to testing. For individuals who are palliative, testing can proceed, or DNA samples banked for future use by family members, for this scenario specific consent forms for testing or release of results are available from the laboratory and are strongly recommended. Contact the laboratory for assistance.

Risk categories for individuals eligible for screening for a genetic susceptibility to breast or ovarian cancers, the category must be noted on the requisition.

Testing for Affected Individuals with Breast or Ovarian Cancer

At least one case of cancer:

1. Ashkenazi Jewish and breast cancer <50 years, or ovarian cancer at any age. Note: Testing limited to ethnic specific mutations, unless other criteria given in this list are met.
2. Breast cancer <35 years of age.
3. Male breast cancer. Note: testing limited to BRCA2.
4. Invasive serous ovarian cancer at any age.

At least 2 cases of cancer on the same side of the family:

5. Breast cancer <60 years, and a first or second-degree relative with ovarian cancer or male breast cancer.
6. Breast and ovarian cancer in the same individual, or bilateral breast cancer with the first case <50 years.
7. Two cases of breast cancer, both <50 years, in first or second-degree relatives.
8. Two cases of ovarian cancer, any age, in first or second-degree relatives.
9. Ashkenazi Jewish and breast cancer at any age, and any family history of breast or ovarian cancer.
   Note: Testing limited to ethnic specific mutations, unless other criteria given in this list are met.

At least 3 cases of cancer on the same side of the family:

10. Three or more cases of breast or ovarian cancer at any age.

Familial:

11. Relative of individual with known BRCA1 or BRCA2 mutation. *Note: specific family mutation only tested.*

Other:

12. Ashkenazi Jewish and first or second-degree relative of individual with: breast cancer <50 years, or-ovarian cancer at any age, or-male breast cancer, or-breast cancer, any age, with positive family history of breast or ovarian cancer.
    Note: Testing limited to ethnic specific mutations, unless meet other criteria.

13. A pedigree strongly suggestive of hereditary breast/ovarian cancer, i.e., risk of carrying a mutation for the individual being tested is >10%.

iii) Hemochromatosis

Clinical Indications for Genetic Testing of the HFE Gene, at least one of the following:

- Confirmatory diagnostic testing
- Clinical presentation consistent with a diagnosis of hemochromatosis
- and/or Elevated fasting serum transferrin saturation on 2 or more repeated tests
- and/or Elevated serum ferritin
- Predictive testing for at risk relatives of individuals who have clinically confirmed hemochromatosis or are carriers of HFE genetic variants

iv) Thrombosis – Factor V Leiden and Prothrombin (Factor II) Variants

Testing may have utility in the following circumstances (these are the same as the general recommendations for testing any thrombophilia):

- Age < 50, any venous thrombosis.
- Venous thrombosis in unusual sites (such as portal hepatic, mesenteric, and cerebral veins).
- Recurrent venous thrombosis.
- Venous thrombosis and a strong family history of thrombotic disease.
- Venous thrombosis in pregnant women or women taking oral contraceptives.
- Myocardial infarction in female smokers under age 50.

Other situations in which testing may be appropriate includes the following:

- Venous thrombosis, age > 50, except when active malignancy is present.

- Asymptomatic relatives of individuals known to have factor V Leiden. Knowledge that they have factor V Leiden may influence management of pregnancy and may be a factor in decision-making regarding oral contraceptive use.
- Women with recurrent pregnancy loss or unexplained severe preeclampsia, placental abruption, intrauterine fetal growth retardation or stillbirth. Knowledge of factor V Leiden carrier status may influence management of future pregnancies. Known carriers of these mutations can be treated with anticoagulants during pregnancy to support a normal outcome.

Routine testing is not recommended for patients with a personal or family history of arterial thrombotic disorders (e.g., acute coronary syndromes or stroke) except for the special situation of myocardial infarction in young female smokers. Testing may be worthwhile for young patients (< 50 years of age) who develop acute arterial thrombosis in the absence of other risk factors for atherosclerotic arterial occlusive disease.

Genes included in Next Generation Sequencing (NGS) Panels:

Please contact the Head of the Division if required for information on genetic testing recommendations.

1. **<u>The NGS Myeloid Panel includes the following genes:</u>**

   a. Hotspot Genes - *ABL1, BRAF, CBL, CSF3R, DNMT3A, FLT3, GATA2, HRAS, IDH1, IDH2, JAK2, KIT, KRAS, MPL, MYD88, NPM1, NRAS, PTPN11, SETBP1, SF3B1, SRSF2, U2AF1, WT1*
   b. Full Genes - *ASXL1, BCOR, CALR, CEBPA, ETV6, EZH2, IKZF1, NF1, PHF6, PRPF8, RB1, RUNX1, SH2B3, STAG2, TET2, TP53, ZRSR2.*
   c. Fusion Genes - *ABL1, ALK, BCL2, BRAF, CCND1, CREBBP, EGFR, ETV6, FGFR1, FGFR2, FUS, HMGA2, JAK2, KMT2A (MLL), MECOM, MET, MLLT10, MLLT3, MYBL1, MYH11, NTRK3, NUP214, PDGFRA, PDGFRB, RARA, RBM15, RUNX1, TCF3, TFE3*

2. **<u>The NGS Solid Tumor Panel includes the following genes:</u>**

   a. Hotspot genes: *AKT1, ALK, AR, BRAF, CDK4, CTNNB1, DDR2, EGFR, ERBB2, ERBB3, ERBB4, ESR1, FGFR2, FGFR3, GNA11, GNAQ, HRAS, IDH1, IDH2, JAK1, JAK2, JAK3, KIT, KRAS, MAP2K1, MAP2K2, MET, MTOR, NRAS, PDGFRA, PIK3CA, RAF1, RET, ROS1, SMO*
   b. Copy number genes: *AKT1, ALK, AR, BRAF, CCND1, CDK4, CDK6, EGFR, ERBB2, FGFR1, FGFR2, FGFR3, FGFR4, KIT, KRAS, MET, MYC, MYCN, PDGFRA, PIK3CA*
   c. Gene fusions: *ABL1, AKT3, ALK, AXL, BRAF, EGFR, ERBB2, ERG, ETV1, ETV4, ETV5, FGFR1, FGFR2, FGFR3, MET, NTRK1, NTRK2, NTRK3, PDGFRA, PPARG, RAF1, RET, ROS1*

3. **<u>The NGS Pan Cancer Panel includes the following genes:</u>**

   a. Genes Assayed for the Detection of Copy Number Variations
   ABL1, ABL2, ABRAXAS1, ACVR1B, ACVR2A, ADAMTS12, ADAMTS2, AKT1, AKT2, AKT3, ALK, AMER1, APC, AR, ARAF, ARHGAP35, ARID1A, ARID1B, ARID2, ARID5B, ASXL1, ASXL2, ATM, ATR, ATRX, AURKA, AURKC, AXIN1, AXIN2, AXL, B2M, BAP1, BARD1, BCL2, BCL2L12, BCL6, BCOR, BLM, BMPR2, BRAF, BRCA1, BRCA2, BRIP1, CARD11, CASP8, CBFB, CBL, CCND1, CCND2, CCND3, CCNE1, CD274, CD276, CDC73, CDH1, CDH10, CDK12, CDK4, CDK6, CDKN1A, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CHD4, CHEK1, CHEK2, CIC, CREBBP, CSMD3, CTCF, CTLA4, CTNND2, CUL3, CUL4A, CUL4B, CYLD, CYP2C9, DAXX, DDR1, DDR2, DDX3X, DICER1, DNMT3A, DOCK3, DPYD, DSC1, DSC3, EGFR, EIF1AX, ELF3, EMSY, ENO1, EP300, EPCAM, EPHA2, ERAP1, ERAP2, ERBB2, ERBB3, ERBB4, ERCC2, ERCC4, ERRFI1, ESR1, ETV6, EZH2, FAM135B, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAT1, FBXW7, FGF19, FGF23, FGF3, FGF4, FGF9, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, FLT4, FOXA1, FUBP1, FYN, GATA2, GATA3, GLI3, GNA13, GNAS, GPS2, H3-3A,

H3-3B, HDAC2, HDAC9, HLA-A, HLA-B, HNF1A, IDH2, IGF1R, IKBKB, IL7R, INPP4B, JAK1, JAK2, JAK3, KDM5C, KDM6A, KDR, KEAP1, KIT, KLF5, KMT2A, KMT2B, KMT2C, KMT2D, KRAS, LARP4B, LATS1, LATS2, MAGOH, MAP2K1, MAP2K4, MAP2K7, MAP3K1, MAP3K4, MAPK1, MAPK8, MAX, MCL1, MDM2, MDM4, MECOM, MEF2B, MEN1, MET, MGA, MITF, MLH1, MLH3, MPL, MRE11, MSH2, MSH3, MSH6, MTAP, MTOR, MUTYH, MYC, MYCL, MYCN, MYD88, NBN, NCOR1, NF1, NF2, NFE2L2, NOTCH1, NOTCH2, NOTCH3, NOTCH4, NRAS, NTRK1, NTRK3, PALB2, PARP1, PARP2, PARP3, PARP4, PBRM1, PCBP1, PDCD1, PDCD1LG2, PDGFRA, PDGFRB, PDIA3, PGD, PHF6, PIK3C2B, PIK3CA, PIK3CB, PIK3R1, PIK3R2, PIM1, PLCG1, PMS1, PMS2, POLD1, POLE, POT1, PPM1D, PPP2R1A, PPP2R2A, PPP6C, PRDM1, PRDM9, PRKACA, PRKAR1A, PTCH1, PTEN, PTPN11, PTPRT, PXDNL, RAC1, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RAF1, RARA, RASA1, RASA2, RB1, RBM10, RECQL4, RET, RHEB, RICTOR, RIT1, RNASEH2A, RNASEH2B, RNF43, ROS1, RPA1, RPS6KB1, RPTOR, RUNX1, SDHA, SDHB, SDHD, SETBP1, SETD2, SF3B1, SLCO1B3, SLX4, SMAD2, SMAD4, SMARCA4, SMARCB1, SMC1A, SMO, SOX9, SPEN, SPOP, SRC, STAG2, STAT3, STAT6, STK11, SUFU, TAP1, TAP2, TBX3, TCF7L2, TERT, TET2, TGFBR2, TNFAIP3, TNFRSF14, TOP1, TP53, TP63, TPMT, TPP2, TSC1, TSC2, U2AF1, USP8, USP9X, VHL, WT1, XPO1, XRCC2, XRCC3, YAP1, YES1, ZFHX3, ZMYM3, ZNF217, ZNF429, ZRSR2

b. Transcripts Assayed for the Detection of Fusions

AKT1, AKT2, AKT3, ALK, AR, BRAF, BRCA1, CDKN2A, EGFR, ERBB2, ERBB4, ERG, ESR1, ETV1, ETV4, ETV5, FGFR1, FGFR2, FGFR3, MAP3K8, MET, MTAP, MYB, MYBL1, NOTCH1, NOTCH2, NOTCH3, NRG1, NTRK1, NTRK2, NTRK3, NUTM1, PIK3CA, PIK3CB, PPARG, PRKACA, PRKACB, RAF1, RARA, RELA, RET, ROS1, RSPO2, RSPO3, STAT6, TERT, TFE3, TFEB, YAP1

c. Genes sequenced for the Detection of "hotspot" DNA Sequence Variants

ABL1, ABL2, ACVR1, ACVR2A, AKT1, AKT2, AKT3, ALK, AMER1, APC, AR, ARAF, ARID1A, ARID1B, ARID2, ASXL1, ASXL2, ATM, ATP1A1, ATR, ATRX, AURKA, AURKC, AXIN1, AXIN2, AXL, B2M, BAP1, BCL2, BCL2L12, BCL6, BCOR, BCR, BLM, BMP5, BRAF, BRCA1, BRCA2, BRIP1, BTK, CACNA1D, CALR, CARD11, CASP8, CBL, CCND1, CCND2, CCND3, CCNE1, CD79B, CDC73, CDH1, CDK4, CDK6, CDKN2A, CDKN2C, CHD4, CHEK2, CIC, CREBBP, CSF1R, CTCF, CTNNB1, CUL1, CUL3, CYP2D6, CYSLTR2, DDR2, DDX3X, DGCR8, DICER1, DNMT3A, DPYD, DROSHA, E2F1, EGFR, EIF1AX, EP300, EPAS1, EPHA2, ERBB2, ERBB3, ERBB4, ERCC2, ERCC5, ERRFI1, ESR1, EZH2, FAM135B, FANCM, FBXW7, FGF7, FGFR1, FGFR2, FGFR3, FGFR4, FLT3, FLT4, FOXA1, FOXL2, FOXO1, FUBP1, GATA2, GATA3, GLI1, GNA11, GNA13, GNAQ, GNAS, GPS2, H2BC5, H3-3A, H3-3B, H3C2, HIF1A, HNF1A, HRAS, ID3, IDH1, IDH2, IKBKB, IL6ST, IL7R, IRF4, IRS4, JAK1, JAK2, JAK3, KDM6A, KDR, KEAP1, KIT, KLF4, KLF5, KMT2B, KMT2D, KNSTRN, KRAS, LARP4B, LATS1, MAGOH, MAP2K1, MAP2K2, MAP2K4, MAP2K7, MAP3K4, MAPK1, MAPK8, MAX, MDM4, MECOM, MED12, MEF2B, MEN1, MET, MGA, MITF, MLH3, MPL, MSH3, MSH6, MTOR, MYC, MYCN, MYD88, MYOD1, NBN, NCOR1, NF1, NF2, NFE2L2, NOTCH1, NOTCH2, NRAS, NSD2, NT5C2, NTRK1, NTRK2, NTRK3, NUP93, PARP1, PAX5, PBRM1, PCBP1, PDGFRA, PDGFRB, PHF6, PIK3C2B, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIM1, PLCG1, PMS2, POLE, PPM1D, PPP2R1A, PPP6C, PRKACA, PTCH1, PTEN, PTPN11, PTPRD, PXDNL, RAC1, RAD50, RAD51, RAF1, RARA, RB1, RET, RGS7, RHEB, RHOA, RICTOR, RIT1, RNF43, ROS1, RPL10, RPL5, RUNX1, RUNX1T1, SDHD, SETBP1, SETD2, SF3B1, SIX1, SIX2, SLCO1B3, SLX4, SMAD2, SMAD4, SMARCA4, SMARCB1, SMC1A, SMO, SNCAIP, SOCS1, SOS1, SOX2, SPOP, SRC, SRSF2, STAG2, STAT3, STAT5B, STAT6, STK11, TAF1, TCF7L2, TERT, TET2, TGFBR1, TGFBR2, TNFAIP3, TOP1, TP53, TPMT, TRRAP, TSC2, TSHR, U2AF1, UGT1A1, USP8, VHL, WAS, WT1, XPO1, XRCC2, ZFHX3, ZNF217, ZNF429

d. Genes Sequenced with Full Exon Coverage

ABRAXAS1, ACVR1B, ACVR2A, ADAMTS12, ADAMTS2, AMER1, APC, ARHGAP35, ARID1A, ARID1B, ARID2, ARID5B, ASXL1, ASXL2, ATM, ATR, ATRX, AXIN1, AXIN2, B2M, BAP1, BARD1, BCOR, BLM, BMPR2, BRCA1, BRCA2, BRIP1, CALR, CASP8, CBFB, CD274, CD276, CDC73, CDH1, CDH10, CDK12, CDKN1A, CDKN1B, CDKN2A, CDKN2B, CDKN2C, CHEK1, CHEK2, CIC, CIITA, CREBBP, CSMD3, CTCF, CTLA4, CUL3, CUL4A, CUL4B, CYLD, CYP2C9, CYP2D6, DAXX, DDX3X, DICER1, DNMT3A, DOCK3, DPYD, DSC1, DSC3, ELF3, ENO1, EP300, EPCAM, EPHA2, ERAP1, ERAP2, ERCC2, ERCC4, ERCC5, ERRFI1, ETV6, FANCA, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, FAS, FAT1, FBXW7, FUBP1, GATA3, GNA13, GPS2, HDAC2, HDAC9, HLA-A, HLA-B, HNF1A, ID3,

INPP4B, JAK1, JAK2, JAK3, KDM5C, KDM6A, KEAP1, KLHL13, KMT2A, KMT2B, KMT2C, KMT2D, LARP4B, LATS1, LATS2, MAP2K4, MAP2K7, MAP3K1, MAP3K4, MAPK8, MEN1, MGA, MLH1, MLH3, MRE11, MSH2, MSH3, MSH6, MTAP, MTUS2, MUTYH, NBN, NCOR1, NF1, NF2, NOTCH1, NOTCH2, NOTCH3, NOTCH4, PALB2, PARP1, PARP2, PARP3, PARP4, PBRM1, PDCD1, PDCD1LG2, PDIA3, PGD, PHF6, PIK3R1, PMS1, PMS2, POLD1, POLE, POT1, PPM1D, PPP2R2A, PRDM1, PRDM9, PRKAR1A, PSMB10, PSMB8, PSMB9, PTCH1, PTEN, PTPRT, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RASA1, RASA2, RB1, RBM10, RECQL4, RNASEH2A, RNASEH2B, RNASEH2C, RNF43, RPA1, RPL22, RPL5, RUNX1, RUNX1T1, SDHA, SDHB, SDHC, SDHD, SETD2, SLX4, SMAD2, SMAD4, SMARCA4, SMARCB1, SOCS1, SOX9, SPEN, STAG2, STAT1, STK11, SUFU, TAP1, TAP2, TBX3, TCF7L2, TET2, TGFBR2, TMEM132D, TNFAIP3, TNFRSF14, TP53, TP63, TPP2, TSC1, TSC2, UGT1A1, USP9X, VHL, WT1, XRCC2, XRCC3, ZBTB20, ZFHX3, ZMYM3, ZRSR2

Molecular Diagnostics and Cytogenetics Requisitions:

These requisitions can be located at the following links:

- Saint John Region users: Genetics - All Documents (rha-rrs.ca)
- External users: For Staff and Physicians - Horizon Health Network (horizonnb.ca) under “Clinical Resources” tab

Section 8: Flow Cytometry

The Flow Cytometry laboratory falls under the administrative umbrella of the Haematology Division of the Laboratory.

Flow Cytometry Laboratory Hours of Operation: Monday to Friday (except statutory holidays): 0800-1600h.

Contact Information: 506-648-6875
After hours, call the Haematology laboratory 648-6883. On Friday or a day prior to a holiday, samples must be received in our laboratory by Noon to allow processing to be completed by 4 pm. Flow Cytometry does not operate on evenings, weekends or Holidays, requests requiring overtime must be cleared by the Division Head.

Flow Cytometry Storage Media for Tissues/Nodes/FNA/FN Core Samples: Media can be obtained by calling the Flow Cytometry Laboratory or from the following locations:

SJRH:
ENT Clinic Fridge
Interventional Suite Fridge
Pathology Surgical Sectioning Fridge

St. Joseph's Hospital:
Specimen Collection Laboratory

Note: If flow cytometry storage media is not available, the following can be used: RPMI 1640, phosphate buffered saline, McCoy's modified media or Hank's buffered salt solution.

Tissues/Nodes:

Tissue samples for lymphoma protocol are usually processed through Anatomical Pathology where the tissue is divided for special studies. Refer to Anatomical Pathology Section 5.
DO NOT place sample on gauze or other surface prior to placing into storage media. Place tissue directly into a sterile sample container with Flow Cytometry storage media. Make sure media completely covers the tissue. Maximize lymphoid tissue; exclude areas of fibrosis, necrosis, fat, and connective tissue.

FNA/FN Core Biopsies for lymphoma protocol:
Flow Cytometry Immunophenotype samples: Flow Cytometry Storage Media. Place tissue directly into container with Flow Cytometry storage media.
Cytology / Pathology samples: collect additional separate samples for these tests. See Cytology and Pathology collection instructions.

Table of Flow Cytometry Tests:

Test Name	**Sample Types**	**Indications**	**In House** (SJRH) **Referred Out** (RO)	**TAT**	**Collection Information-*See individual test listing below for complete details***
Immunocompetence ICP/ CD4	Blood	1. Check Immune status: T+B+NK 2. HIV treatment monitoring -T cell subsets only put note to lab in order if want T+B+NK. New patients for monitoring will have T+B+NK done first time only.	RO	Routine 48hr	Mon -Thurs morning only, must be in SJRH Lab by noon to allow same day shipment
Immunophenotype	Blood, CSF, Body Fluid, Nodes/tissues/ Bronchial Wash, FNA, FNCore	Hematolymphoid Malignancies: Diagnosis / Staging / Monitoring / Recurrence **Note:** Tissue samples for lymphoma protocol are usually processed through Anatomical Pathology where the tissue is divided for special studies. Refer to Anatomical Pathology Section 5. FNA/FC Core - are not divided by pathology send separate samples to the Flow Cytometry Lab for processing. Collect separate samples for Pathology and Cytology.	SJRH	Routine 7 days Stat: Preliminary 24-48 hr. Cases triaged by clinical urgency	Mon-Fri by appointment only 506-648-6875. Friday samples must be in lab by noon to allow for processing.
Immunophenotype - Bone Marrow	Bone Marrow	Hematolymphoid Malignancies: Diagnosis / Staging / Monitoring / Recurrence	SJRH	Routine 7 days Stat: Preliminary 24-48 hr. Cases triaged by clinical urgency	Mon -Fri by appointment only 506-648-6875.
PNH /Paroxysmal Nocturnal Hemoglobinuria	Blood	Diagnosis Monitoring	RO	Routine: 72hr	Mon -Thurs morning only, must be in SJRH Lab by noon to allow for same day shipment
CD34 (Stem cell)	Blood, Apheresis Products	Check mobilization / Enumerate apheresis product counts	SJRH	Stat:2 hr.	Scheduled by NB Stem Cell Program Coordinator
Immunodeficiency Flow ID1/ID2	Blood	Diagnosis / Treatment Monitoring	RO	Routine: 7days	Mon -Thurs morning only, must be in SJRH Lab by noon to allow same day shipment.
Regulatory T cells	Blood	Evaluating patients with clinical features of graft-vs-host disease post-hematopoietic stem cell transplantation	RO	Routine: 48hrs	Collect M-W am only. Send Stat must be in lab referral before noon with completed Calgary Requisition, ensure CBC gets collected at same time.

Section 9: Microbiology

Specimens by Source

Microbiology Hours: Weekdays *0730-2100*; Weekends and Holidays *0800-1600*; After Hours, *contact 648-6111 (Stat testing only)*

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Covid-19 specimens	• Nasopharyngeal swab • Nasopharyngeal aspirate (not optimal) • Throat/Nose swab • Sputum • Bronchial washing	Covid-19	Viral transport swab (available by contacting Lab Specimen Receiving area) Sterile specimen container (SPD#7031972 or #6069390)	Specify reason for testing/symptoms Rapid testing available upon special authorization on request – must call Microbiology to request. Validated specimen types are Nasopharyngeal swab (COVID/Flu/RSV and respiratory panel), throat/nose swab (COVID/Flu/RSV)	Deliver to laboratory ASAP (within 24hrs) Refrigerate after collection and during transport	D/ A* *Rapid result	D -24-30 hrs. A- 2-3 hrs.
Abscess	**See Wounds**						
Bile	**See Fluids**						

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Blood Culture	Adult: Two sets of blood cultures collected from different sites Should be collected on pediatric patients weighing 36 kg or more Can be used for rapidly growing yeast or fungus	Blood Culture Routine (Set of aerobic and anaerobic vials)	Aerobic (SPD#7013912) and Anaerobic (SPD#0018284) vials	Disinfect venipuncture site with appropriate disinfectant. Disinfect the rubber septum on vial with alcohol prior to inoculation. One set of blood cultures includes one aerobic and one anaerobic vial. Collect 2 sets from separate sites (indicate site) Blood volume to be drawn is 10 mL per vial, or approximately 20 mL per set. Blood cultures should be drawn before taking blood samples for other testing and the administration of antibiotics. Specify "yeast" if suspected	• Optimal: Deliver to Laboratory immediately. • Within 36 hours at room temperature (DO NOT INCUBATE).	A	Preliminary Negative: 48 hours Final report: 5 days Positive results within 3 days
	Pediatric Patients weighing less than 36 kg	Blood Culture Pediatric	Aerobic (pediatric) vial (SPD#7013914)	Collection preparation as per adult blood cultures. One aerobic vial is drawn. Blood volume to be drawn is 1-4 mL. A second culture vial increases test sensitivity.	• Optimal: Deliver to Laboratory immediately. • Within 36 hours at room temperature (DO NOT INCUBATE).	A	Preliminary Negative: 48 hours Final report: 5 days Positive results within 3 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Blood Culture *continued*	All patients	TB (AFB) culture	Special blood culture vial available from Microbiology (MycoFLytic) – contact Microbiology to request vial	Collection preparation as per adult blood cultures. Blood volume to be drawn is 1-5 mL	• Optimal: Deliver to laboratory immediately. • Must be received in Microbiology within 48 hours at room temperature (DO NOT INCUBATE).	A	6 weeks
	Blood culture for systemic fungemia only Order Blood culture Routine for rapidly growing yeast and fungus	Fungal culture	Special blood culture vial available from Microbiology (MycoFLytic) – contact Microbiology to request vial	Collection preparation as per adult blood order and cultures. Blood volume to be drawn is 1-5 mL.	• Optimal: Deliver to Laboratory immediately. • Room temperature. Specimen must be received in Microbiology within 48 hours. (DO NOT INCUBATE)	A	30 days
Bone Marrow		Aerobic culture	Aerobic (pediatric) blood culture vial (SPD#7013914) and plain sterile tube/container (if possible) for direct smear	Optimally, specimen should be inoculated into blood culture bottle immediately to prevent clotting.	Optimal: Deliver to Laboratory immediately.	A	Negative: 5 days
		TB (AFB) culture	Special blood culture vial available from Microbiology (MycoFlytic) – contact Microbiology to request vial	Optimally, specimen should be inoculated into a blood culture bottle immediately to prevent clotting.	• Optimal: Deliver to Laboratory immediately. • Within 48 hours at room temperature (DO NO INCUBATE).	B	6 weeks
		Fungal culture	Special blood culture vial available from Microbiology (MycoFlytic) – contact Microbiology to request vial	Optimally, specimen should be inoculated into a blood culture bottle immediately to prevent clotting.	• Optimal: Deliver to Laboratory immediately. • Within 48 hours at room temperature (DO NO INCUBATE).	A	30 days
		Viral Testing	Plain sterile tube/container	Deliver to Laboratory immediately.	• Optimal: Deliver to Laboratory immediately. • Freeze at -70°C if delayed in transit.	D	1 week

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Cervical	**See Genital Tract**						
Screening specimens for Candida auris	Basic screening set: Nares swab and axilla/groin swab	Candida auris screen	Culture swab (SPD#7031912)	Refer to Infection Prevention and Control protocols for screening.	• Specimen stability: 72 hours.	D	7 days
Screening specimens for Carbapenem-resistant Gram-negative bacilli CRGNB (CRE)	Rectal swab	CRGNB screen	Culture swab (SPD#7031912)	Refer to Infection Prevention and Control protocols for screening.	• Specimen stability: 48 hours.	A	24-48 hours
	Various: Urines, sputums, draining wounds	CRGNB screen	Sterile specimen container (SPD#7031972) or Culture swab (SPD#7031912) or Uriswab (SPD#0007647)	Refer to Infection Prevention and Control protocols for screening.	Specimen stability: 24 hours for sputums and urines* or 48 hours for culture swabs. • ** Uriswabs are stable for up to 3 days.*	A	48-72 hours
CSF (cerebrospinal fluid)	CSF	Routine culture	Plain sterile tube	Ideally, 1-2 mL of CSF should be submitted for routine culture. Multiple tubes may be required when other testing is requested (i.e., TB culture, viral culture/PCR, etc.). NEVER send the first tube collected for culture.	• **Optimal: Deliver STAT.** • Delays of >1 hour may compromise test results. Outside of regular hours (Mon-Fri 0730-2100; Sat, Sun, Holidays 0800-1600), call Locating (6111) to contact Microbiology technologist on call.	A	Direct smear: 1 hour Preliminary: 2-48 hours Final Negative: 5 days
		TB (AFB) culture	Plain sterile tube	Minimum: 0.5-1 mL	• Optimal: Deliver to Microbiology immediately. • Refrigerate if delayed up to 3 days.	B	8 weeks
		Fungal culture	Plain sterile tube	Minimum: 0.5-1 mL	• Optimal: Deliver to Microbiology immediately. • Refrigerate if delayed in transit.	D	4 weeks Cryptococcal antigen: 24 hours

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
	CSF	Syphilis (VDRL)	Plain sterile tube	Minimum: 0.5 mL Serology must be positive for Syphilis	• Optimal: Deliver to Microbiology immediately. • Freeze at -70°C if delayed in transit.	D	1-2 weeks
		Viral (PCR) testing	Plain sterile tube	Minimum: 0.5-1 mL	• Optimal: Deliver to Microbiology immediately. • Refrigerate at 2-8°C if delayed in transit.	D	7 days Stat PCR requests: 1-2 days
		CJD testing (Creutzfeldt Jakob Disease)	Plain sterile tube	Minimum: 2-3 mL	• Prior notification to lab and IPC is required. Send during regular working hours (M-F 0830-1430), Consultation with Microbiologist or Infectious Disease specialist is required. Send to lab immediately in sealed bag	D	7 days
Duodenal fluid	**See Stool/GI Tract**						
Ear/Eye/Nose	Ear swab (external)	Culture	Culture swab (SPD#7031912)	Specify left or right. First remove any debris or crust from ear canal. Obtain a sample by firmly rotating swab in the outer canal.	• Optimal: <24 hours room temperature. • Maximum: 48 hours room temperature.	A	48-72 hours
	Ear (pus or drainage from middle ear or ruptured eardrum)	Culture	Culture swab (SPD#7031912) or if anaerobes are suspected Anaerobic transport container (SPD#0015704 - fluid)	Specify left or right.	• Optimal: <24 hours room temperature. • Maximum: 48 hours room temperature.	A	5 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Ear/Eye/Nose *continued*	Tympanocentesis fluid	Anaerobic culture	Anaerobic transport container (SPD#0015704 – fluid)	Specify left or right. Clean ear canal with soap solution and collect fluid via syringe aspiration technique.	• Optimal: Within 3 hours of collection. • Specimen stability: 48 hours if indicator has not changed (colorless).	A	5 days
	Eye (conjunctiva)	Aerobic culture	Culture swab (SPD#7031912)	Specify left or right. Pre moisten swab with sterile saline and roll over conjunctiva.	• Optimal: <24 hours room temperature. • Maximum: 48 hours room temperature.	A	48-72 hours
	Eye (conjunctiva)	Viral Testing	Viral transport swab (available by contacting Lab Specimen Receiving)	Specify left or right. Specify virus	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days
		GC, Chlamydia (DNA)	STD Molecular Swab SPD# 7023907	Specify left or right. Pre-moisten swab with sterile saline and roll over conjunctiva.	• 90 days, room temperature	C	3-5 days
		Chlamydia culture	Viral (UTM) transport swab (available by contacting Lab Specimen Receiving area)	Specify left or right. Pre-moisten swab with sterile saline and roll over conjunctiva.	• Deliver to Laboratory immediately. • Room temperature stability.	D	10 days
	Corneal scraping/ulcer	Aerobic culture	Direct culture inoculation to blood agar, chocolate agar, and IMA plates.	Specify left or right. Call Microbiology to obtain media prior to collection.	Send inoculated plates to laboratory immediately.	A	5 days
	Nose	Aerobic culture	Culture swab (SPD#7031912)	Routinely cultured for Staphylococcus aureus. If another pathogen is suspected, please specify.	• Optimal: <24 hours room temperature. • Maximum: 48 hours room temperature.	A	48-72 hours

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Environmental Cultures	Dialysis waters	C/S Envir	Sterile specimen container (SPD#7031972)	Orderable by Dialysis units and lab only.	Maximum: 24 hours refrigerated.	A	Final report: 48 hours Endotoxin: same day
	Blood bank product sterility	C/S Envir BB	Aerobic vial (SPD#7013912)	Transfusion Medicine order only.	• Deliver to Laboratory ASAP. • Maximum: 36 hours room temperature.	A	7 days
	Lab Waters	C/S Envir	Sterile specimen container (SPD#7031972)	Lab Only Orderable	• Maximum: 24 hours refrigerated.	A	48 hours
	Nuclear Medicine sterility	C/S Envir Nuc Med	Aerobic vial (SPD#7013912)	Nuclear Medicine order only.	• Maximum: 36 hours room temperature.		7 days
	Pharmacy sterility	C/S Envir Pharm	Aerobic vial (SPD#7013912)	Pharmacy order only.	• Maximum: 36 hours room temperature.	A	14 days
ESBL Screen specimens	Rectal swab	ESBL screen	Culture swab (SPD#7031912)	Refer to Infection Prevention and Control protocols for screening.	• Specimen stability: 48 hours.	A	24-48 hours
ESBL Screen specimens	Various: Urines, sputums, draining wounds	ESBL screen	Sterile specimen container (SPD#7031972) or Culture swab (SPD#7031912) or Uriswab (SPD#0007647)	Refer to Infection Prevention and Control protocols for screening.	Specimen stability: 24 hours for sputums and urines* or 48 hours for culture swabs. • ** Uriswabs are stable for up to 3 days.*	A	48-72 hours
Fluids (sterile body fluids)	Synovial (joint)	Body fluid culture	Anaerobic transport container (SPD#0015704 – fluid)	Specify site of aspiration.	• Optimal: Within 3 hours of collection. • Specimen stability: 48 hours if indicator has not changed (colorless)	A	5 days
	Pleural, pericardial, peritoneal, bile	Body fluid culture	Anaerobic transport container (SPD#0015704 – fluid)	Specify type of fluid.	• Optimal: Within 3 hours of collection. • Specimen stability: 48 hours if indicator has not changed (colorless)	A	5 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Fluids (sterile body fluids) *continued*	All sterile body fluids	Fungal culture	Sterile specimen container (SPD#7031972) or Anaerobic transport container (SPD#0015704 – fluid)	Specify type of fluid. Minimum: 0.5-1 mL	• Optimal: Deliver to Microbiology immediately. • Refrigerate if delayed in transit.	D	4 weeks
		TB culture	Sterile specimen container (SPD#7031972) or Anaerobic transport container (SPD#0015704 – fluid)	Specify type of fluid. Minimum: 0.5-1 mL	• Optimal: Deliver to Microbiology immediately. • Refrigerate if delayed up to 3 days.	B	8 weeks
		Viral Testing	Sterile specimen container (SPD#7031972) or Anaerobic transport container (SPD#0015704 – fluid)	Specify virus	• <2 hours at room temperature. • 24 hours if refrigerated	D	7 days
	Peritoneal Dialysis	Culture (Aerobic and Anaerobic) + Direct Gram Smear	Blood collection vials: Aerobic (SPD#7013912) and Anaerobic (SPD#0018284) and sterile container (SPD#0250348)	Always collect both aerobic and anaerobic bottles and send separate specimen for direct smear.	• Optimal: Deliver to Laboratory immediately. • Within 48 hours at room temperature (DO NOT INCUBATE).	A	Direct smear within 24 hours. Final culture: 7 days unless positive
Genital tract	Cervix	GC culture	Culture swab (SPD#7031912)	Using a speculum, remove mucus and secretions from the cervical or with a swab and discard this swab. Firmly yet gently sample the cervical canal with the culture swab, and place in transport tube.	• Optimal: Deliver to Laboratory immediately. • Maximum: Within 24 hours at room temperature.	A	72 hours

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Genital Tract c*ontinued*	Cervix	GC, Chlamydia swab (DNA)	STD molecular swab (female) (SPD#7023907)	Remove excess mucus with woven, larger swab from the cervical os and discard. Insert the small, flocked swab into the cervical canal, rotate 5 times in one direction, and withdraw carefully, avoiding contact with the vaginal mucosa. Place the swab into the PCR media tube, carefully break the swab shaft at the dark line, and tightly recap the tube.	• 90 days room temperature	C	3-5 days
		Chlamydia culture	Viral (UTM) transport swab (contact Microbiology)	Using a speculum, remove mucus and secretions from the cervical os with a swab and discard this swab. Firmly yet gently sample the cervical canal with the culture swab, and place in transport tube.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	2 weeks
		Viral Testing	Viral transport swab (available by contacting Lab Specimen Receiving area)	Using a speculum, remove mucus and secretions from the cervical os with a swab and discard this swab. Firmly yet gently sample the cervical canal with the culture swab, and place in transport tube.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Genital Tract *continued*		HPV (Human Papillomavirus)	Thin Prep or Surepath liquid-based Cytology samples	Collected as per cervical collection for liquid-based cytology. Done as a reflex test after Cytology workup or by special request as a referred-in test	• Preserve Cyt (Thin Prep) samples: 6 months at 2-30°C. Minimum volume: 3 mL • Surepath samples: 6 weeks***** at 15-30°C or 6 months at 2-8°C. Minimum volume (concentrated specimen): 3 mL	C	7-10 days
	IUD	Actinomyces Culture	Sterile specimen container (SPD#7031972)		• Optimal: Deliver to Laboratory immediately.	A	14 days
	Urethra	GC culture	Culture swab (SPD#7031912)	Collect at least 1 hour after patient has urinated. Remove old exudates from the urethral orifice. Collect discharge material on a swab.	• Optimal: Deliver to Laboratory immediately. • Maximum: Within 24 hours at room temperature.	A	72 hours
		Viral testing	Viral transport swab (available by contacting Lab Specimen Receiving area)	Remove any discharge. Insert the swab 2-4cm into the urethra and rotate for 3-5 seconds. Withdraw the swab and place the cap/swab into the transport tube, ensuring the cap is tightly secured to the tube.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days
		GC, Chlamydia DNA	STD Molecular Swab SPD# 7023907	Collect at least 1 hour after patient has urinated. Remove old exudates from the urethral orifice. Collect discharge material on a swab.	• 90 days, room temperature	C	3-5 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Genital Tract *Continued*	Urethra	Chlamydia culture	Viral (UTM) transport swab (contact Microbiology)	Remove any discharge. Insert the swab 2-4cm into the urethra and rotate for 3-5 seconds. Withdraw the swab and place the cap/swab into the transport tube, ensuring the cap is tightly secured to the tube.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours or 24 hours refrigerated (longer if frozen at -20°C or below).	D	14 days
	Vagina	Bacterial vaginosis (C/S Vagina)	Culture swab (SPD#7031912)	Wipe away old secretions/discharge. Obtain secretions from the mucosal membrane of the vaginal wall using a sterile swab.	• Optimal: 24 hours (room temperature). • Specimen stability: 48 hours	A	72 hours
		Culture	Culture swab (SPD#7031912)	Indications: Prepubertal, post-partum, post-op, Toxic shock syndrome	• Optimal: 24 hours (room temperature). Specimen stability: 48 hours	A	72 hours
	Vagina	Trichomonas	Culture swab (SPD#7031912)	Collect discharge from vagina using sterile swab.	• 24 hours at room temperature.	A	24 hours
		Yeast	Culture swab (SPD#7031912)	See Bacterial vaginosis. Order C/S Vagina and indicate yeast +/- treatment failure	Specimen stability: 48 hours.	A	48-72 hours
	Vagina	Viral Testing	Viral transport swab (available by contacting Lab Specimen Receiving area)	Collect discharge from vagina using sterile swab.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Genital Tract *Continued*	Vagina	GC, Chlamydia swab (DNA)	STD molecular swab (female) (SPD#7023907)	Insert smaller flocked swab about 5 cm (2 inches) into the vaginal opening. Gently turn the swab for about 30 seconds while rubbing the swab against the wall of the vagina. Withdraw the swab carefully. Do not let the swab touch any surface before placing it into the collection tube.**DO NOT USE woven larger swab for collection.**	• 90 days room temperature	C	3-5 days
	Vag/Anal	GBS culture	Culture swab (SPD#7031912)	Swab vaginal area, and using the same swab, insert into anus.	• Optimal: 24 hours (room temperature). • Specimen stability: 48 hours.	A	48-72 hours
	Vaginal vault (hysterectomized)	GC culture	Culture swab (SPD#7031912)	Collect specimen from vaginal vault using sterile swab.	• Optimal: Deliver to Laboratory immediately. • Maximum: Within 24 hours at room temperature.	A	72 hours
	Vagina	Chlamydia culture	Viral (UTM) transport swab (contact Microbiology)	Must be used for sexual assault and prepubertal patients. (Collect as for vaginal virus culture)	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	10 days
	Vulva	Aerobic culture (genital)	Culture swab (SPD#7031912)	Culture for yeast. Indicate if other pathogens are suspected. (e.g., S. aureus or GAS)	Specimen stability: 48 hours.	A	48-72 hours

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	Vulva	Viral Testing (Herpes PCR)	Viral transport swab (available by contacting Lab Specimen Receiving area)	Obtain swab of lesions.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days
Hair/Skin/Nails (fungus)	Hair	Fungus culture	Sterile container (SPD#7031972)	Endothrix infections: pick coiled hair (black dots) from scalp. Ectothrix infections (or favus): pluck hair stubs.	Specimen stability: 48 hours.	D	4 weeks
	Nails	Fungus culture	Sterile container (SPD#7031972) **DO NOT SEND ENTIRE NAIL OR PARTS OF IT – send scrapings**	Collect the following depending on the type of nail infection: – Beneath the nail plate – obtain material beneath nail plate or by whittling through it. – White spot type involving the surface of the nail – scrape off the white chalky spots in nail plate.	Specimen stability: 48 hours.	D	4 weeks
Hair/Skin/Nails (fungus)	Skin (scraping)	Fungus culture	Sterile container (SPD#7031972)	Take skin scrapings from advancing edges or borders of the suspect lesions (associated with signs and symptoms of dermatophytes).	Specimen stability: 48 hours.	D	4 weeks
Lines/Tips	CVP, TPN, IV vascular/ umbilical lines and tips	Aerobic culture	Sterile specimen container (SPD#7031972)	Send 5cm of the distal portion of the line.	• Optimal: Deliver to Laboratory immediately to prevent drying. • Maximum: 24 hours.	A	48-72 hours

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MRSA screening	Nares, rectal swabs	MRSA screen	Culture swab (SPD#7031912)	Refer to Infection Prevention and Control protocols for screening.	Specimen stability: 48 hours.	A	24-48 hours
	Other: Foley catheter urines, sputum, draining wounds	MRSA screen	Sterile specimen container (SPD#7031972) or Culture swab (SPD#7031912) or Uriswab (SPD#0007647)	Refer to Infection Prevention and Control protocols for screening.	Specimen stability: 24 hours for sputums and urines* or 48 hours for culture swabs. ** Uriswabs are stable for up to 3 days.*	A	48-72 hours
Nasopharynx	**See Respiratory**						
Respiratory Tract	Bronchial washing, Bronchoalveolar lavage (BAL) brushing	Bronchial culture	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 24 hours if refrigerated.	A	48-72 hours
		Fungus culture	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 48 hours if refrigerated.	D	4 weeks
		Galactomannan	Sterile specimen container (SPD#6069390 or #7031972)	Restricted Order (5AS, Oncology, Lab) Minimum volume 2 mL. Specimens should not be exposed to air.	• Send to Microbiology immediately	C	3-4 days
		TB culture	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• Optimal: Deliver to Laboratory immediately. • Refrigerate if delayed up to 3 days.	B	8 weeks
		Viral Respiratory Panel	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Respiratory Tract *Continued*		Actinomyces culture	Sterile specimen container (SPD#0010803 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 24 hours if refrigerated.	A	2 weeks
		Legionella culture	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 24 hours if refrigerated.	A	7 days
		Nocardia culture	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 24 hours if refrigerated.	A	2 weeks
	Bronchial washing, Bronchoalveolar lavage (BAL) brushing *continued*	Pneumocystis carinii (jirovecii) exam	Sterile specimen container (SPD#6069390 or #7031972)	Specify left or right.	• <2 hours at room temperature. • 24 hours if refrigerated.	D	1-3 days
	Nasopharyngeal swab (preferred) Nasopharyngeal aspirate (NPA) Nose/Throat (COVID and Flu/RSV only)	Viral Testing (COVID-19 can include Influenza/RSV PCR) Viral Respiratory Panel	Viral transport swab (available by contacting Lab Specimen Receiving area) OR Sterile container (SPD#6069390)	Order COVID and specify another virus requested Aspirates collected by Respiratory Therapy. For swab collection, see collection instructions.	Deliver to laboratory ASAP (within 24hrs) Refrigerate after collection and during transport	D / A*	24-72 hours for COVID and Flu/RSV Rapid testing performed daily on-site by protocol*
		Pertussis PCR	Viral transport swab (available by contacting Lab Specimen Receiving area) OR Sterile container (SPD#6069390) (NPA)	Nasopharyngeal swabs are preferred specimen. For swab collection, see collection instructions. Two separate swabs must be collected if ordering both Viral testing and Pertussis PCR.	Deliver to laboratory ASAP (within 24hrs) Refrigerate after collection and during transport	D	3 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Respiratory Tract *Continued*	Sputum	Sputum culture CF culture	Sterile specimen container (SPD#7031972 or #6069390)	For expectorated sputum samples, after rinsing with water to remove excess oral flora, have patient cough deeply to produce a lower respiratory specimen. If unable to produce sputum, a specimen should be collected via suction. Printable collection instructions are available through Multimedia or on Skyline (Form # HHN-0452)	• <2 hours at room temperature. • 24 hours if refrigerated.	A	48-72 hours
	Sputum	Fungus culture	Sterile specimen container (SPD#7031972 or #6069390)	Printable collection instructions are available through Multimedia or on Skyline (Form # HHN-0452)	• <2 hours at room temperature. • 48 hours if refrigerated.	D	4 weeks
		TB culture	Sterile specimen container (SPD#7031972 or #6069390)	Collect first morning expectorated sputum. One specimen per day for 3 days is recommended. Can collect same day at different times. Printable collection instructions are available through Multimedia or on Skyline (Form # HHN-0452)	• Optimal: Deliver to Laboratory immediately. • Refrigerate if delayed up to 3 days.	B	8 weeks
		Legionella culture	Sterile sputum container (SPD#7031972 or #6069390)	Printable collection instructions are available through Multimedia or on Skyline (Form # HHN-0452)	• <2 hours at room temperature. • 24 hours if refrigerated.	A	7 days

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	Sputum	Pneumocystis carinii (jirovecii) exam	Sterile specimen container (SPD#7031972 or #6069390)	**Must be an induced sputum** (contact Respiratory Therapy for collection).	• <2 hours at room temperature. • 24 hours if refrigerated.	D	1-3 days
		Viral Respiratory Panel	Sterile sputum container (SPD#7031972 or #6069390)	Specify virus other requested	• <2 hours at room temperature. 24 hours if refrigerated	D	7 days
	Throat	Routine Culture CF culture	Culture swab (SPD#7031912)	Depress tongue with a tongue depressor and sample the posterior pharynx, tonsils, and inflamed areas with a sterile swab. *NOTE: if *Corynebacteria diphtheriae* or *Arcanobacterium haemolyticum* are suspected, please indicate on request	48 hours at room temperature.	A	24-48 hours
		Viral Respiratory Panel	Viral transport swab (available by contacting Lab Specimen Receiving area)	Specify other virus	Deliver to laboratory ASAP (within 24hrs) Refrigerate after collection and during transport	D	7 days
		GC culture	Culture swab (SPD#7031912)	Depress tongue with a tongue depressor and sample the posterior pharynx, tonsils, and inflamed areas with a sterile swab.	• Optimal: Deliver to Laboratory immediately. • Maximum: 24 hours at room temperature.	A	72 hours
		GC/Chlamydia DNA	Molecular swab SPD #7023907	COBAS swab	• 90 days room temperature	C	3-5 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Sterility Culture	Cardiac valve rinse	Culture (Aerobic and Anaerobic)	Blood collection vials: Aerobic (SPD#7013912) and Anaerobic (SPD#0018284)	Sterility culture only.	• Optimal: Deliver to Laboratory immediately. • Within 36 hours at room temperature (DO NOT INCUBATE).	A	7 days
	Corneal rims (Eye bank)	Culture (includes aerobic culture & anaerobic)	Sterile specimen container (SPD#7031972) Note: Corneal rims are submitted in sterile specimen container with preservative **(by Eye Bank staff)**	Specify left or right.	• Deliver to Laboratory immediately. • Refrigerate if delayed in transit.	A	Preliminary Negative: 48 hours Final Report: 5 days Positive results communicated immediately
	Prosthetic Devices	Sterility culture	Sterile specimen container (SPD#7031972)	Various hardware and prosthetic devices removed during surgery	Deliver to Laboratory immediately.	A	14 days
	Stem cells (HPCA)	Product sterility	Aerobic (pediatric) vial (SPD#7013914) and Anaerobic vial (SPD#0018284)	Transfusion Medicine order only	Deliver to Laboratory immediately.	A	14 days
	Tissue or bone (or swab)	Sterility culture	Sterile specimen container (SPD#7031972) or Anaerobic culture swab (SPD#7031406)	Indicate tissue bank reference ID#. (If available)	Deliver to Laboratory immediately.	A	14 days
	Transfusion Reaction culture	C/S donor blood	Blood product bag	Transfusion Medicine order only.	Deliver to Laboratory immediately.	A	7 days
Stool/GI Tract	Duodenal fluid	Culture	Sterile specimen container (SPD#6069390)	Collected by suction during colonoscopy.	• Deliver to Laboratory immediately. • Room temperature: 1 hour.	A	3 days
		Ova and parasite exam (O&P)	Stool O&P container labelled “SAF Fixative” (SPD#0014972) or Sterile specimen container (SPD#6069390)	Optimally, specimen should be transferred into the O&P container immediately after collection. **Do not fill above the fill line.**	Stable if in SAF indefinitely.	C	3-5 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Stool/GI Tract *Continued*	Gastric Aspirate	TB culture	Sterile specimen container (SPD#7031972) or Sterile specimen container (SPD#6069390)	Collected on children only. Collect fasting, early morning specimen on three consecutive days. Use sterile water.	• Deliver to Laboratory immediately. • Must be neutralized within 3 hours of collection.	B	8 weeks
	Rectal swab	GC culture	Culture swab (SPD#7031912)	Insert swab past anal sphincter, move from side to side, allow 10-30 sec for absorption, and withdraw. If swab is contaminated with feces, collect new sample.	• Optimal: Deliver to Laboratory immediately. • Maximum: 24 hours at room temperature.	A	72 hours
		GC/Chlamydia DNA	Molecular swab SPD#7023907	Insert swab past anal sphincter, move from side to side, allow 10-30 sec for absorption, and withdraw. If swab is contaminated with feces, collect new sample.	• 90 days room temperature	C	3-5 days
		Chlamydia Culture	Viral (UTM) transport swab (contact Microbiology)	Insert swab past anal sphincter, move from side to side, allow 10-30 sec for absorption, and withdraw. If swab is contaminated with feces, collect new sample.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours or 24 hours refrigerated (longer if frozen at -20°C or below).	D	14 days
		Viral testing	Viral (UTM) transport swab (contact Microbiology)	Insert swab past anal sphincter, move from side to side, allow 10-30 sec for absorption, and withdraw. If swab is contaminated with feces, collect new sample.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Stool/GI Tract *continued*	Stool	C. difficile toxin screen	Sterile specimen container (SPD#7031972) or Fecal collection kit (SPD#0017293)	Formed stools are not appropriate for testing (except in cases of ileus). Empty bladder before collecting stool. Collect in a clean, dry container and then transfer specimen into sterile container using a plastic spoon. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0448). Minimum sample: 1 teaspoon.	• Optimum: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or up to 48 hours refrigerated (longer if frozen at -20°C).	A	24 hours
		H. pylori antigen	Sterile specimen container (SPD#7031972) or Fecal collection kit (SPD#0017293)	Discontinue antibiotics, bismuth, and proton pump inhibitor drug at least 4 weeks prior to collection. Printed collection instructions for stool specimen are available from Multimedia or on Skyline (form #HHN-0448). Minimum sample: 1 teaspoon.	Optimum: Deliver to laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or up to 24 hours refrigerated (longer if frozen at -20°C).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Stool/GI Tract *Continued*		Routine Culture	Stool C&S container labelled "Enteric Pathogen Transport" (SPD#7031915) (or Carey-Blair) Vial contains pink liquid transport media	Only one sample per day will be processed. A maximum of two should be sent for initial investigation. Empty bladder before collecting stool. Collect in a clean, dry container and then transfer specimen into C&S container. **Do not fill above the fill line.** Note: Stools from patients who develop diarrhea after 3 days in hospital should first be screened for C. difficile. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0448).	• Refrigerate after collection. • Optimum: <24 hours. • Maximum: 48 hours if refrigerated.	A	3-4 days
		TB culture	Sterile specimen container (SPD#7031972) or Fecal collection kit (SPD#0017293)		• Deliver to lab immediately. • Refrigerate if delayed in transit.	B	8 weeks

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
	Stool	Ova and parasite exam (O&P)	Stool O&P container labelled "SAF Fixative" (SPD#0014972)	Only sample per day will be processed. A maximum of three should be sent for initial investigation. Empty bladder before collecting stool. Collect in a clean, dry container and then transfer specimen into O&P container. **Do not fill above the fill line.** Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0448).	Stable if in SAF indefinitely.	C	3-5 days
		Viral Testing	Sterile specimen container (SPD#7031972) or Fecal collection kit (SPD#0017293)	A multiplex PCR panel will be performed for Norovirus, Rotavirus, Adenovirus, Astrovirus and Sapovirus. Specify virus, if known, and if part of suspected outbreak. Empty bladder before collecting stool. Collect in a clean, dry container and then transfer specimen into sterile container using a plastic spoon. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0448).	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C).	D	3 days
	Other: Perianal smear (pinworm paddle)	Pinworm	Pinworm paddle collection device (SPD#7031911)	See section 12 of the Lab Manual (on Skyline) for collection instructions (form HHN-0763)	• Room temperature storage. • Deliver to Laboratory within 24 hours.	B	24-48 hours

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
	Other: Urine for Schistosomiasis	Ova and parasite exam (O&P)	Sterile specimen container (SPD#7031972)	Collect the last voided portion of a mid-day urine specimen (between noon and 3pm)	Send to Laboratory immediately (room temperature).	B	3-5 days
	Other: Worms (GI Tract, such as ascaris, tapeworms), fly larvae, Arthropods Ectoparasites (e.g., Lice, ticks)	ID	Sterile specimen container (SPD#7031972) or Stool O&P container labelled "SAF Fixative" (SPD#0014972) (for specimens from GI tract)	Only ticks removed from patients can be submitted for ID through this lab. Case history tick submission form required for testing. See section 12 of the Lab Manual (on Skyline) for collection instructions.	Stable if in SAF indefinitely (specimens from GI tract only).	B/D	24 hours – 4 weeks
	Other: Skin scrapings for Scabies	ID	Sterile specimen container (SPD#7031972)	See section 12 of the Lab Manual (on Skyline) for collection instructions.	Send to Laboratory immediately (room temperature).	B	24 hours
Tissue	Biopsy	Tissue culture	Sterile specimen container (SPD#7031972)	If specimen will be delayed, add sterile saline to keep specimen moist. DO NOT PUT IN GAUZE.	• Transport at room temperature to Laboratory as soon as possible. • Optimal: within 3 hours. • Specimen stability: 24 hours (keep moist).	A	5 days
		Fungal culture	Sterile specimen container (SPD#7031972)	If specimen will be delayed, add sterile saline to keep specimen moist. DO NOT PUT IN GAUZE.	• Transport at room temperature to Laboratory as soon as possible. • Refrigerate if delayed in transit.	D	4 weeks

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
		TB culture	Sterile specimen container (SPD#7031972)	If specimen will be delayed, add sterile saline to keep specimen moist. DO NOT PUT IN GAUZE.	• Transport at room temperature to Laboratory as soon as possible. • Refrigerate if delayed in transit.	B	8 weeks
		Viral Testing	Sterile specimen container (SPD#7031972)	Specify virus	• <2 hours at room temperature. • 24 hours if refrigerated	D	7 days
Urine	Midstream, Foley catheter, straight catheter, cystoscopy	Culture	Sterile specimen container (SPD#7031972) or Uriswab (SPD#0007647)	Midstream urine: Clean genital area surrounding the urethra and begin voiding. After several milliliters has passed, collect a midstream portion without stopping. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0822).	• Stability: 2 hours at room temperature or 24 hours refrigerated (indicate refrigeration). • If a delay is anticipated, an Uriswab should be used. These are stable for up to 3 days at room temperature. • Uriswabs and collection instructions are available from SPD (#0083297).	A	24-48 hours
Urine *continued*	Urine	TB culture	Sterile specimen container (SPD#7031972)	Collect the complete early morning specimen. One specimen per day for 3 days. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0822).	• Optimal: Deliver to Laboratory immediately. • Refrigerate if delayed up to 3 days.	B	8 weeks

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
	Urine (First voided)	GC, Chlamydia urine (DNA)	Sterile specimen container (SPD#7031972)	The patient should not have urinated for at least one hour prior to collection. Female patients must not clean the labial area. Collect the first 10-50 mL of voided urine into a sterile urine cup. Printed collection instructions are available from Multimedia or on Skyline (form #HHN-0822).	• Send to the laboratory within 24 hours of collection. • If it is impossible to send samples to reach the lab within 24 hours, the urine can be placed in PCR transport media (0105985). Stability is then 90 days at room temperature.	C	3-5 days
	Urine	Legionella urinary antigen	Sterile specimen container (SPD#7031972)	Random urine.	Stability: 2 hours at room temperature, longer if refrigerated (indicate refrigeration).	D	7-10 days
	Urine	Mumps, Measles (PCR)	Sterile specimen container (SPD#7031972)	Optimum volume: 50 mL	Stability: Send to lab on ice ASAP. Stability: Must be received within 48 hours refrigerated (indicate refrigeration)	D	3-5 days

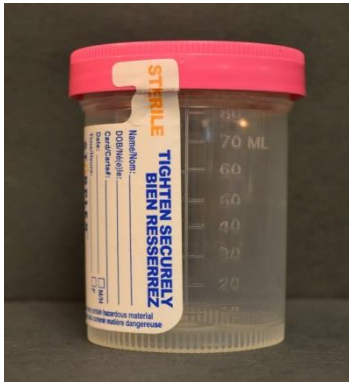
Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Wounds	Deep wound or abscess	Deep wound culture	Anaerobic transport container (SPD#0015704 – fluid) or Swab – anaerobic (SPD#7031406)	Swabs are poor specimens for anaerobic culture. Remove surface exudates by wiping with sterile saline or alcohol. Send aspirate, fluid, or tissue whenever possible. Aspirate abscess wall with needle and syringe and transfer to an anaerobic transport device. Specimens should always be taken from active sites of infection and collected to ensure that normal body flora is bypassed.	• Optimal: Within 3 hours of collection. • Specimen stability: 48 hours if indicator has not changed (colorless). • Room temperature.	A	3-5 days
	Deep or abscess	Fungus culture	Culture swab (SPD#7031912)	Tissue or fluid should be sent if possible. Swabs are not optimal.	Specimen stability: 48 hours (room temperature).	D	4 weeks
	Deep or abscess	TB culture	Anaerobic transport container (SPD#0015704) Or Sterile specimen container (SPD#7031972)	Tissue or fluid should be sent if possible. A separate aerobic swab should be taken for this test. Swabs are not optimal.	Specimen stability: 48 hours (room temperature).	B	8 weeks
		Viral Testing	Viral transport swab (available by contacting Lab Specimen Receiving area)	Specify virus. Tissue or fluid should be sent if possible.	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days

Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Wounds *continued*	Superficial/surface pustules, boils, carbuncles, IV or incision sites	Surface wound culture	Culture swab (SPD#7031912)	Specimens should always be taken from active sites of infection and collected to ensure that normal body flora is bypassed.	• Optimal: Within 24 hours (room temperature). • Specimen stability: 48 hours.	A	48-72 hours
		TB culture	Culture swab (SPD#7031912)	A separate swab must be taken for this test. Swabs are suboptimal for TB culture	Specimen stability: 48 hours (room temperature)	B	8 weeks
		Viral Testing	Viral transport swab (available by contacting Lab Specimen Receiving area)	Specify virus. Specimens should always be taken from active sites of infection (i.e., vesicles, lesions)	• Optimal: Deliver to Laboratory immediately. • Room temperature: 2 hours (should be transported on ice for best stability) or 24 hours refrigerated (longer if frozen at -20°C or below).	D	7 days
SEROLOGY							
Blood	Serum	ASOT	Gold top tube BD#367986		Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated.	D	10 days
	Serum	Rubella IgG Syphilis HIV Ag/Ab Anti-HCV Anti-HBs HbsAg Total HB Core Ab	Gold top tube BD#367986		Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B	24-48 hours

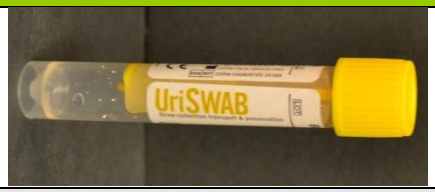
Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* *Specimens must be processed by Micro within the stability limits	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Blood *continued*	Serum	CMV IgG CMV IgM Toxo IgG Toxo IgM HB core IgM HAV-IgM HAV-IgG	Gold top tube BD#367986		Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	C	1 week
		Galactomannan	Gold top tube BD#367986	Restricted order (5AS, Oncology, and Lab only) Treatment with piperacillin/ tazobactam can affect test results	Send to Microbiology lab immediately	C (Tue & Thu)	3-4 days
		Prenatal Panel (includes HbsAg, HIV Ag/Ab, Rubella IgG, Syphilis)	1 Gold top tubes BD#367986	For prenatal infectious disease screening	Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B	24-48 hours
		Bloodborne Pathogen Panel (includes HbsAg, HIV Ag/Ab, Anti-HCV, Syphilis)	1 Gold top tubes BD#367986	For infectious disease screening for hepatitis B and C, HIV, and syphilis)	Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B	24-48 hours
Blood	Serum	**Needlestick EXP** (needlestick exposed) – includes HbsAg, HBs antibody, Total HB core antibodies, Anti-HCV, HIV Ag/AB; ALT (Chemistry)	2 Gold top tubes BD#367986	Ordered on the exposed person/employee unless the exposure, risk assessment indicates post-exposure prophylaxis, which would require Needlestick PEP.	Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B STAT (when requested)	24-48 hours Same day

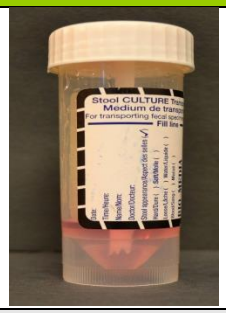
Specimen Source	Specimen Description	Test Requested	Container	Collection/ Special Instructions	Specimen Transport/Stability* **Specimens must be processed by Micro within the stability limits*	Testing Schedule: A: Mon-Sun B: Mon-Fri C: Batched D: Referred out	Average Turnaround Time for Results
Blood *Continued*	Serum	**Needlestick PEP** (Needlestick post-exposure prophylaxis) – includes HbsAg, HBs antibody, Total HB core antibodies, Anti-HCV, HIV Ag/AB; ALT, ALK phos, Creatinine, Total Bilirubin (Chemistry); and CBC (Hematology)	2 Gold top tubes BD#367986	Ordered by Emergency or other medical staff due to the need for medical treatment/follow up (i.e., post-exposure prophylaxis)	Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B	24-48 hours
		Needlestick SC (needlestick source) includes HbsAg, Anti-HCV, HIV Ag/Ab	1 Gold top tubes BD#367986	Ordered on the source patient	Optimal: Deliver within 24 hours, room temperature or refrigerated If >24 hours, specimens must be centrifuged, aliquoted and refrigerated	B	24-48 hours
	Blood (collected in special collection tubes)	QuantiFeron TB Interferon Gamma Release Assay (**IGRA**) – for latent TB	Special collection kit of 4 color coded tubes. Collection kit must be obtained from Microbiology laboratory directly.	See specimen collection instruction sheet – section 11 Specimen Collection Guide (next section).	Samples in special collection tubes (grey, green, yellow, and purple) must be received in Microbiology lab within 16 hours of collection (22°C +/- 5°C) or incubated at 37°C for 16-24 hours, spun, and plasma separated prior to sending **See collection instructions for information for referring laboratories referring these samples to SJRH Microbiology lab for testing.**	C	2 weeks

MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Superficial Wound	Aerobic Culture	
	Deep Wounds	Anaerobic Culture	This includes aerobic culture
	Ear Swab	Aerobic Culture	
	Eye Swab	Aerobic Culture	
	Cervical	GC Culture	
	Urethral/Urethral discharge	GC Culture	
	Penile swabs	Aerobic Culture	
	Perineal Swabs	Aerobic Culture (Yeast ONLY)	
	Vaginal	Vaginal Culture (Nugent Score) Trichomonas exam	
	Vaginal/Anal	GBS Culture	
	Vulva or Labia	Aerobic Culture (Yeast ONLY)	
	Various Sites	MRSA Screen	
	Nose/Nares Swab	Aerobic Culture MRSA Screen	
	Rectal Swab	GC Culture MRSA Screen VRE Screen	
	Throat	Throat Culture	
Culture Swab w/ Media SPD #7031912			
	Abscesses	Anaerobic Culture	This includes aerobic culture
	Body Fluids	Anaerobic Culture	Not optimal specimen This includes aerobic culture
	Bone/Tissue donor	Sterility Culture	
Anaerobic Culture Swab SPD # 7031406			

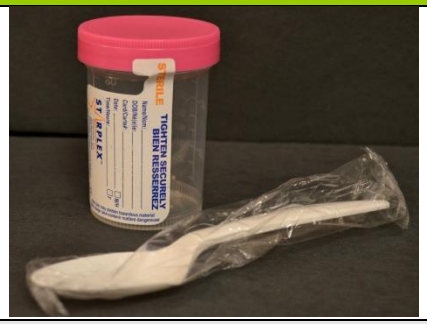
MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Body fluids (i.e., Joint fluids)	Anaerobic Culture	Collected aseptically using needle aspiration This includes aerobic culture
	Aspirates/Abscesses	Anaerobic Culture	Collected aseptically using needle aspiration This includes aerobic culture
Anaerobic Transport Medium SPD # 0015704			
	Bone/Tissue donor	Sterility Culture	
	Bladder Urine	Urine Culture	**KEEP REFRIGERATED**
	Corneal donor (rims)	Sterility Culture	
	Sterile body fluids / Tissues Dialysis fluid	Fungal Culture TB Culture Viral Testing Direct Smear	
	Urine	Chlamydia/Gonorrhea DNA Screen Urine Culture Ova and Parasite Exam TB Culture	**KEEP REFRIGERATED**
	Sputum Bronchial Washings Endotracheal Suction	Sputum Culture TB Culture Actinomyces/Nocardia/Legionella Fungus Culture Pneumocystis carinii Exam Virus Testing	Specify Virus Requested
	Stools	Clostridium difficile TB culture Viral Testing VRE Screen	Specify Virus Requested
	Worms/Arthropod	Worm/Arthropod for ID	Surveillance Form required for Tick Identification
	Hair/Skin/Nails	Fungus Culture	
	Prosthetic Device	Culture	
Plain Sterile 90mL Specimen Container			

SPD # 7031972			

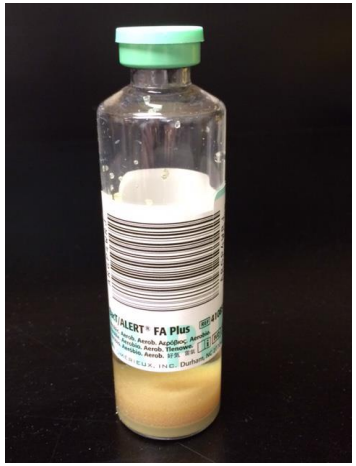
SPECIMEN COLLECTION DEVICE	SPECIMEN	TEST	COMMENTS
	Urine	Urine Culture	**TRANSPORT DEVICE ONLY** Inoculate immediately upon collection of urine sample. Can be stored/ transported at room temperature.
UriSwab SPD# 0007647			
	Endocervical Vaginal Rectal, Eye, Throat, Urethra	Chlamydia/Gonorrhea DNA Screening	**Use small, flocked swab for specimen collection.** The preferred specimen for males is urine.
Chlamydia/GC Molecular Swab SPD # 7023907			
	Covid-19 specimens: Nasopharyngeal swab Throat/nasal swab	Covid-19	Specify reason for testing/symptoms Rapid testing available upon special authorization on request
	Throat Nasopharyngeal Swab Nares Superficial wounds Rashes/blisters/pustules etc.	Viral Testing	Specify Virus Requested (Respiratory specimens will be screened routinely for Influenza and RSV) Small swab is used for NP swab specimen collecting
	Nasopharyngeal Swab (Copan UTM only)	Bordetella pertussis PCR	Please see collection instructions. Must have separate swab for this test. Small swab is used for NP swab specimen collecting
	Eye, Throat, Rectal Cervical, Vaginal, Urethral Cervical, Vaginal	Chlamydia Culture Mycoplasma/Ureaplasma	Used for Sexual assault cases <u>Mycoplasma/Ureaplasma</u> require case history-submit to the laboratory on manual Microbiology requisition

Viral (UTM) Swab (Request from Lab Receiving)			
MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Stool	Stool Culture	CONTAINER MAY HAVE DIFFERENT COLOURED TOP. CONTAINS CAREY BLAIR TRANSPORT MEDIA (PINK LIQUID)
Stool Culture Container-Cary Blair Media SPD # 7031915			
	Stool	Ova and Parasite Exam	CONTAINER MAY HAVE DIFFERENT COLOURED TOP. CONTAINS SAF FIXATIVE (CLEAR LIQUID)
Ova & Parasite Stool Container- SAF Fixative SPD # 0014972			
	Perianal skin	Pinworm Paddle	For diagnosis and identification

Pinworm Paddle Container SPD# 7031911			

MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Stool	Clostridium difficile toxin H. pylori stool antigen TB culture Viral Testing VRE Screen	
Fecal Collection Kit SPD# 0017293 **OR** Plain Sterile 90mL Specimen Container SPD# 7031972			
	Endotracheal suction	Sputum Culture Bronchial Culture Actinomyces Culture Legionella Culture Nocardia Culture Fungus Culture TB culture Pneumocystis Viral Testing	
Note: Please ensure cover is on properly and suction tube is pushed on suction tip completely. **Taping suction container does not prevent leakage.** Transport in upright position in a plastic zip lock bag.	Nasopharyngeal aspirate	Viral Testing Bordetella pertussis PCR	Specify Virus Requested (Viral testing includes Influenza and RSV) **NOTE: NP swab is preferred specimen**
	Duodenal Aspirate	Duodenal Fluid Culture Ova and Parasite Exam	
Suction Specimen Container SPD# 6069390			

MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Spinal Fluid (CSF)	CSF Culture Viral Testing Fungus Culture CSF Cryptococcus Latex TB Culture CSF Syphilis VDRL CSF CJD Testing **(special precautions apply)**	**Must be delivered to the laboratory immediately**
Lumbar Puncture Tray SPD# 0003964			

MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
SPECIMEN COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Blood	Blood Culture Routine Blood Culture Endocarditis (Set of Aerobic and Anaerobic vials)	Collected as a set on adults and children >36 kg Should collect 2 sets routinely from different sites Rapidly growing fungus and yeast will be detected
	Valve Rinses	Valve Rinse Culture (Set of Aerobic and Anaerobic vials)	Collected as a set
	Dialysis Fluids	Dialysis Fluid Culture (Set of Aerobic and Anaerobic vials)	Collected as a set
Note: Direct Smears (Gram) are not performed. Smears are only performed on instrument flagged positive vials.	Sterility cultures – Pharmacy, Transfusion Medicine, Nuclear Medicine	Environment Culture – Select location	BacT/Alert Aerobic vial only
BacT/Alert Aerobic Blood Culture Vial SPD#7013912			
	Blood	Blood Culture Routine Blood Culture Endocarditis (Set of Aerobic and Anaerobic vials)	Collected as a set on adults and children >36 kg Should collect 2 sets routinely from different sites
	Valve Rinses	Valve Rinse Culture (Set of Aerobic and Anaerobic vials)	Collected as a set
	Dialysis Fluid	Dialysis Fluid Culture (Set of Aerobic and Anaerobic vials)	Collected as a set
Note: Direct Smears (Gram) are not performed. Smears are only performed on instrument flagged positive vials.			
BacT/Alert Anaerobic Blood Culture Vial SPD# 0018284			

MICROBIOLOGY SPECIMEN COLLECTION CONTAINER GUIDE			
COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
 **Note:** Direct Smears (Gram) are not performed. Smears are only performed on instrument flagged positive vials.	Blood	Blood Culture Pediatric	For pediatric patients <36 kg and reduced specimen volume draws (Specimen requirements: Up up to 4 ml)
BacT/Alert Pediatric Blood Culture Vial SPD# 7013914			
 **Note:** Direct Smears (Gram) are not performed. Smears are only performed on instrument flagged positive vials.	Blood	TB Blood Culture Fungus Blood Culture	**Mycobacteria** **For Dimorphic Fungus (Systemic Fungus) only**
TB Blood Culture Vial (Request from Microbiology Department 648-7178)			

CHEMISTRY SPECIMEN COLLECTION CONTAINER GUIDE			
COLLECTION DEVICE	**SPECIMEN**	**TEST**	**COMMENTS**
	Feces	Occult Blood	Keep at room temperature

Red Blood Cells, Plasma, Platelets, Cryoprecipitate
ABO and Rh Compatibility Chart

Red Blood Cells: **ABO** selection order of compatible donor products

Recipient's ABO Group	1st Choice ABO Specific	2nd Choice ABO Compatible	3rd Choice ABO Compatible	4th Choice ABO Compatible
O	O	NONE	NONE	NONE
A	A	O	NONE	NONE
B	B	O	NONE	NONE
AB	AB	A	B	O

Red Blood Cells: **Rh** selection order of compatible donor products

1. Rh **Positive** recipients: Either Rh Positive or Rh-Negative red blood cells may be used
2. Rh **Negative** recipients: **ABO & Rh** selection order of compatible donor products

Recipient's ABO & Rh	1st Choice **ABO & Rh Specific**	2nd Choice **Rh Negative, ABO Compatible**	Last Choice **Rh Positive, ABO Compatible**
O Negative	O Negative	NONE	O Positive
A Negative	A Negative	O Negative	A Positive O Positive
B Negative	B Negative	O Negative	B Positive O Positive
AB Negative	AB Negative	A Negative B Negative O Negative	AB Positive A Positive B Positive O Positive

Plasma: **ABO** selection order of compatible plasma

Recipient's ABO Group	1st Choice ABO Specific	2nd Choice ABO Compatible	3rd Choice ABO Compatible	4th Choice ABO Compatible
O	O	A	B	AB
A	A	AB	NONE	NONE
B	B	AB	NONE	NONE
AB	AB	NONE	NONE	NONE

Platelets: **ABO** selection order of compatible platelets

Recipient's ABO Group	1st Choice (ABO Specific)	2nd Choice	3rd Choice	4th Choice
O	O	A	B	AB
A	A	AB	(B)*	(O)*
B	B	AB	(A)*	(O)*
AB	AB	(A)*	(B)*	(O)*

* Blood groups in (parentheses) represent choices with incompatible plasma, listed in "least compatible" order

Platelets: **Rh** selection order of compatible platelets

1. Rh **Positive** recipients: Either Rh Positive or Rh-Negative platelets may be used
2. Rh **Negative** recipients: Rh Negative platelets should be used, especially in males <18 years and women <50 years. In emergency situations and/or inventory availability, Rh Positive platelets may be substituted. In these cases, prophylactic Rh Immune Globulin must be ordered by the physician and given within 72 hrs.

Cryoprecipitate:

ABO compatible is preferred, but due to the very small volume of plasma in each unit (11+/- 3 mL), routinely any ABO Group may be used.

Prothrombin Complex Concentrate (PCC)
Dosing, Administration and Monitoring

Dosing

For adult patients: INR based dosing

The National Advisory Committee on Blood and Blood Products (NAC) (2022) recommendation based the dosing of Prothrombin Complex Concentrate (PCC) as per the table below. If the INR is unknown and major bleeding is present, 80 mL should be administered.

	INR < 3.0	INR 3.0-5.0	INR > 5.0
Dose of Prothrombin Complex Concentrate (PCC)	1000 IU (40 mL)	2000 IU (80 mL)	3000 IU (120 mL)

Administration

- Must be administered intravenously.
- May be administered by direct IV push, syringe pump or minibag.

The manufacturer's recommended maximal rates of infusion are:

- Octaplex = 3mL/min
- Beriplex = 8 mL/min

Vitamin K:

Vitamin K1 (10 mg IV) co-administration is strongly recommended if a reversal is required for longer than 6 hours (the half-life of PCC). The onset of action of Vitamin K1 is 4-6 h IV.

Monitoring

Post dose monitoring:

- INR values – Since dose effect is not universally applicable, efficacy of dosing must be determined using the surrogate marker of an ***INR – 10-30 minutes post PCC administration***. If correction to an INR <1.5 has not been achieved and there is insufficient time to wait for Vitamin K to take effect, a subsequent dose of PCC may be required if the patient continues to demonstrate clinical bleeding.
- Clinical outcome – including evaluation of mortality and thrombotic events, at 24 hours and 30 days post dose.

Reference: National Advisory Committee on Blood and Blood Products, Recommendations for Use of Prothrombin Complex Concentrates in Canada, May 16, 2011. Retrieved from:

http://www.nacblood.ca/

Indications for Ordering Cytomegalovirus (CMV) Negative And /or Irradiated Blood Products

At the direction of Canadian Blood Services (CBS, 2017), Transfusion Medicine will only provide CMV Negative products for intrauterine transfusions.

Irradiated products

Products which may be irradiated include RBC and platelets.

Prolonged storage of irradiated red blood cell (RBC) units is associated with high potassium levels, in vitro hemolysis and decreased post-transfusion recovery. The system cost of providing irradiated RBCs includes higher production costs, time delays and damage to transfused RBCs. Irradiated RBCs should be limited to patients having specific clinical indications for irradiated products, thereby minimizing exposure of the general patient population to irradiated RBCs.

Irradiated RBCs are not indicated and therefore will not be routinely provided for the following conditions:

- Routine surgery
- Solid tumors
- Acquired immunodeficiency
- Autoimmune disorders
- Organ transplantation (unless alemtuzumab (anti-CD52) has been used in the conditioning regimen)

Irradiated blood products will be provided for:

- Acute leukemia
- Non-Hodgkins Lymphoma
- Bone marrow/stem cell transplant (Autologous and Allogenic)
- Neonatal exchange transfusions, neonatal small volume transfusions
  NOTE: ***Not all of the above patient groups require irradiated blood products at all times during treatment. Please refer to NAC Recommendations (2017) when ordering irradiated blood products***
- Hodgkin Lymphoma
- Patients on potent immunosuppressive drugs (Fludarbine, Cladribine, Deoxycoformycin, Clofarabine, Bendamustine)
- Directed donations from first- and second-degree relatives
- HLA matched platelets

Orders for irradiated RBC that fall outside the NAC recommendations will be assessed by a Transfusion Medicine physician on a case-by-case basis**.**

References:

- American Association of Blood Bank, Technical Manual 17th Edition, 2011
- CBS Customer Letter #2017-36
- NAC Recommendations for use of Irradiated blood components in Canada, 2017
- Memo May 16-18 from Dr Rajappannair to all SJA physicians and nurse managers: Irradiated Red Blood Cells

This document applies to	☒ All Horizon	☐ Saint John Area	☐ Fredericton and Upper River Valley Area
	☐ Moncton Area	☐ Miramichi Area	

Horizon Health Network
Regional Laboratory Manual

TRANSFUSION REACTIONS – SIGNS / SYMPTOMS / TREATMENT / INVESTIGATION

POLICY:

For all Transfusion Reactions

1. **Stop the transfusion**
2. Maintain IV access with 0.9 % Sodium Chloride (NaCl)
3. Perform Clerical Check
4. Assess vital signs every 15 minutes until stable
5. Contact health care provider. Decision to restart the transfusion will be made by the Health Care Provider.
6. Notify Transfusion Medicine Laboratory

PROCEDURE:

- When the Health Care Provider orders a transfusion reaction investigation, follow the steps below:
  1) Collect pink/lavender tube(s) of blood from the patient (taken from a site other than the infusion site).
  2) Collect first post-transfusion urine specimen for urinalysis.
  3) Consider chest x-ray if the patient is showing respiratory symptoms
  4) Complete a Transfusion Reaction form
  5) Immediately send blood specimens and the unused portion of the blood product with the administration set attached (appropriately bagged) to Transfusion Medicine Laboratory.
  6) Monitor the patient's vital signs every 15 minutes (TPR and BP) until stable.
  7) See Transfusion Reaction Chart on the next page

DIRECTLY AFFECTED:

- All staff who administer and/or assist and/or monitor patients receiving a blood product transfusion

RELATED DOCUMENTS

- HHN-CL-NU022 Administration of Blood Products

REFERENCE(S)

- Newfoundland and Labrador Blood Coordinating Program: Tables NL2012-036-TMP and NL-2012-036 (Version 2.0 effective 2014-12-12)
- Canadian Blood Services: Clinical guide to transfusion (Online edition) Chapter 10 Adverse Reactions, updated May 2011

TRANSFUSION REACTION CHART

Signs and Symptoms		May occur:	Actions & Suggested Treatment / Investigations	Possible Reaction
Fever and/or **Chills/ Rigors**	Temperature >38°C, <39°C and 1°C above baseline	during or up to 4 hrs. post-transfusion	1. Consider acetaminophen 2. Continue transfusion with caution	Febrile Non-Hemolytic Transfusion Reaction (FNHTR)
	Temperature >38.5°C with chills, rigors, shock hypotension, nausea, vomiting, tachycardia, bleeding, pain	during or up to 4 hrs. post-transfusion	1. **DO NOT** restart transfusion 2. Do blood cultures on recipient 3. TM will order blood cultures on product 4. Treat shock, DIC, renal failure 5. Consider use of broad-spectrum antibiotics	Bacterial Contamination
	Temperature >39°C, chills, rigors, hypotension, nausea/vomiting, headache, pain, tachycardia, hemoglobinuria	early in transfusion up to 24 hrs. post-transfusion	1. **DO NOT** restart transfusion 2. Serologic testing to investigate incompatibility 3. DAT, LDH, BUN, Creatinine 4. IV fluids	Acute Hemolytic Transfusion Reaction (AHTR)
Urticaria (hives) and/or **Itching** and/or **Rash**	<2/3 of body affected and no other symptoms	within 2-3 hrs. of initiating transfusion	1. Consider diphenhydramine IV / PO 2. Restart transfusion with caution if not more than 4 hours since begun 3. After 2 episodes, consider premedication with antihistamine	Minor Allergic
	>2/3 of body, + dyspnea, hypotension, ↓SPO_2, hoarseness, nausea/vomiting	within 45 min. of initiating transfusion	1. **DO NOT** restart transfusion 2. Consider diphenhydramine IV / PO 3. Provide supportive care, oxygen	Severe Allergic/ Anaphylactoid
	as above **AND** profound hypotension, loss of consciousness	within 45 min. of initiating transfusion, often within first 5 min.	1. **DO NOT** restart transfusion 2. Consider epinephrine, fluid bolus, vasopressors for intractable hypotension; ventilator support	Anaphylactic
Dyspnea and/or **↓ Oxygen Saturation**	Dyspnea, orthopnea, cyanosis, hypoxemia, tachycardia, hypertension, pulmonary/ pedal edema, elevated JVP	within 1-2 hrs. of initiating transfusion up to 6 hrs. post-transfusion	1. **DO NOT** restart transfusion 2. Give oxygen, diuretics 3. Elevate head of bed 4. **Chest X-ray to rule out TRALI**	Transfusion Associated Circulatory Overload (TACO)
	Dyspnea, hypotension, fever/chills; +/- nausea /vomiting, DIC, hemoglobinuria, +/- pain	early in transfusion up to 24 hrs. post-transfusion	As above for Bacterial Contamination and Acute hemolytic (AHTR)	Acute Hemolytic Reaction (AHTR) or Bacterial Contamination
	Acute Respiratory distress, dyspnea, cyanosis, severe hypoxemia, severe bilateral pulmonary edema, bilateral infiltrates on chest X-ray, hypotension unresponsive to fluid bolus	within 1-2 hrs. of initiating transfusion up to 6 hrs. post-transfusion	1. **DO NOT** restart transfusion 2. Do chest X-ray 3. Consider oxygen, intubation and ventilation, vasopressors	Transfusion Associated Acute Lung Injury (TRALI)

HORIZON HEALTH NETWORK
ZONE 2
TRANSFUSION MEDICINE

CLINICAL REPORT OF A TRANSFUSION REACTION

SJRH ☐ **SJH** ☐ **CCH** ☐ **SHC** ☐ **GMH** ☐ **FHC** ☐

Patient's Name: _____

Patient's Hospital Registration Number: _____

Patient's Medicare Number: _____

Patient's Date of Birth: _____

Donor Unit Serial Number: _____

Clerical Check OK: Yes No (circle one)

Transfusion Started (Date and Time): _____

Transfusion Reaction (Date and Time): _____

Amount Infused (mL): _____

Pulse Rate Before: _____

Pulse Rate After: _____

Blood Pressure Before (mmHg): _____

Blood Pressure After (mmHg): _____

Temperature Before (ºC): _____

Maximum Temperature During/After (ºC): _____

Respiration Rate Before: _____

Respiration Rate After: _____

Symptoms (select at least one)			
Chills/Rigor	☐	**Hypoxemia** • provide O_2 sat: _____	☐
Diffuse hemorrhage	☐		
Hemoglobinurea	☐	**Pain** • specify: _____	☐
Jaundice	☐		
Nausea/Vomiting	☐	**TRALI: chest x-ray** • results of bilateral filtrate yes ☐ no ☐	☐
Oliguria	☐		
Shock	☐	**TRALI: evidence of circulatory overload** yes ☐ no ☐	☐
Shortness of breath	☐		
Urticaria	☐	**TRALI: explain circulatory overload** _____	☐
Other skin rash	☐	**Other symptoms** • specify: _____	☐

Signature: _____ Date: _____

SEE INSTRUCTIONS BELOW

INSTRUCTIONS

1. Stop the transfusion immediately
2. Keep the intravenous line open with saline.
3. Perform a clerical check.
4. Notify the attending physician.
5. Record patient's vital signs.
6. Draw the patient samples from the opposite arm.
7. Fill out a Transfusion Medicine manual request form and order a "Transfusion Reaction Investigation". Collect and label two 6 mL EDTA (lavender) samples immediately following the transfusion reaction.
8. Send blood product unit involved in the transfusion reaction to Transfusion Medicine. Attached tubing should be removed and replaced with a sampling site coupler.
9. Fill out a Chemistry manual request form and order a "Total Bilirubin-Transfusion Reaction Investigation". Collect the sample immediately following the transfusion reaction.
10. Fill out a Chemistry manual request form and order hemoglobin on a random urine sample. Collect the urine sample immediately following the transfusion reaction.

Out-Of-Hospital Transfusion

Out-of-hospital transfusion refers to transfusion occurring in the patient's own home, care homes or other areas where blood products are administered that are not covered by hospital protocols. This policy applies to the transfusion of red blood cells (RBC) only.
A clinical assessment of the appropriateness of the patient for out-of-hospital transfusion should be conducted by the physician. This should include an assessment of the patient's transfusion history, current medical status, and current indication for out-of-hospital transfusion and physical safety for the patient and physician/nurse in the out-of-hospital environment.
The patient must have a history of previous transfusions with no adverse reactions noted.

Exclusion Criteria

If there is a history of clinically significant antibodies, the antibody specificities should be clearly identified. There should be no unresolved serological findings and the RBC should be compatible. If there are unresolved serological findings and the RBC are incompatible, out-of-hospital transfusion cannot take place.
If there is a history of adverse reactions, the patient does not meet the criteria for out-of-hospital transfusion.

DIRECTLY AFFECTED

Defining Roles and Responsibilities

The physician referring the patient for out-of-hospital transfusion is responsible for the following processes pertaining to Transfusion Medicine:

1. Obtaining a patient consent form signed by the patient or substitute decision maker.
2. The physician must be immediately available on the day of the transfusion or must arrange to have an alternate physician available.
3. The physician must include the following information for the out-of-hospital transfusion:
    a. Quantity of RBC to be administered
    b. Rate of transfusion
    c. Duration of transfusion
    d. Special requirements, if applicable (i.e., irradiated)

The nurse(s) administering the out-of-hospital transfusion is responsible for the following processes pertaining to Transfusion Medicine:

1. Communicating with Transfusion Medicine about the out-of-hospital transfusion and the expected date and time of transfusion
2. Verification that the consent form is completed and signed
3. Collection of the pre-transfusion specimen and the physician request documented on a manual request order form (clearly identifying out-of-hospital transfusion)
4. Check that the physician's medical orders are complete and include:
    a. Quantity of RBC to be transfused
    b. Special requirements (if applicable)
    c. Date and time of transfusion
    d. Pre and post laboratory tests to be performed
    e. Rate of transfusion
    f. Duration of transfusion

5. Delivery of the order form and the specimen to Transfusion Medicine.
6. Arrange for pickup of the RBC unit(s) from Transfusion Medicine.
7. Perform a visual inspection of the RBC unit(s).
8. Appropriate verification and documentation of the RBC(s) upon receipt and at the patient's bedside as per HHN-CL-NU022 Administration of Blood Products.
9. Dispose of empty blood bags, tube, sharps etc. as per policy.
10. Return the empty shipping container to Transfusion Medicine with a completed copy of the dispense sheet for acknowledgement of transfusion purposes.

The Transfusion Medicine laboratory is responsible for the following:

1. Processing of the pre-transfusion manual request form and specimen as requested.
2. Alert the physician and nurse of any concerns.
3. Dispense the RBC unit(s) as per laboratory policy.
4. Pack and ship the RBC unit(s) as per laboratory policy.
5. Ensure that the physician and nurse are notified in the event of an immediate quarantine and/or recall of the RBC unit(s) which have been dispensed for the patient during time of out-of-hospital transfusion.
6. Upon receiving the completed dispense form for the out-of-hospital transfusion, document final disposition as per laboratory policy.

NOTES:

1. If the patient refuses the transfusion after the RBC unit(s) are in the presence of the patient, Transfusion Medicine must be immediately notified, and the RBC unit(s) must be immediately shipped back to Transfusion Medicine. The RBC unit(s) will be accepted back into inventory according to laboratory policy.
2. If any discrepancy exists, when verifying that the information on the RBC unit(s) matches the dispense form, the issue tag and the patient's armband, **DO NOT TRANSFUSE.** Notify Transfusion Medicine and immediately send the RBC unit(s) back to Transfusion Medicine.
3. If the visual inspection of the RBC unit(s) fails, **DO NOT TRANSFUSE**. Notify Transfusion Medicine and immediately send the RBC unit(s) back to Transfusion Medicine.

RELATED DOCUMENTS

1. HHN-CL-NU022 Administration of Blood Products
2. EM/ ANB SharePoint site- II-M-020e Administration of Blood Products

REFERENCE(S)

1. Nova Scotia Provincial Blood Coordinating Program, Guidelines for Home Transfusion Version 2.0, May 2014

Turn-Around-Times for Blood Products Ordered from Transfusion Medicine

Blood Product	Emergency Release	Routine	Stat	
			No Currently Tested Specimen Available	Currently Tested Specimen Available
Red Blood Cells	Uncrossmatched Group O = ≤10 minutes ***Exception is < 30 minutes for St. Joseph's Hospital***	< 4 hours Crossmatched, Antibody Detection Negative	< 1 hour Crossmatched, Antibody Detection Negative	< 15 minutes Crossmatched, Antibody Detection Negative
Plasma	Group AB Plasma ≤ 30 minutes	45 minutes	≤ 30 minutes	
Platelets	Any Group ≤10 minutes	30 minutes	≤ 15 minutes	
Cryoprecipitate	Any Group ≤45 minutes	NA	≤ 45 minutes	
Plasma Protein Products	Depending on Availability ≤10 minutes	Depending on Availability ≤ 1 hour	Depending on Availability ≤ 20 minutes	

Plasma Protein Products: Albumin (25% and 5%), Coagulation Factor Concentrates, Immune Globulins

All requests for emergency release or stat testing must be telephoned immediately to Transfusion Medicine. Delays in turn-around-times are communicated to the patient's attending physician/delegate.

Limitations

1. Turn-around-times are based on the receipt of properly labeled specimens and specimens which are not grossly hemolysed.

2. Turn-around-times for specimen collected to specimen received has not been established. Specimen is rejected if mislabelled, not labeled or grossly hemolysed.

3. Platelets and some plasma protein products, such as *Coagulation Factor Concentrates* are not routinely stored at Charlotte County Hospital and Sussex Health Centre. Check with these facilities before ordering.

4. Cryoprecipitate is not available at Charlotte County Hospital and Sussex Health Centre.

Limitations Cont'd.

5. Turn-around-times for stat and routine orders may be extended due to the following circumstances:

    - Product not available; need to order from Canadian Blood Services, for example, IgA deficient red blood cells or HLA-matched platelets
    - Patient has a positive antibody detection or a positive direct antiglobulin test and further investigation is required
    - Prenatal patient requires an antibody investigation and antibody titre.

Request Form for Intravenous Immune Globulin (Adult) can be found at the following link:

Skyline/ Tools and Resources /Patient Care /Blood Products Administration/ IVIG:

Request form for Intravenous Immune Globulin (Adult)

IVIG Dosage Calculator
http://novascotia.ca/dhw/nspbcp/IVIG-calculator.asp

For additional information, go to Skyline/ Tools and Resources/ Patient Care/ Blood Products Administration

Request for Intravenous Immune Globulin (Pediatric)

Patient: _____ Hospital Registration #: _____

Weight: _____ kg Allergies: _____

- The following orders may be used in any patient care area and will be carried out by a qualified health professional only on the authority of a physician.
- All blanks must be completed as appropriate. Use the table below to check off the indication and criteria for the use of IVIG. **Missing Information will result in delays.**
- Transfusion Medicine **may require a consultation** with a specialist prior to issuing product.

ORDERS (see reverse for recommended doses):

Infuse _____ g/kg for a total dose of ____ g of IVIG x _____days

Starting on _____ (mmddyy). Then repeat this

Regimen q _____ days for a total of _____ treatments.

IgA deficient product required? ☐ Yes ☐ No

ABO, Rh, Antibody Detection Ordered ☐

	Indication	Criteria-Please Complete Checkboxes	Indication	Criteria-Please Complete Checkboxes
RHEUMATOLOGY	□ **Juvenile Idiopathic Arthritis**	Must meet both of the following 2 criteria: ☐ patient is resistant to other forms of therapy ☐ patient is cared for in consultation with a pediatric rheumatologist **Rheumatologist name:** _____	□ **Juvenile Dermatomyositis**	Must meet both of the following 2 criteria: ☐ glucocorticoids & other 2nd-line agents contraindicated OR IVIG is part of early therapy in a critically ill child ☐ patient is cared for in consultation with a pediatric rheumatologist **Rheumatologist name:** _____
	□ **Kawasaki Disease**	No criteria need to be met other than a diagnosis of Kawasaki disease.	□ **Systemic Lupus Erythematosis**	Must meet the following criterion: ☐ patient is cared for in consultation with a pediatric rheumatologist or hematologist **Specialist name:** _____
HEMATOLOGY	□ **Idiopathic Thrombocytopenic Purpura (ITP)**	Must meet the diagnosis AND 1 of the subsequent 2 criteria: ☐ platelets less than 50 x 10^9/L AND either the presence of major bleeding or surgery required ☐ platelets less than 20 x 10^9/L AND treatment clinically indicated	□ **Fetal Alloimmune Thrombocyto-penia**	Must meet both of the following 2 criteria: ☐ Mother had a previously affected pregnancy OR has a family history of F/NAIT OR has been found to have platelet alloantibodies ☐ treatment is under the direction of a high-risk obstetrical centre **Specialist name:** _____
	□ **Neonates of Mothers with ITP**	Must meet 1 of the following 2 criteria: ☐ platelets less than 50 x 10^9/L ☐ imaging evidence of intracranial hemorrhage or other serious bleeding	□ **Neonatal Alloimmune Thrombocytopenia**	Must meet the diagnosis and all the following criteria: ☐ platelet count less than 50 x 10^9/L ☐ treatment includes consultation with or is within a high-risk neonatal centre **Specialist name:** _____
	□ **Hematological Malignancy**	Must meet the 1st criterion and 1 of the subsequent 2 criteria: ☐ acquired hypogammaglobulinemia ☐ history of severe invasive or recurrent sinopulmonary infections ☐ patient is registered on a multinational protocol which requires IVIG support	□ **Hemolytic Disease of the Newborn**	Must meet the following criterion: ☐ total serum bilirubin (TSB) rising despite intensive phototherapy
NEUROLOGY	□ **Guillain-Barre Syndrome: Acute**	Must meet both of the following 2 criteria: ☐ MG being given within 4 wks. of symptom onset ☐ Hughes Disability Score is 3 or more OR score is 2 or less & symptoms are progressing	□ **Guillain-Barre Syndrome: Relapses**	Must meet both of the following 2 criteria: ☐ relapse is within 8 wks. of the initial symptom onset ☐ the patient has previously responded to IVIG
	□ **Acute Disseminated Encephalomyelitis**	Must meet 1 of the following 2 criteria: ☐ patient has failed to respond, or has contraindications to, corticosteroids ☐ trying to eliminate steroid dependency	□ **Other Autoimmune Encephalopathies**	Specify condition: _____ Must meet 1 of the following 2 criteria: ☐ patient has failed to respond, or has contraindications, to corticosteroids ☐ trying to eliminate steroid dependency
OTHER	□ **Primary Immune Deficiencies**	Specify condition: _____ must meet the following criterion: ☐ patient is cared for in consultation with a pediatric immunologist. Immunologist name: _____	□ **Secondary Immune Deficiency Conditions**	Specify condition: _____ must meet the following criterion: ☐ patient is cared for in consultation with a pediatric immunologist. Immunologist name: _____
	□ **Other**	Please provide name of indication:		

Physician's Signature: _____ Date (mmddyy): _____

Physician's Name: _____ CPSNS No.: _____

Original-Patient Chart **Fax Request** to Transfusion Medicine at: ☐ SJRH (7162) ☐ Sussex (3119) ☐ CCH (4471)

NSPBCP PPO IVIG Peds. Rev. 2009.05

Indication		Recommended Doses for Intravenous Immune Globulin (Paediatric)
RHEUMATOLOGY	**Kawasaki Disease (KD)**	**Dose:** 2 g/kg given once. About 10% of children fail to respond to initial IVIG therapy & may be treated a 2nd time with the same dose, at least 24 hrs. after the 1st dose. Failure to respond to a 2nd dose (provided the recurrence of symptoms & signs does not reflect a reaction to IVIG) should prompt reconsideration of the diagnosis & referral to a specialist with expertise in the management of KD. Specialist referral should also occur for KD in the very young infant, particularly in the presence of myocarditis, where IVIG treatment may compromise cardiac function & result in congestive heart failure.
	Juvenile Dermatomyo-sitis	**Dose:** 2 g/kg/day given every 2-4 wks. for a variable period of time, usually months to years.
	Juvenile Idiopathic Arthritis	**Dose:** 1–2 g/kg once every 2–4 wks. for a variable period, usually months to years, under the supervision of a pediatric rheumatologist
	Systemic Lupus Erythematosis	**Dose:** 1–2 g/kg, frequency and duration variable.
HEMATOLOGY	**Idiopathic Thrombocyto-penic Purpura (ITP)**	**Dose:** One dose of 0.8 to 1.0 g/kg, with a second dose given within 48 hours if the platelet count has not increased to above 20 x 10^9/L. For life-threatening bleeding, concomitant treatment with platelet transfusion is recommended.
	Neonates of Mothers with ITP	A **dose** of 1 g/kg daily for 2 days is recommended with the second 1 g/kg dose to be given only if platelets are less than 30 x 10^9/L or in the presence of clinically significant bleeding. In newborns *without* evidence of intracranial hemorrhage (ICH) or other serious bleeding, treatment with IVIG may be appropriate if platelets are less than 50 x 10^9/L. Newborns *with* imaging evidence of ICH or other serious bleeding should be treated with IVIG & platelet transfusion.
	Fetal Alloimmune Thrombocyto-penia (FAIT)	**Dose**: 1 g/kg every week. IVIG is recommended as the standard first-line antenatal treatment of FAIT.and that treatment be under the direction of a high-risk obstetrical center with specialized expertise in the treatment of FAIT.. Expert opinion suggests IVIG should be initiated around 20 wks. and no later than 30 wks.
	Neonatal Alloimmune Thrombocyto-penia (NAIT)	**Dose:** 1g/kg/dose/day x 2. **Monitoring:** platelet counts should rise within 24 to 48 hrs. after therapy & should be checked weekly. Follow up with a specialist should be done at 6–8 wks. The provision of antigen-negative compatible platelets should be considered first-line therapy for neonates with severe thrombocytopenia and/or bleeding. Antigen-negative platelets are the platelet product of choice; however, random donor platelets should be used if matched platelets are not immediately available. IVIG is used as **adjunctive therapy** & is effective in 75% of cases. The threshold platelet count for treatment of NAIT with platelet transfusions and IVIG is 30-50 x 10^9/L, which is derived from published studies, although data from randomized trials are lacking.
	Hemolytic Disease of the Newborn	**Dose:** 0.5g/kg, with repeat dosing q 12–24h as necessary IVIG is recommended, in addition to aggressive phototherapy, for the treatment of hyperbilirubinemia due to immune hemolytic disease of the newborn (ABO, Rh or other).
	Hematological Malignancy	**Dose:** one dose of 0.4–0.6 g/kg every 3–4 wks. for prophylaxis. Re-evaluation should be done every 4–6 months by a haematologist. A trough IgG level of greater than 5 g/L should be maintained, but it may be necessary to assess the effectiveness of IVIG primarily on clinical response.
NEUROLOGY	**Guillain-Barré Syndrome (GBS) (including Miller Fisher Syndrome and other variants)**	**Acute or for Relapses:** 1 g/kg x 2 days or 0.4 g/kg x 5 days Hughes Disability Scores: 0 Healthy 1 Minor symptoms or signs, able to run 2 Able to walk 5 m independently 3 Able to walk 5 m with a walker, stick, or one-person support 4 Bed- or chair-bound 5 Requiring assisted ventilation 6 Death
	Acute Disseminated Encephalo-myelitis	**Dose:** 1 g/kg daily x 2 days. IVIG is used in the same way for other autoimmune encephalopathies (Hashimoto encephalopathy, Landau-Kleffner syndrome, & primary CNS angiitis).
IMMUNOLOGY	**Primary Immune Deficiency (PID)**	**Replacement doses** are 0.6-0.7g/kg every 3-4 weeks to achieve a minimum trough level of 7g/L. An immunologist should be consulted for all pediatric patients with suspected immunodeficiency syndromes (including PID) prior to the administration of immunoglobulin. **Re-evaluation** should be done by an immunologist every 4-6 months.
	Secondary Immune Deficiency	**Replacement doses** are 0.6-0.7g/kg every 3-4 weeks to achieve a minimum trough level of 7g/L. An immunologist should be consulted for all patients with suspected immunodeficiency, including secondary immune deficiency. **Re-evaluation** should be done by an immunologist every 4-6 months.

Section 11: Specimen Collection Guide for Laboratory Testing – Containers and Instructions

Plasma/Serum should be separated within 2 hours of collection			
Lime Green Lithium Heparin Barricor Tube 4.5 and 5.5 ml: **ONE** full tube will do **any** combination of the following tests:			
Alpha-1-antitrypsin	Cholesterol, Total	HCG	Prolactin
AFP	CK	HDL Cholesterol	Protein, Total
Albumin	CO2 content	IGF-1	PSA, Free
ALP	Complement (C3, C4)	Insulin	PSA, Total
ALT	Cortisol	Immunoglobulin E	Rheumatoid Factor
AST	Creatinine	Immunoglobulin Quant (IgA, IgG, IgM)	Testosterone
Beta 2 Microglobulin	CRP	Iron/TIBC/UIBC	Transferrin
Beta-hydroxybutyrate	DHEA-S	LDH	Triglycerides
Bilirubin, Direct	Electrolytes (Na, K, Cl)	LH	Troponin T
Bilirubin, Total	Estradiol	Lipase	TSH
CA 125	Ferritin	Magnesium	Free T3
CA 15.3	Folate	Myoglobin (blood)	Free T4
Calcium	FSH	NT-ProBNP	Urate
CEA	Glucose	Phosphate	Urea
Ceruloplasmin	Growth Hormone	Prealbumin	Vitamin B12
	Haptoglobin	Progesterone	Vitamin D

Gold top 5 ml: **ONE** full tube for **any** combination of the following tests:
Lithium
Osmolality

Gold top 5 ml: **ONE** full tube for **EACH** of the following tests:
Free light chains (kappa and lambda)
Protein Electrophoresis
ANCA
GBM
tTG
Celiac Diagnostic Panel
MSS

ONE Plain Red (6 ml) for any combination of tests in Column 1	**ONE Plain Red (6 ml)** for any combination of tests in Column 2	**ONE Plain Red (6 ml)** for **EACH** test in Column 3	**ONE Plain Red (4 ml)** for **the** test in Column 4	**ONE Plain Red (10 ml)** for the test in Column 5
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**
Acetaminophen	Toxic Screen (includes Acetaminophen, Ethanol, Salicylates, Osmolality)	ANA	Mono test	Cord Blood (ABO, Rh, DAT)
Carbamazepine		ENA		
Digoxin		C1 Esterase Inhibitor		
Gentamicin		Cytoplasmic Ab.		
Phenobarbital		Methotrexate		
Phenytoin				
Salicylates				
Theophylline				
Tobramycin				
Valproic Acid				
Vancomycin				

Revision Date: September 28, 2022

Gray top: Collect **ONE** tube for the following test:
Glucose (can be collected on Barricor tube if able to deliver specimen to the lab within 2 hours of collection)
Lactate (send to lab immediately on ice)

Lavender top (EDTA): **ONE 6 ml** tube for **EACH** of the following tests in Column 1	**Lavender** top (EDTA): **Two 6 ml** tubes for **EACH** of the following tests in Column 2
Column 1	**Column 2**
ABO, Rh and Antibody Detection	Transfusion Reaction Investigation
Prenatal Transfusion Medicine	Direct Antiglobulin Test
Father's Blood	
Kleihauer-Betke/ Post Partum Workup	
Kleihauer-Betke Antepartum	
Cold Agglutinin Titre	

Lavender top (EDTA): Collect **ONE 4 ml** tube for **EACH** of the following tests:	**Lavender** top (EDTA): Collect **TWO 4 ml** tube for **EACH** of the following tests in Column 2:
CBC (Retics can be done on the CBC tube)	HLA-B27
HbA1C	PNH
Cyclosporine	
Tacrolimus	
PTH	
CD34	
ICP	
Ammonia (send to lab immediately on ice)	
ACTH (pre-chilled tube; send to lab immediately on ice)	

Blue top (Sodium Citrate): **ONE** tube for **any** combination of the following tests:
PT/PTT All blue top tubes for coagulation tests must be filled to the etched fill indicator line on the tube.
Fibrinogen
D-Dimer

Gold top (5 ml): **ONE** tube for **EACH** of the tests in Column 1 when not ordered as a panel	**Gold** top (5ml): **TWO** tubes for Column 2 (Bloodborne Pathogen Panel)	**Gold** top (5ml): **TWO** tubes for Column 3 (Needlestick Source Panel)
Column 1	**Column 2**	**Column 3**
Syphilis	Syphilis	HbsAg
HbsAg	HbsAg	HCV
HCV	HCV	HIV
HIV	HIV	

Refer to previous section (Section 11 Microbiology Specimens by Source) for requirements for other needlestick panels.

Minimum Specimen Requirement for Micro Sample Collection

BIOCHEMISTRY	
Blood Gases	1 full heparinized capillary tube, no air
Cyclosporine	1 lavender top microtainer
HbA1c	1 lavender top microtainer
Ionized Calcium	1 balanced heparin capillary tube full, no air
Lactate	1 grey top microtainer – Deliver to laboratory on ice IMMEDIATELY.
Osmolality	2 gold top amber microtainer
Tacrolimus	1 lavender top microtainer

ROUTINE CHEMISTRY			
½ light green (PST-lithium heparin) top clear microtainer will do any ONE of the following tests: 1 light green (PST-lithium heparin) top clear microtainer will do up to a combination of SIX following tests:			
Alpha-1-antitrypsin	CK	Insulin	Protein, Total
AFP	CO2 content	Immunoglobulin E	PSA, Free
Albumin	Complement (C3, C4)	Immunoglobulin Quant (IgA, IgG, IgM)	PSA, Total
ALP	Cortisol		Rheumatoid Factor
ALT	Creatinine		
AST	CRP	Iron/TIBC	Testosterone
Beta-2 Microglobulin	DHEA-S	LDH	Transferrin
Beta-hydroxybutyrate	Electrolytes (Na, K, Cl)	LH	Triglycerides
Bilirubin, Direct	Estradiol	Lipase	Troponin
Bilirubin, Total	Ferritin	Magnesium	TSH
CA 125	Folate	Myoglobin (blood)	Free T3
CA 15.3	FSH	NT-ProBNP	Free T4
Calcium	Glucose	Phosphate	Urate
CEA	Haptoglobin	Prealbumin	Urea
Ceruloplasmin	HCG	Progesterone	Vitamin B12
Cholesterol, Total	HDL Cholesterol	Prolactin	Vitamin D

THERAPEUTIC DRUGS	
1 red top clear microtainer will do any ONE of the following tests:	
Acetaminophen	Phenytoin
Carbamazepine	Salicylate
Digoxin	Theophylline
Gentamicin	Valproic Acid
Methotrexate (protect from light)	Vancomycin
Phenobarbital	

MICROBIOLOGY	
3 gold top amber microtainer will do ALL the following tests: 1 gold top amber microtainer will do any 2 of the following tests:	
CMV	Rubella (Serology)
HbsAg	Syphilis
Hepatitis	Toxoplasmosis
HIV	

HAEMATOLOGY	
CBC (includes DIFF & Retic)	1 lavender top microtainer minimum volume 0.5 ml
Hemoglobin Electrophoresis	3 lavender top microtainers
Mono Test	1 red top microtainer
PT and/or APTT	1 clear light blue top (1.8mL) tube venous draw. Tube must be filled to the etched fill indicator line on the tube.

QUICK GUIDE – URINE CONTAINERS					
TEST	**COLLECTION**	**TEST**	**COLLECTION**	**TEST**	**COLLECTION**
5-HIAA *	24	Oligosaccharides	R	Urinalysis	R
Abuse Screen	R	Organic acid	R	~~Heavy Metal Screen~~ *(No longer available)*	~~I or 24~~
Albumin	R or 24	Osmolality	R or 24		
Amino Acids	R	Oxalate **	24		
Calcium **	24	Phosphorus **	24		
Catecholamines*	24	Potassium	R or 24		
Chloride	24	Porphyrin precursors@	R or 24		
Citrate **	24			Trace Metals: Aluminum Arsenic Cadmium Cobalt Copper Lead Mercury Zinc	R or 24
Cortisol	24	Porphyrin screen@	R or 24***		
Creatinine **	R or 24				
Cystine	R	Pregnancy Test	R		
Electrolytes: (Na, K, Cl)	R or 24	Protein	R or 24		
		Protein Electrophoresis (Bence Jones Protein)▲	R or 24		
Hemoglobin	R				
Magnesium **	24				
Metanephrines *	24				
Mucopolysaccharides	R	Sodium	R or 24		
Myoglobin	R	Urate **	24		
Nicotine	R	Urea	24		

NOTE: Random urine is acceptable only for analytes marked “R”. A 24-hour urine collection is required for analytes marked “24”. Specimen is to be collected in a plain container unless otherwise specified. Containers are kept in SPD.

* Must be collected with 6N HCl preservative.
** Can be collected in a plain 24-hour container or with 6N HCl preservative.
*** Must be collected with sodium carbonate preservative.
@ Must be protected from light, use a urine cup wrapped in foil for random collection or an orange-colored container for 24-hour collection.
▲ A minimum of 50 mL is required.

***ACID WASHED * CONTAINERS – No longer necessary, can collect in plain Metal Free container (24h collection)**

Revision Date: *October 15, 2019*

BD

Helping all people live healthy lives

BD Vacutainer® Order of Draw for Multiple Tube Collections

Designed for Your Safety

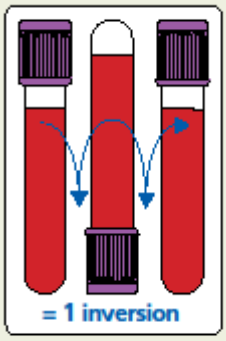
Reflects change in CLSI recommended Order of Draw (H3-A5, Vol 23, No 32, 8.10.2)

Closure Color	Collection Tube	Mix by Inverting
BD Vacutainer® Blood Collection Tubes *(glass or plastic)*		
	• Blood Cultures - SPS	8 to 10 times
	• Citrate Tube*	3 to 4 times
or	• BD Vacutainer® SST™ Gel Separator Tube	5 times
	• Serum Tube *(glass or plastic)*	5 times (plastic) none (glass)
	• BD Vacutainer® Rapid Serum Tube (RST)	5 to 6 times
or	• BD Vacutainer® PST™ Gel Separator Tube With Heparin	8 to 10 times
	• Heparin Tube	8 to 10 times
or	• EDTA Tube	8 to 10 times
	• BD Vacutainer® PPT™ Separator Tube K_2EDTA with Gel	8 to 10 times
	• Fluoride (glucose) Tube	8 to 10 times

* When using a winged blood collection set for venipuncture and a coagulation (citrate) tube is the first specimen tube to be drawn, a discard tube should be drawn first. The discard tube must be used to fill the blood collection set tubing's "dead space" with blood but the discard tube does not need to be completely filled. This important step will ensure proper blood-to-additive ratio. The discard tube should be a nonadditive or coagulation tube.

Note: Always follow your facility's protocol for order of draw

Handle all biologic samples and blood collection "sharps" (lancets, needles, luer adapters and blood collection sets) according to the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples (for example, through a puncture injury) since they may transmit viral hepatitis, HIV (AIDS), or other infectious diseases. Utilize any built-in used needle protector if the blood collection device provides one. BD does not recommend reshielding used needles, but the policies and procedures of your facility may differ and must always be followed. Discard any blood collection "sharps" in biohazard containers approved for their disposal.



1 Becton Drive
Franklin Lakes, NJ 07417
www.bd.com/vacutainer

BD Technical Services
1.800.631.0174
BD Customer Service
1.888.237.2762
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BD Helping all people live healthy lives

BD Microtainer® Tubes with BD Microgard™ Closure

Tube Guide and Order of Draw

Catalog #/Closure Color	Additive	Mix by Inverting	Laboratory Use
 365974 Lavender	K_2EDTA	10x	For whole blood hematology determinations. Tube inversions prevent clotting.
 365965 Green	Lithium Heparin	10x	For plasma determinations in chemistry. Tube inversions prevent clotting.
 365985 Mint Green  365987 Mint Green	Lithium Heparin and Gel for plasma separation	10x	For plasma determinations in chemistry. Tube inversions prevent clotting.
 365992 Grey	NaFl/Na_2EDTA	10x	For glucose determinations. Tube inversions ensure proper mixing of additive and blood.
 365967 Gold  365978 Gold	Clot Activator and Gel for serum separation	5x	For serum determinations in chemistry.
 365963 Red	No additive	0x	For serum determinations in chemistry.

365976
Tube Extender

BD Global Technical Services:
1.800.631.0174
BD Customer Service:
1.888.237.2762
www.bd.com/vacutainer

CAUTION:
Handle all biologic samples and blood collection "sharps" (lancets, needles, luer adapters, and blood collection sets) in accordance with the policies and procedures of your facility. Obtain appropriate medical attention in the event of any exposure to biologic samples (e.g., through a puncture injury) since samples may transmit viral hepatitis, HIV (AIDS), or other infectious diseases. Utilize any safety-engineered feature if the blood collection device provides one. Discard all blood collection "sharps" in biohazard containers approved for their disposal.

 Made in USA 11/04 V558836-2

BD Diagnostics
Preanalytical Systems
1 Becton Drive
Franklin Lakes, NJ 07417

Nasopharyngeal Swab Collection for Bordetella pertussis PCR, Viral Testing, Covid-19

MATERIALS NEEDED:

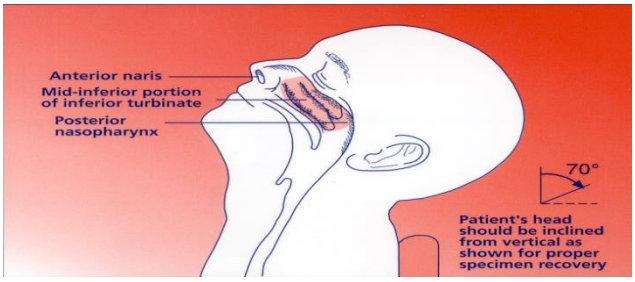
- Facial tissues for cleaning mucous from nose.
- **B. pertussis PCR** – Separate viral transport swab (Copan UTM only).
- **Virus Testing/ Covid-19** – Separate Viral Transport Swab (UTM).

NOTE: USE SMALL SWAB for collection (available from Laboratory Receiving area – 648-6575).

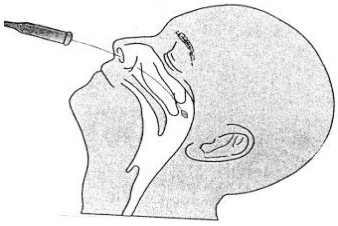
NOTE: For optimum recovery of the organism the sample must be taken during the early stages of the infection, i.e., within 7 to 14 days from the onset of the symptoms. After this time recovery rate falls dramatically.

PROCEDURE:

1. Clean off any obvious mucous from the patient's nostrils.
2. Immobilize the patients head at a 70^0 angle.



3. Gently insert swab into one nostril until it reaches the posterior nasopharynx.



4. Rotate swab over surface of posterior nasopharynx for up to 30 seconds or until coughing is induced.
5. Withdraw swab from collection site.
6. Insert swab back into the transport tube.
7. Label the tube and send to the laboratory ASAP along with a completed requisition or ensure the request is entered and statused as collected in i3.
8. Swabs may be kept at room temperature for delivery to the laboratory.

Specimen Collection for Scabies Examination

Equipment: Sterile mineral oil
Sterile scalpel
Microscope slide
Coverslip
Alcohol prep
Cardboard slide mailer

Preparation: Wash area of skin to be scraped with alcohol prep.
Ensure area is dry before performing the scraping.

Collection:

- Disinfect area and allow it to dry.
- Label microscopes slide with patient name, date of birth, date of collection.
- Apply a single drop of mineral oil to the papule and abrade the affected area with a sterile scalpel to remove top of papule (flecks of blood will be evident).
- Transfer the skin scrapings to the slide and cover with coverslip.
- Place slide in slide mailer and secure with elastic band or tape.
- Label mailer with requisition tag or patient information label.
- Transport slide to the Microbiology Lab immediately (room temperature).

Specimens that are incorrectly labeled and do not have a complete requisition will not be tested.

QuantiFeron TB Gold Plus Testing – IGRA Collection Instructions

Special tubes are required and are available from the Microbiology Lab 648-7178. The Microbiology Lab must be notified when the specimen is arriving at the lab.

Blood is to be collected in the following tubes and in the following order:

1st Nil (negative control) – grey cap with white ring
2nd TB1 (TB antigen 1) – green cap with white ring
3rd TB2 (TB antigen 2) – yellow cap with white ring
4th Mitogen (positive control) – purple cap with white ring

Note:

- Blood collection tubes should be at room temperature (17°C – 25°C) at the time of collection.
- These tubes draw blood relatively slowly. To ensure that the correct volume is drawn (1 ml) keep the tube on the needle for 2-3 seconds once the tube appears to have completed filling.
- The black mark on the side of tubes indicates the 1 ml fill volume.
- Optimal range of sample is within 0.8 ml to 1.2 ml.
- If the level of blood in any tube is not close to the indicator line it is recommended to obtain another blood sample.
- Do not overfill the tubes.

If a butterfly needle is being used to collect blood, a “purge”/prime tube (a plain vacutainer tube) should first be used to ensure that the tubing is filled with blood prior to the QuantiFeronTB Gold Plus collection tubes being filled.

Tubes must be mixed thoroughly after collection to ensure contact of blood with antigens coating the inner wall of the blood collection tubes. Mix the tubes by inverting 10 times just firmly enough to ensure that the inner surface of the tube is coated in blood (to solubilize antigens on tube walls). Over-vigorous shaking may cause gel disruption and could lead to aberrant results.

Label the tubes with the required patient information. **Complete a Microbiology requisition**.

Maintain tubes at room temperature, 22°C ± 5°C. Do not refrigerate or freeze the blood samples. Send to the lab ASAP to ensure proper sample handling occurs. Specimens must be received in the laboratory within 16 hours of collection.

(LABORATORY USE ONLY)
For Laboratories Referring IGRA testing to the SJRH

- Tubes must be transferred to a 37°C ± 1°C incubator within 16 hours of collection. If not incubated immediately, maintain the tubes at room temperature, 22°C ± 5°C and indicate on the tubes they have not been incubated. If the tubes are not incubated at 37°C soon after collection, re-mix the tubes by inverting 10 times immediately prior to incubation.
- Do not refrigerate or freeze the blood samples.
- Incubate the tubes UPRIGHT at 37°C ± 1°C for 16-24 hours.
- After incubation of the tubes at 37°C ± 1°C, centrifuge the tubes for 15 minutes at 2000 – 3000 RCF (g). Plasma will be separated from cells by the gel plug.
- After centrifugation and prior to harvesting, avoid pipetting up and down or mixing plasma by any means. At all times, take care not to disturb material on the surface of the gel. Plasma samples should only be harvested using a pipette.
- Ensure that tubes are labelled, and that the appropriate tube color that the plasma was removed from (i.e., grey, green, yellow, purple) is written on the label.
- Plasma samples can be stored for up to 28 days at 2-8°C or, if harvested from the cells, below –20°C for extended periods.
- **Ensure a Requisition is sent with the sample for testing.**

QuantiFeron TB Gold Plus – Instructions pour le prélèvement d'échantillons aux fins du TLIG

Des tubes particuliers sont requis et peuvent être obtenus auprès du laboratoire de microbiologie 648-7178. Le laboratoire de microbiologie doit être avisé lorsque l'échantillon arrive au laboratoire.

Le sang doit être prélevé dans les tubes ci-dessous, dans l'ordre suivant :

1er Valeur zéro (contrôle négatif) – capuchon gris avec anneau blanc
2e TB1 (antigène de *M. tuberculosis* 1) – capuchon vert avec anneau blanc
3e TB2 (antigène de *M. tuberculosis* 2) – capuchon jaune avec anneau blanc
4e Mitogène (contrôle positif) – capuchon mauve avec anneau blanc

Remarques :

- Au moment du prélèvement, les tubes de prélèvement sanguin doivent être à la température ambiante (de 17 °C à 25 °C).
- Le prélèvement pour ces tubes est relativement lent. Pour vous assurer de prélever le bon volume (1 ml), maintenez le tube sur l'aiguille pendant deux ou trois secondes après que le tube semble être rempli.
- La marque noire sur le côté des tubes indique un volume de remplissage de 1 ml.
- La plage optimale se situe entre 0,8 ml et 1,2 ml.
- Si le niveau de sang dans tout tube n'est pas près de la ligne indicatrice, il est recommandé d'obtenir un autre échantillon de sang.
- Évitez de trop remplir les tubes.

Si une aiguille à ailettes est utilisée pour prélever le sang, il faut d'abord employer un premier tube/tube de purge (tube Vacutainer ordinaire) pour s'assurer de remplir la tubulure de sang avant de remplir les tubes de prélèvement aux fins du QuantiFeronTB Gold Plus.

Le contenu des tubes doit être bien mélangé après le prélèvement de manière à assurer le contact du sang avec les antigènes recouvrant la paroi interne des tubes de prélèvement sanguin. Tournez les tubes à l'envers 10 fois, avec juste assez de fermeté pour que le sang recouvre la surface interne du tube (afin de solubiliser les antigènes sur les parois du tube). Un secouage trop vigoureux peut provoquer une rupture du gel et mener à des résultats aberrants.

Étiquetez les tubes en indiquant les renseignements requis sur le patient. Remplissez une demande d'analyse microbiologique.

Gardez les tubes à la température ambiante, c'est-à-dire à 22 °C, plus ou moins 5 °C. Vous ne devez pas réfrigérer ni congeler les échantillons de sang. Envoyez les échantillons au laboratoire dans les plus brefs délais afin d'assurer une manipulation appropriée. Les échantillons doivent parvenir au laboratoire dans les 16 heures qui suivent le prélèvement.

(À L'USAGE EXCLUSIF DU LABORATOIRE)

À l'intention des laboratoires qui soumettent des échantillons à l'HRSJ aux fins du TLIG

- Les tubes doivent être transférés dans un incubateur à 37 °C, plus ou moins 1 °C, dans les 16 heures qui suivent le prélèvement.
- Si les tubes ne sont pas incubés immédiatement, maintenez-les à la température ambiante, c'est-à-dire à 22 °C, plus ou moins 5 °C, et indiquez sur les tubes qu'ils n'ont pas été incubés. Vous ne devez pas réfrigérer ni congeler les échantillons de sang. Si les tubes ne sont pas incubés à 37 °C peu après le prélèvement, vous devez mélanger le contenu des tubes de nouveau en les tournant à l'envers 10 fois immédiatement avant l'incubation.
- Incubez les tubes en POSITION VERTICALE à 37 °C, plus ou moins 1 °C, pendant 16 à 24 heures.
- Après avoir incubé les tubes à 37 °C, plus ou moins 1 °C, il faut centrifuger les tubes pendant 15 minutes à 2000 à 3000 FCR (g). Le gel séparateur séparera le plasma des cellules.
- Après la centrifugation et avant le prélèvement, évitez le pipetage vers le haut et vers le bas ou le mélange du plasma par tout moyen. Veillez en tout temps à ne pas perturber la substance se trouvant sur la surface du gel. Les échantillons de plasma doivent seulement être prélevés à l'aide d'une pipette.
- Assurez-vous d'étiqueter les tubes et d'écrire sur l'étiquette la bonne couleur du tube duquel le plasma a été retiré (c.-à-d. gris, vert, jaune et mauve).
- Les échantillons de plasma peuvent être entreposés pendant un maximum de 28 jours à une température allant de 2 °C à 8 °C ou, s'ils ont été prélevés à même les cellules, à une température de –20 °C pendant de longues périodes.
- **Assurez-vous d'envoyer une demande d'analyse avec l'échantillon.**

Blood Collection Instructions for Use with the BD BACTEC™ Blood Culture System

WARNING

"Standard Precautions" should be followed in handling all items contaminated with blood or other body fluids.

Prior to use, (1) inquire if patient has a history of adverse reaction to iodine (see Step 1 below); and (2) inspect all vials and discard any vials showing evidence of contamination, damage or deterioration.

STEP 1. SKIN PREPARATION

- Cleanse the venipuncture site with 70% isopropyl alcohol.
- Starting at the middle of the site, swab concentrically with a 1 to 10% povidone-iodine solution or chlorhexidine-gluconate.

NOTE: Chlorhexidine-gluconate is recommended for infants two months and older and patients with iodine sensitivity.

- Allow the site to air dry.

NOTE: If the venipuncture proves difficult and the vein must be touched again to draw blood, the site should be cleansed again.

STEP 2. PREPARE BACTEC™ VIALS

- Mark BACTEC culture vial label(s) at desired fill level.
- Remove flip-off caps from BACTEC culture vials(s).
- Wipe tops of vials with single alcohol swab and allow to dry.

STEP 3. BLOOD COLLECTION OPTIONS

BD Vacutainer® Safety-Lok™ and BD Vacutainer® Push Button Blood Collection Sets – COLLECTION

- Peel apart package and remove blood collection set.
- Thread the Luer end of tubing set into Vacutainer holder.
- Remove sheath covering needle at wings.

- Perform venipuncture by holding wings as shown. DO NOT hold by grasping the yellow safety shield.
- Select aerobic bottle first. Hold the bottle upright.
- Push and hold Vacutainer holder over top of vial to puncture septum.
- Collect blood to desired fill level on vial. Monitor to ensure proper blood flow and fill level.

- Remove holder from vial. Immediately push and hold holder onto second vial.
- Collect blood to desired fill level on second vial. Remove holder from vial.

NOTE: If more samples are required, additional tubes may be drawn at this time using the Vacutainer holder.

OPTION A:

BD Vacutainer® Safety-Lok™ Blood Collection Set – REMOVAL

- When final vial or tube is filled, withdraw the needle by grasping the wings and gently pulling. DO NOT withdraw by holding the yellow safety shield. Cover the puncture site with a sterile gauze pad and apply pressure.

- To activate the safety shield, grasp either wing with one hand and grip the yellow safety base with other hand. Slide the wings back into the rear of the safety shield until a snap is felt to ensure that the needle is retracted completely and locked in place.

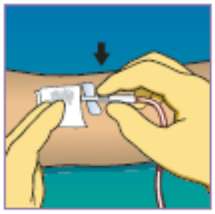
(continued on reverse)

BD

Helping all people live healthy lives

Blood Collection Instructions for Use with the BD BACTEC™ Blood Culture System *(continued)*

STEP 3. BLOOD COLLECTION OPTIONS *(continued from front)*



OPTION B:

BD Vacutainer® Push Button Blood Collection Set – REMOVAL

- The device is designed to be activated while the needle is still in the patient's vein. Place your gauze pad or cotton ball on the venipuncture site. Allow gauze pad or cotton ball to cover nose of front barrel. Following the collection procedure, and while the needle is still in the vein, grasp the body with the thumb and middle finger. Activate the button with the tip of the index finger.
- To ensure complete and immediate retraction of device, make sure to keep fingers and hands away from the end of the blood collection set during retraction. Do not impede retraction.

OPTION C:

Needle and Syringe Collection

- Using aseptic technique, attach needle to syringe.
- A 20 mL syringe with a 21 gauge needle is recommended but other sizes may be used.
- Insert the needle into prepared vein and collect 10 to 20 mL blood in syringe.
- Withdraw needle after collecting 10-20 mL blood in syringe.
- Distribute blood equally into aerobic and anaerobic vials.

STEP 4. PATIENT SKIN CARE

- Place the gauze pad over the site, continuing mild pressure. Check bleeding has ceased, and apply an adhesive or gauze bandage over the site.
- After all specimens have been collected, remove remaining skin antiseptic from collection site using a sterile alcohol swab.

STEP 5. LABEL VIALS

- Label all vials. DO NOT write on or place any labels over the BACTEC vial barcode, as this is used by the instrument to process the specimen.

STEP 6. DISPOSAL

- Dispose of the blood collection devices in the nearest sharps container according to regulations. Dispose of all other used materials in appropriate container and wash hands.

STEP 7. ADDITIONAL CULTURES MAY BE COLLECTED IN A SIMILAR WAY

- A different venipuncture site should be used for each culture set collected.

BD BACTEC™ Blood Culture Media

Cat No.	Description	Quantity	Unit
442265	BACTEC™ Lytic/10 Anaerobic/F Medium	50	Shelf Pack
442003	BACTEC™ Myco/F Lytic Medium	25	Shelf Pack
442288	BACTEC™ Myco/F Lytic Medium	50	Shelf Pack
442194	BACTEC™ PEDS PLUS™/F Medium	50	Shelf Pack
442192	BACTEC™ Plus Aerobic/F Medium	50	Shelf Pack
442193	BACTEC™ Plus Anaerobic/F Medium	50	Shelf Pack
442191	BACTEC™ Standard Anaerobic/F Medium	50	Shelf Pack
442260	BACTEC™ Standard/10 Aerobic/F Medium	50	Shelf Pack
442000	Blood Culture Procedural Tray 1, Adult	20	Shelf Pack
442001	Blood Culture Procedural Tray 2, Adult	20	Shelf Pack
442002	Blood Culture Procedural Tray 3, PEDS	20	Shelf Pack

To order any of the above BACTEC Blood Culture Media, please contact your local BD sales representative. To order BD Vacutainer™ products, please call 1.888.237.2762 or visit www.bd.com/vacutainer.

BD

BD Diagnostics
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Sparks, MD 21152-0999
800.638.8663
www.bd.com/ds

RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

A SUMMARY OF GOOD PRACTICE

A) USING WINGED BLOOD COLLECTION SET

(preferred method of collection)[1,2,3]

1 PREPARE BLOOD COLLECTION KIT

Confirm the patient's identity and gather all required materials before beginning the collection process.

Do not use blood culture bottles beyond their expiration date, or bottles which show signs of damage, deterioration or contamination.

It is recommended to identify the Fill-to Mark or mark the target fill level on the blood culture bottle label about 10 ml above the media level.




2 PREPARE BOTTLES FOR INOCULATION

Wash hands with soap and water then dry, or apply an alcohol hand rub or another recognized effective hand rub solution.

Remove the plastic "flip-cap" from the blood culture bottles and disinfect the septum using an appropriate and recognized effective disinfectant, such as chlorhexidine in 70% isopropyl alcohol, 70% isopropyl alcohol, or tincture of iodine in swab or applicator form. Use a fresh swab/applicator for each bottle.

Allow bottle tops to dry in order to fully disinfect.


3 PREPARE VENIPUNCTURE SITE

If skin is visibly soiled, clean with soap and water. Apply a disposable tourniquet and palpate for a vein. **Apply clean examination gloves** (sterile gloves are not necessary).

Cleanse the skin using an appropriate disinfectant, such as chlorhexidine in 70% isopropyl alcohol or tincture of iodine in swab or applicator form. **The venipuncture site is not fully clean until the disinfectant has fully evaporated.**



4 VENIPUNCTURE

Attach a winged blood collection set to a collection adapter cap*.

To prevent contaminating the puncture site, do not re-palpate the prepared vein before inserting the needle. Insert the needle into the prepared vein.



5 CULTURE BOTTLE INOCULATION

Place the adapter cap over the **aerobic bottle** and **press straight down** to pierce the septum. Hold the bottle upright, below the level of the draw site, and add up to 10 ml of blood per adult bottle and up to 4 ml per pediatric bottle.** Ensure the bottle is correctly filled to the Fill-to Mark or target fill level. Once the aerobic bottle has been inoculated, repeat the procedure for the **anaerobic bottle**.



6 OTHER BLOOD TESTS

If blood is being collected for other tests, an insert placed into the adapter cap may be required. The insert is used to guide blood collection tubes onto the needle.

If other blood tests are requested, always collect the blood culture first.


7 FINISH THE PROCEDURE

Discard the winged collection set into a sharps container and cover the puncture site with an appropriate dressing. Remove gloves and wash hands before recording the procedure, including indication for culture, date, time, site of venipuncture, and any complications.

Ensure additional labels are placed in the space provided on the bottle label and do not cover the bottle barcodes, and that the tear-off barcode labels are not removed. If additional labels contain a barcode, they should be positioned in the same manner as the bottle barcode.

Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI.[4] If delays are expected, it is important to refer to the manufacturer's Instructions for Use for guidance.


1. Applied Phlebotomy. Dorwin J. Ernst. Lippincott Williams & Wilkins, 2005.
2. Essentials Of Medical Laboratory Practice. Lieseke C, et al. 2012.
3. Qamruddin A, et al. J Clin Pathol. 2008;61:509-13.
4. Principles and procedures for Blood Cultures; Approved Guideline, CLSI document M47-A. Clinical and Laboratory Standards Institute (CLSI); Wayne, PA. 2007.

* The use of blood collection sets without blood collection adaptors is not recommended.

** Avoid holding the blood culture bottle in a horizontal or upside down position or drawing blood with a needle connected directly to the adaptor cap, as fill level cannot be monitored during collection and there is a possible risk of media reflux into the blood stream.

These recommendations illustrate the best practices for blood culture collection based on the World Health Organization recommendations (WHO guidelines on drawing blood: best practices in phlebotomy. 2010. ISBN 978 92 4 159922 1). Best practices may vary between healthcare facilities; refer to guidelines applicable in your facility.

RECOMMENDATIONS FOR BLOOD CULTURE COLLECTION

A SUMMARY OF GOOD PRACTICE

B) USING NEEDLE AND SYRINGE

Conventional needles and syringes should be replaced wherever possible with winged blood collection sets, which are safer.[1,2,3]

They should only be used if prevention measures to Accidental Blood Exposure are strictly applied*. Needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand.

1 PREPARE BLOOD COLLECTION KIT

Confirm the patient's identity and gather all required materials before beginning the collection process.

Do not use blood culture bottles beyond their expiration date, or bottles which show signs of damage, deterioration or contamination.

It is recommended to identify the Fill-to Mark or mark the target fill level on the blood culture bottle label about 10 ml above the media level.

2 PREPARE BOTTLES FOR INOCULATION

Wash hands with soap and water then dry, or apply an alcohol hand rub or another recognized effective hand rub solution.

Remove the plastic "flip-cap" from the blood culture bottles and disinfect the septum using an appropriate and recognized effective disinfectant, such as chlorhexidine in 70% isopropyl alcohol, 70% isopropyl alcohol, or tincture of iodine in swab or applicator form. Use a fresh swab/applicator for each bottle. **Allow bottle tops to dry in order to fully disinfect.**

3 PREPARE VENIPUNCTURE SITE

If skin is visibly soiled, clean with soap and water. Apply a disposable tourniquet and palpate for a vein. **Apply clean examination gloves** (sterile gloves are not necessary).

Cleanse the skin using an appropriate disinfectant, such as chlorhexidine in 70% isopropyl alcohol or tincture of iodine in swab or applicator form. **The venipuncture site is not fully clean until the disinfectant has fully evaporated.**

4 VENIPUNCTURE

Attach the needle to a syringe. **To prevent contaminating the puncture site, do not re-palpate the prepared vein before inserting the needle.**

Insert the needle into the prepared vein.

5 CULTURE BOTTLE INOCULATION

Collect the sample. Transfer the blood into the culture bottles, starting with the **anaerobic bottle**. Hold the bottle upright, and add up to 10 ml of blood per adult bottle and up to 4 ml per pediatric bottle. Ensure the bottle is correctly filled to the Fill-to Mark or target fill level. Once the anaerobic bottle has been inoculated, repeat the procedure for the **aerobic bottle**.

6 FINISH THE PROCEDURE

Discard the needle and syringe into a sharps container and cover the puncture site with an appropriate dressing. Remove gloves and wash hands before recording the procedure, including indication for culture, date, time, site of venipuncture, and any complications.

Ensure additional labels are placed in the space provided on the bottle label and do not cover the bottle barcodes, and that the tear-off barcode labels are not removed. If additional labels contain a barcode, they should be positioned in the same manner as the bottle barcode. Inoculated bottles should be transported to the laboratory for testing as quickly as possible, preferably within 2 hours per CLSI.[4] If delays are expected, it is important to refer to the manufacturer's Instructions for Use for guidance.

* *Refer to recognized guidelines such as those issued by the WHO or CDC:*
http://www.who.int/injection_safety/phleb_final_screen_ready.pdf
http://www.cdc.gov/niosh/docs/2000-108/pdfs/2000-108.pdf

These recommendations illustrate the best practices for blood culture collection based on the World Health Organization recommendations (WHO guidelines on drawing blood: best practices in phlebotomy. 2010. ISBN 978 92 4 159922 1). Best practices may vary between healthcare facilities; refer to guidelines applicable in your facility.

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www.biomerieux.com • www.biomerieux-diagnostics.com

Gastric Aspirate Collection for Mycobacterial (TB) Culture

Gastric aspiration has traditionally been the diagnostic procedure of choice to obtain specimens to assist with the diagnosis of pulmonary tuberculosis in young children who are unable to produce sputum.

MATERIALS NEEDED:
- N-95 mask
- 10 French or larger nasogastric suction tube
- 30 cc syringe with connector
- Sterile distilled water
- Sterile aspiration container
- Ziploc (sealable) bag
- Requisition and/or label

PROCEDURE:
During sleep, the mucociliary mechanism of the respiratory tract sweeps mucus, which may contain TB bacteria, into the mouth. This material is swallowed and may be a source for organism identification, especially if the stomach has not emptied.
NOTE: Aspirates are obtained after at least 6 hours of sleep and before the stomach has emptied.

1. Collect fasting early-morning specimen on 3 consecutive days. Collect in the morning soon after patient awakens to obtain sputum swallowed during sleep.

2. Patients should not drink or eat anything overnight to prevent the stomach from emptying. They should also avoid exposure to the smell or sight of food, which may encourage gastric emptying. The ideal time is just at the time of waking.

3. Aspirate the stomach contents first and ensure proper placement of the tube in the stomach. Place any aspirated stomach contents in the sterile container and then instill into the stomach no more than 50 mL of sterile distilled water – the sort used for infant feeding is suitable. Aspirate back and add the aspirate to the sterile container. Specimen volume should be 20 – 50mL.

4. Confirm the collection container is labeled correctly with:
    - Patient's first and last name
    - The date and time of collection
    - Patient's healthcare number

NOTE: Incorrectly or incompletely labeled specimens will not be tested.

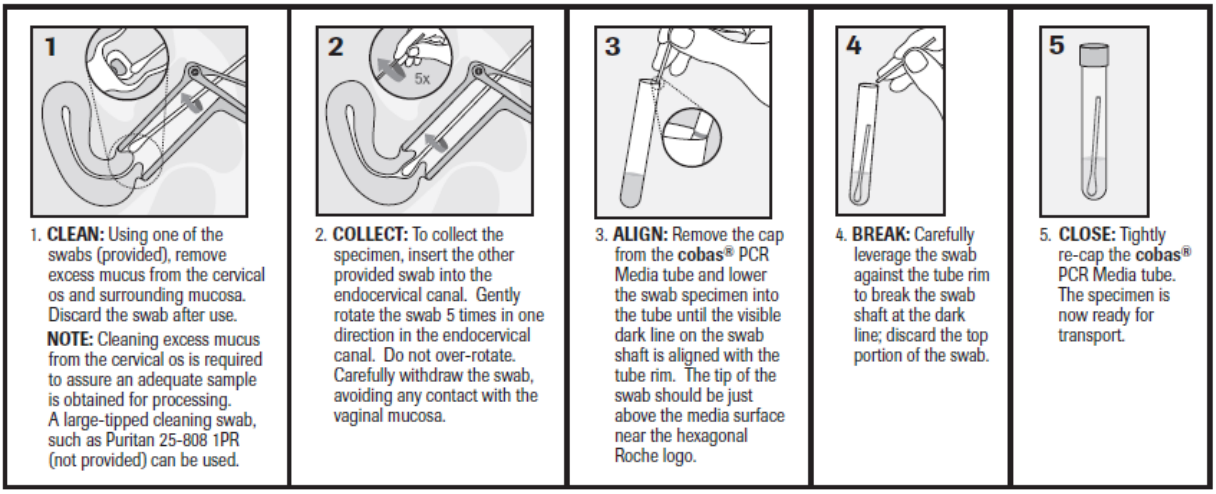
5. Place labeled container into a Ziploc (sealable) plastic bag. Unless a bar-coded label is generated when the laboratory order is placed in the computer system, a properly completed requisition must accompany samples submitted.

6. **IMPORTANT: Send to the laboratory immediately**. The gastric fluid must be adjusted to neutral pH within 4 hours of collection because acid is detrimental to mycobacterial growth.

Endocervical and Vaginal Specimen Collection Instructions for CT/GC (Cobas)

ENDOCERVICAL SWAB SPECIMEN COLLECTION

WARNING: DO NOT PRE-WET SWAB IN cobas® PCR MEDIA BEFORE COLLECTION!

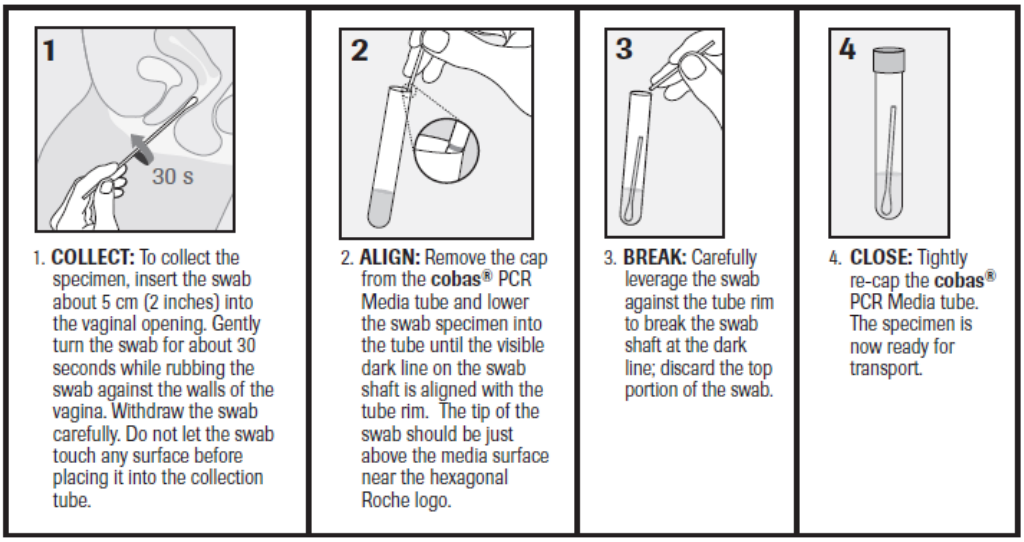


1. **CLEAN:** Using one of the swabs (provided), remove excess mucus from the cervical os and surrounding mucosa. Discard the swab after use.
   NOTE: Cleaning excess mucus from the cervical os is required to assure an adequate sample is obtained for processing. A large-tipped cleaning swab, such as Puritan 25-808 1PR (not provided) can be used.
2. **COLLECT:** To collect the specimen, insert the other provided swab into the endocervical canal. Gently rotate the swab 5 times in one direction in the endocervical canal. Do not over-rotate. Carefully withdraw the swab, avoiding any contact with the vaginal mucosa.
3. **ALIGN:** Remove the cap from the **cobas®** PCR Media tube and lower the swab specimen into the tube until the visible dark line on the swab shaft is aligned with the tube rim. The tip of the swab should be just above the media surface near the hexagonal Roche logo.
4. **BREAK:** Carefully leverage the swab against the tube rim to break the swab shaft at the dark line; discard the top portion of the swab.
5. **CLOSE:** Tightly re-cap the **cobas®** PCR Media tube. The specimen is now ready for transport.

VAGINAL SWAB SPECIMEN – CLINICIAN COLLECTION

NOTE: The following instructions are for the doctor, nurse or care provider to perform a vaginal swab specimen collection.

WARNING: DO NOT PRE-WET SWAB IN cobas® PCR MEDIA BEFORE COLLECTION!



1. **COLLECT:** To collect the specimen, insert the swab about 5 cm (2 inches) into the vaginal opening. Gently turn the swab for about 30 seconds while rubbing the swab against the walls of the vagina. Withdraw the swab carefully. Do not let the swab touch any surface before placing it into the collection tube.
2. **ALIGN:** Remove the cap from the **cobas®** PCR Media tube and lower the swab specimen into the tube until the visible dark line on the swab shaft is aligned with the tube rim. The tip of the swab should be just above the media surface near the hexagonal Roche logo.
3. **BREAK:** Carefully leverage the swab against the tube rim to break the swab shaft at the dark line; discard the top portion of the swab.
4. **CLOSE:** Tightly re-cap the **cobas®** PCR Media tube. The specimen is now ready for transport.

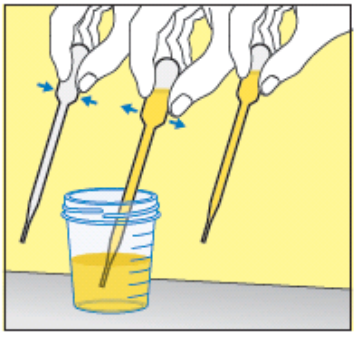
NOTE: Use small, flocked swab for sampling. The larger woven swab can be used for removing mucus.

<u>HANDLING PRECAUTIONS</u>: Avoid contact of the Cobas PCR media with the skin, eyes, or mucous membranes. If contact does occur, immediately wash with large amounts of water. Avoid contact with bleach or other highly reactive reagents such as acids and bases if spills occur.

Reference:

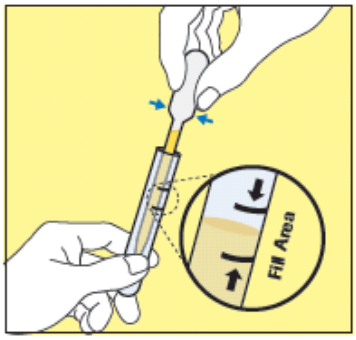
Roche Diagnostics Molecular Systems, Cobas®PCR Female Swab Sample Kit, 12/2011

Cobas PCR Urine Sample Kit for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* SPD#0105985



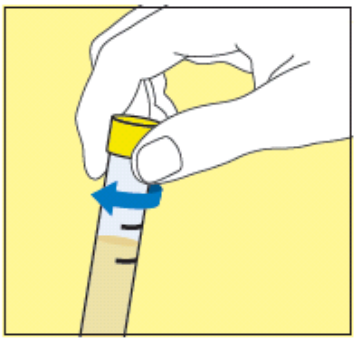
1. COLLECT:
   Prior to sampling, the patient should not have urinated for at least one hour and female patient must not clean the labial area.

   Ask the patient to provide the first catch urine (10-50 mL) into a urine collection cup.



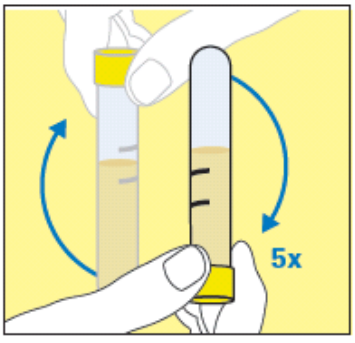
2. PIPET:
   Use the provided disposable pipet to transfer **(within 24 hours)** the urine into the cobas PCR Media tube.

   The correct volume of urine has been added when the fluid level is between the two black lines on the tube label.



3. CLOSE:
   Tightly re-cap the tube.

HANDLING PRECAUTIONS: Avoid contact of the cobas PCR media with the skin, eyes, or mucous membranes. If contact does occur, immediately wash with large amounts of water. Avoid contact with bleach or other highly reactive reagents such as acids and bases if spills occur.



4. MIX:
   Invert the tube 5 times.

5. LABEL:
   Label the tube just below the 2 lines indicating the fill level.

   TRANSPORT: 2°C to 30°C

   STABILITY of SAMPLE: 12 months.

Reference: Roche 01-Nov-2012
SJRH Microbiology Lab Dec 2013

Conjunctival Sample Collection for Chlamydia Trachomatis (Culture)

Specimens should be collected only from symptomatic patients.

Use UTM (viral) transport swab collection kit. These are available by calling Laboratory Receiving at the SJRH (6575).

Both eyes should be sampled. For clinical purposes, both samples may be collected using the same swab. Use swab on less affected eye first to avoid further contamination of that eye.

Note: Swabbing of accumulated pus at the inner canthus or palpebral margin is NOT a reliable specimen.

1. Using the small swab, thoroughly swab the inner surface of the lower, then the upper eyelid. If Chlamydia is present, slight bleeding may occur.
2. Place swab in the UTM transport tube and break off the swab at the score line. Ensure specimen is labelled properly.
3. Request Chlamydia culture (C/S) and indicate which eye was sampled.
4. Keep refrigerated. Send to lab as soon as possible.

Classic Creutzfeldt-Jakob Disease (CJD); Other Classic TSE's

POLICY:

It is important for laboratory personnel to follow best practices for prevention of transmission of prion diseases such as Creutzfeldt-Jakob Disease (CJD also known as Transmissible Spongiform Encephalopathy – TSE), sporadic CJD (sCJD), variant CJD (vCJD), Gerstmann-Straussler-Scheinker syndrome (GSS), fatal familial insomnia (FFI).

The department of Laboratory Medicine commits to providing communication strategies that ensure all laboratory staff in potential contact with specimens/tissue from an at-risk or high-risk patient for CJD are aware of the precautions necessary to prevent transmission.

Because of the additional precautions and potential associated risks to performing CJD testing, ordering of CJD testing is restricted to only Neurologists and samples **must only be collected Monday to Friday between 8:30 AM to 3:30PM.**

A Risk Assessment will be conducted, on the patient, by the attending physician in accordance with Infection Control Policy HHN I-050, Classic Creutzfeldt-Jakob Disease and Other Transmissible Spongiform Encephalopathies.

Level of Infectivity/Prion Concentration

Identification of Infectivity Risk of Tissues/Fluids	
Level of Infectivity/ Prion concentration	**Tissues, Secretions and Excretions**
High Infectivity/ High concentration	Brain, spinal cord, dura mater, pituitary, eye[1] (including optic nerve and retina).
Low Infectivity/ Low concentration	CSF[2], kidney, liver, lung, lymph nodes, spleen, and placenta
No detected infectivity/ No prions detected	Adipose tissue, adrenal gland, **blood, bone marrow**, breast milk, dental pulp, feces, heart, nasal mucous, prostate, saliva, semen, skin, sweat, tears, testis, thyroid gland, urine

1. The highest level of infectivity in the eye are associated with the optic nerve and retina, to a much lower level the cornea. It is expected that levels of infectivity for other parts of the eye are low or nonexistent. There is no infectivity with tears.

2. Although CSF is classified as low infectivity and is less infectious than high infectivity tissues it was felt that instruments contaminated with CSF should be handled in the same manner as those contacting high infectivity tissues in High Risk and At Risk

Communication Process:

Upon ordering and collection of suspected CJD samples, the order physician (or delegate) will contact the Medical Microbiologist to initiate laboratory CJD protocol. Central receiving staff will be notified by the Microbiologist of the CJD protocol and wait for sample to arrive before contacting each division. Infection Control is notified of suspected CJD by the ordering physician.

Roles and Responsibilities:

Ordering physicians/ collecting agent

Samples collected for suspected CJD, should be placed individually in small plastic biohazard bags. Each small bag can then be placed in one large bag for transport to the lab. This will allow for laboratory personnel to safely log the specimens into the LIS without direct exposure.
The outside bag containing samples should be clearly labelled with **"CJD precautions"** and if required, the manual requisition should be clearly labelled with **"CJD Prion Agent"** and can be placed in the large outer bag. It is important that the requisition not be place in the same bag as the sample.

- Samples must be transported to the lab by porter, not PTS.

Packaging and transport between facilities:

In the case that samples must be shipped to/from an outside area, staff must follow TDG procedures for shipping 6.2, UN3373, Biological Substance, Category B.

Storage and Disposal

When a CSF or tissue sample is cleared for disposal, it should be disposed of (in its original container) in a leak-proof red biohazard puncture-resistant bucket and disposed by incineration.

Patient slides should be quarantined and disposed of by incineration, using CJD precautions.
Once samples are safely stored in sealed red biohazard bucket, contact EVS ext. 6406 to have EVS personnel remove buckets from the lab.

Decontamination of workspace:

CJD/TSE agents are particularly resistant to standard physical and chemical methods of inactivation and decontamination. It is important to note that most chemical disinfectants are ineffective at reducing infectivity and some, acting as protein fixatives, may stabilize the agent. Therefore, effective cleaning is of great importance in the removal of these agents.

The disinfectant of choice is 1N NaOH for 1 hour which is considered effective at reducing infectivity when used at ambient temperature. Laboratory work surfaces that have been exposed to suspected CJD samples should be thoroughly cleaned and decontaminated as per divisional policy.

Section 12: PATIENT instructions for specimen collection

Réseau de santé Horizon
Health Network

RANDOM URINE COLLECTION INSTRUCTIONS FOR PATIENT

For the proper diagnosis and treatment of your case, your physician has requested that a urine specimen be collected. It is extremely important that this be a sterile specimen. Please read these instructions thoroughly before you begin your collection.

1. Please wash your hands thoroughly for at least 10 seconds.
2. Void a small amount into the toilet.
3. Stop the stream of urine and position the container.
4. Resume voiding until container is about half full.
5. Finish voiding into the toilet.
6. Replace the lid tightly.
7. Label with your first name, last name, date of birth, Medicare number, date and time of collection.

NOTE:
- **Specimens received by the laboratory with incomplete or incorrect information will not be processed.**
- **The specimen cannot be contaminated with stool because this will greatly affect the results.**

Urine sample should be transported to the laboratory as soon as possible after collection. **Optimally the testing is to be completed within 4 hours of collection.** If a delay in transport is anticipated, urine samples should be refrigerated at (3-5°C) to slow growth of bacteria until testing is performed. If the delay is greater than 8 hours, specimens will not be processed.

If you have any question please call the Chemistry Laboratory at 648-6587 Monday to Friday 8:30 – 4:30.

After the collection is completed bring the container to the specimen drop off at the following locations:

Saint John Regional Hospital-level 1
Monday – Friday 7:30 am – 3:30 pm

Saint Joseph's Hospital
Monday – Friday 7:00 am – 3:00 pm

Fundy Health Center
Monday – Friday 8:00 am – 11:00 am
Saturday 8:00 am – 10:30 am

Charlotte County Hospital
Monday – Friday 7:00 am – 3:00 pm

Sussex Health Centre
Monday – Friday 7:00 am – 3:00 pm

KV Health Center
Monday – Friday 7:30 am – 3:00 pm

NOTE: These sites are closed on statutory holidays

60503 ns (03/15)

CONSIGNES POUR LES PATIENTS DEVANT FOURNIR UN ÉCHANTILLON D'URINE AU HASARD

Afin de diagnostiquer votre cas avec exactitude et de vous soigner convenablement, votre médecin a demandé que vous recueilliez un échantillon d'urine.
Il est extrêmement important que cet échantillon soit stérile. Veuillez lire ces consignes attentivement avant de commencer votre collecte.

1. Veuillez vous laver les mains à fond pendant au moins 10 secondes.
2. Urinez un peu dans la toilette.
3. Cessez d'uriner et positionnez le récipient.
4. Recommencez à uriner jusqu'à ce que le récipient soit à demi plein.
5. Continuez ensuite d'uriner dans la toilette.
6. Fermez bien le couvercle.
7. Inscrivez sur l'étiquette votre prénom, votre nom, votre date de naissance, votre numéro d'assurance-maladie, la date et l'heure de la collecte.

REMARQUE :
- **Le laboratoire ne traitera pas d'échantillons portant des renseignements incomplets ou inexacts.**
- **Assurez-vous que l'échantillon n'est pas contaminé par des selles, car cela affectera grandement les résultats.**

Les échantillons d'urine doivent être livrés au laboratoire dès que possible après la collecte. **Idéalement, l'analyse devrait avoir lieu dans les quatre heures suivant la collecte.** Si vous prévoyez un retard dans la livraison, réfrigérez vos échantillons d'urine (3 à 5 °C) afin de retarder la croissance de bactéries jusqu'à ce que l'analyse soit entamée. Si le retard de livraison excède huit heures, les échantillons ne seront pas analysés..

Pour toute question, veuillez communiquer avec le Laboratoire de chimie au 648-6587, du lundi au vendredi, de 8 h 30 à 16 h 30.

Lorsque vous aurez prélevé votre échantillon d'urine, apportez votre récipient au comptoir de dépôt d'échantillons à l'un des établissements suivants :

Hôpital régional de Saint John – 1er étage
Du lundi au vendredi, de 7 h 30 à 15 h 30

Hôpital St. Joseph
Du lundi au vendredi, de 7 h à 15 h

Centre de santé de Fundy
Du lundi au vendredi, de 8 h à 11 h
Le samedi, de 8 h à 10 h 30

Hôpital du comté de Charlotte
Du lundi au vendredi, de 7 h à 15 h

Centre de santé de Sussex
Du lundi au vendredi, de 7 h à 15 h

Centre de santé de la Vallée de Kennebecasis
Du lundi au vendredi, de 7 h 30 à 15 h

NOTA : Les comptoirs de dépôt d'échantillons sont fermés les jours fériés.

24-Hour Urine Collection – Patient Instructions

CAUTION: The collection bottle may contain a preservative (a powdered substance or liquid). **DO NOT** remove it from the container. This preservative may cause burns to skin, fabric and many solid materials. **DO NOT** urinate directly into the container. **Avoid** splashing when pouring urine into the container. If contact with the preservative occurs, flush the area with water for 15 minutes. If a burn or rash appears or if ingested, seek medical attention. Keep the container in an **UPRIGHT** position so it does not leak or spill. **Keep out of reach of children.**

Instructions for ALL 24-hour urines:

1. Label the collection container correctly with: Patient first and last name, date of birth, Medicare number, start and stop dates and times of collection. **Specimens received by the laboratory with incomplete or incorrect information will not be processed.**
2. These specimens are not processed on weekends/holidays. Therefore, collect urine during periods Sunday through Thursday with appropriate modifications for holidays.
3. **Do not** collect urine in metal or glass urinals, pans or containers.
4. **FEMALES** – If possible, do not collect urine specimens while menstruating.
5. Select a start time usually upon waking in the morning (i.e. 8:00 a.m.). Empty your bladder into the toilet, as usual. Record this time and date on the collection container label and requisition (if applicable) as the start time and date.
6. You must collect all urine voided for the next 24-hour period. Collect the urine starting the next time you urinate, in a clean plastic container. Slowly pour all urine into the 24-hour urine container each time after urinating for a 24-hour period. Replace lid tightly after each collection, swirl gently to mix and keep the container upright in a cool, dark place (refrigerator or a basin with cold water).
7. Collect your final urine sample exactly 24 hours after the start time the previous day. Attempt to void, even if you do not feel the urge to void, empty your bladder completely and add the urine to the container.
8. Record this time and date on the container label and on the requisition as the finish time and date.
9. Deliver the container(s) and requisition to the laboratory as soon as possible after **the collection is completed**.

Note:

- Please refer to the Drug/Diet restriction sheet HHN-0840 if applicable.
- A blood test is required for Creatinine Clearance Urines Test which **must** be collected within 2 days of collection of the urine.

HHN-0858 (05/18)

Directives aux patients pour la collecte des urines sur 24 heures

ATTENTION : Le contenant utilisé pour la collecte d'urine pourrait renfermer un agent de conservation sous forme de poudre ou de liquide. **NE le retirez PAS** du contenant. Cet agent de conservation peut causer des brûlures à la peau ou endommager de nombreux tissus et matériaux solides. **N'urinez PAS** directement dans le contenant. Évitez les éclaboussures lorsque vous versez l'urine dans le contenant de collecte. En cas de contact avec l'agent de conservation, rincez la zone avec de l'eau pendant 15 minutes. Si une brûlure ou une éruption cutanée apparaît sur votre peau ou si vous ingérez l'agent de conservation, consultez un médecin. Gardez le contenant en position **VERTICALE** pour éviter qu'il ne coule ou ne se renverse. **Gardez hors de la portée des enfants.**

Directives à suivre pour TOUTE collecte des urines sur 24 heures :

1. Inscrivez les renseignements suivants sur l'étiquette du contenant de collecte d'urine : prénom, nom, date de naissance, numéro d'assurance-maladie et la date et l'heure du début et de la fin de la collecte des urines. **Le laboratoire ne traitera pas les** échantillons portant des renseignements incomplets ou inexacts.
2. Le laboratoire ne traite pas les échantillons les fins de semaine et les jours fériés. Par conséquent, recueillez votre urine entre le dimanche et le jeudi et faites les modifications appropriées pour les jours fériés.
3. **Ne faites pas** la collecte des urines dans un urinoir, une cuvette ou un récipient en métal ou en verre.
4. **FEMMES** – Ne faites pas la collecte des urines lors de vos menstruations.
5. Choisissez une heure pour commencer la collecte des urines, habituellement au réveil le matin (c.-à-d. 8 h). Videz votre vessie dans la toilette comme d'habitude. Inscrivez sur l'étiquette du contenant de collecte (et sur le formulaire de demande de services de laboratoire, s'il y a lieu) l'heure et la date à laquelle vous avez uriné comme l'heure et la date du début du processus de collecte.
6. La prochaine fois que vous urinerez, et chaque fois que vous urinerez pendant la prochaine période de 24 heures, vous devez recueillir toute votre urine dans un contenant de plastique propre. Ensuite, versez lentement l'urine dans le contenant de collecte des urines sur 24 heures. Fermez bien le contenant après chaque collecte. Mélangez l'urine avec l'agent de conservation en remuant légèrement le contenant tout en le maintenant en position verticale. Rangez-le ensuite dans un endroit frais et sombre comme un réfrigérateur ou un grand contenant d'eau froide.
7. Vous devez faire la dernière collecte d'urine exactement 24 heures après l'heure du début de la collecte des urines le jour précédent. Essayez d'uriner, même si vous n'en ressentez pas l'envie, afin de vider complètement votre vessie, et videz l'urine dans le contenant de collecte.
8. Sur l'étiquette du contenant de collecte, inscrivez l'heure et la date à laquelle vous avez uriné pour la dernière fois comme l'heure et la date de la fin du processus de collecte.
9. Remettez tout contenant d'urine (et le formulaire de demande de services de laboratoire, le cas échéant) le plus tôt possible après la fin de la période de collecte des urines.

Note :

- Veuillez vous référer au Formulaire de restrictions relatives aux médicaments et à l'alimentation (HHN-0840), s'il y a lieu.
- Le test d'urine de clairance à la créatinine **exige** que vous subissiez un test sanguin dans les 2 jours suivant la collecte des urines.

Patient Occult Blood Collection Instructions

1. Follow the provided Drug and Diet guidelines before and during the stool collection period.

DRUG Guidelines:

- For seven (7) days before, as well as during the stool collection period, AVOID non-steroidal anti-inflammatory drugs such as ibuprofen, naproxen or aspirin (more than one aspirin per day).
- Acetaminophen (Tylenol) can be taken as needed.
- For three days (3) before, as well as during the stool collection period, AVOID vitamin C in excess of 250 mg a day from supplements and citrus fruits and juices.

NOTE: Please talk to your doctor or pharmacist if you have any questions about medications that you take regularly. Some iron supplements contain vitamin C in excess of 250 mg. (100% of RDA of vitamin C for an adult is 60 mg a day.)

DIET Guidelines:

- For three (3) days before, as well as during the stool collection period, patient must eat a well-balanced diet including fibre such as bran cereals, fruit and vegetables.
- For three (3) days before, as well as during the stool collection period, AVOID red meats such as beef, lamb and liver.

2. Complete the requisition (if provided), the Hemoccult white envelope and each Hemoccult card with your full name, age, full address, phone number, doctor's name, and the date and time of collection. DO NOT TEAR THE CARD APART.

3. Open the white envelope and follow collection instructions or use the following instructions:

- Collect stool in a clean dry container. Specimens should be collected from samples taken on **three (3) different days.** Only **collect one stool sample per day**. It will therefore take a minimum of 3 **days** to collect all 3 samples. Do not collect the samples if blood is visible in stool or urine.
- Open the front section of card and using the provided applicator stick, collect a small sample of stool, and apply a THIN smear covering BOX A. Collect a second sample from a different portion of the stool sample and apply to BOX B in the same card.
- Close the card and insert the tab into the slot. Store the card at room temperature in the white envelope. This allows the sample to air dry.
- Repeat the above steps for the 2nd and 3rd collections. Reminder: Only collect one stool sample per day.
- After completing the last sample collection, allow 24 hours for the sample to dry and then return the requisition, the envelope and labelled cards to the laboratory. The requisition MUST accompany samples. **Samples must be received by the laboratory within 10 days of collection.**

NOTE: Specimens without the proper patient information and no date and time of collection or without an accompanying requisition, will not be accepted.

HHN-0752 (04/17)

Directives à l'intention des patients : prélèvement des selles pour le test de dépistage de sang occulte

1. Suivez les lignes directrices concernant les médicaments et le régime alimentaire avant et après la période de prélèvement d'échantillons de selles.

Lignes directrices sur les MÉDICAMENTS :

- Pendant les sept (7) jours précédant et durant la période de prélèvement d'échantillons de selles, ÉVITEZ les anti-inflammatoires non stéroïdiens (AINS) tels qu'ibuprofène, naproxène ou aspirine (plus d'une aspirine par jour).
- Vous pouvez prendre de l'acétaminophène (Tylenol) au besoin.
- Pendant les trois (3) jours précédant et durant la période de prélèvement d'échantillons de selles, ÉVITEZ de consommer plus de 250 mg par jour de vitamine C, que ce soit sous forme de suppléments, d'agrumes ou de jus.

  NOTA : Veuillez consulter votre médecin ou pharmacien si vous avez des questions concernant les médicaments que vous prenez régulièrement. Certains suppléments de fer contiennent plus de 250 mg de vitamine C. Pour un adulte, l' apport journalier recommandé (AJR) en vitamine C est de 60 mg.

Lignes directrices ALIMENTAIRES :

- Pendant les trois (3) jours précédant et durant la période de prélèvement d'échantillons de selles, suivez un régime alimentaire équilibré, incluant des fibres provenant de céréales de son et de fruits et légumes.
- Pendant les trois (3) jours précédant et durant la période de prélèvement d'échantillons de selles, ÉVITEZ la viande rouge (par ex. : bœuf, agneau et foie).

2. Remplissez le formulaire de demande (si fourni), l'enveloppe blanche et chaque carte pour le test de dépistage hémocculte en y indiquant votre nom au complet, votre âge, votre adresse complète, votre numéro de téléphone, le nom de votre médecin et la date et l'heure du prélèvement. N'ENDOMMAGEZ PAS LA CARTE.

3. Ouvrez l'enveloppe et suivez les directives concernant le prélèvement, ou utilisez les directives suivantes :

- Recueillez les selles dans un récipient propre. Les échantillons doivent être prélevés de selles recueillies sur **trois jours consécutifs.** Prélevez seulement **un échantillon de selles par jour**. Il faudra au moins **trois jours** pour prélever tous les trois échantillons. Ne prélevez pas l'échantillon si du sang est visible dans les selles ou l'urine.
- Ouvrez la section avant de la carte et à l'aide du bâton d'application, prélevez un petit échantillon de selles. Appliquez une MINCE couche à la BOÎTE A. Prélevez un deuxième échantillon d'une autre portion des selles et appliquez-le à la BOÎTE B de la même carte.
- Fermez la carte et insérez la languette dans la fente. Entreposez la carte à la température de la pièce dans l'enveloppe blanche. Ceci permettra aux échantillons de sécher à l'air.
- Répétez les étapes ci-dessus pour les deuxième et troisième prélèvements. N'oubliez pas de prélever seulement un échantillon de selles par jour.
- Après avoir terminé le dernier prélèvement d'échantillons, attendez 24 heures afin que les échantillons puissent sécher et ensuite, remettez la demande, l'enveloppe et les cartes étiquetées au laboratoire. La demande DOIT accompagner les échantillons. **Les échantillons doivent être reçus au laboratoire dans les 10 jours qui suivent les prélèvements.**

  NOTA : Les échantillons ne seront pas acceptés en l'absence des renseignements complets du patient, de l'indication de la date et l'heure des prélèvements ou de la demande elle-même.

HHN-0752 (04/17)

Laboratory Medicine Program

Instructions for Collection Urine Routine Culture, Yeast and TB (Mycobacteria)

Preparation

1. The following items should be within easy reach:
    - Dry sterile container – loosen the lid but do not touch the inside.
    - Clean wash cloth/paper towels or tissues dampened with warm water and soap or supplied wipe
    - Clean dry washcloth, paper towel or tissues.
2. Wash hands with soap and water.

Note: For TB culture, entire first morning urine is required.

FEMALES – Instructions for Actual Collection

- Sit comfortably on the toilet, and swing one knee to the side as far as possible.
- Move apart the outer and inner folds of skin around the vagina with one hand and hold until the specimen is collected.
- Using the wet cloth/tissue/wipe, wash the area around the opening through which the urine passes.
- Dry the area with the dry washcloth, paper towel or tissues.
- Start to urinate (pee) into the toilet.
- After the first few drops have been passed, stop and collect the next portion of urine into the sterile container – the container should be about half-full.
- Place the lid carefully on the container and close tightly. Wash hands with soap and water. Ensure your sample has your correct name and Medicare number on it.

MALES – Instructions for Actual Collection

- Using the wet cloth/tissue/wipe, wash the head of the penis (if not circumcised, the foreskin must be pulled back).
- Dry the area with the dry washcloth, paper towel or tissues.
- Start to urinate (pee) into the toilet.
- After the first few drops have been passed, stop and collect the next portion of urine into the sterile container – the container should be about half-full. Place the lid carefully on the container and close tightly. Wash hands with soap and water. Ensure your sample has your correct name and Medicare number on it.

Labelling and Transport

1. Make sure the cover is securely on the container and that the outside of the container is clean and dry.
2. Label the container with the patient's name, Medicare number, time and date of collection and the doctor's name.
3. Bring to the Hospital Laboratory as soon as possible (within 24 hours). The specimen must be kept in the refrigerator. A completed requisition from the provider is also required.

Instructions for Collection Urine for GC & CHLAM PCR

Chlamydia & GC Testing

1. Do not urinate (pee) within one hour prior to collection.
2. Collect the first 15 to 30 mL (¼ to ½ cup), i.e. the first part of the urine stream directly into a dry, sterile container.
3. Wash hands with soap and water.
4. Label and transport as per above.

HHN-0822 (02/18)

Programme de médecine de laboratoire

Directives pour la collecte d'échantillons d'urine — culture routine, mycologie et tuberculose (mycobactéries)

Préparation

1. Garder les articles suivants à la portée de la main :
   - Contenant stérile sec (Dévisser le couvercle, mais ne pas toucher l'intérieur.)
   - Débarbouillette ou serviette en papier propre et imbibée d'eau tiède et de savon (ou lingettes nettoyantes fournies)
   - Débarbouillette ou serviette en papier sèche et propre
2. Se laver les mains avec de l'eau et du savon.

NOTE : Pour la culture de tuberculose, recueillir la quantité totale de la première urine du matin.

FEMMES : Directives pour la collecte d'urine

- S'asseoir confortablement sur la toilette et amener un genou le plus loin possible vers le côté.
- Écarter les grandes et les petites lèvres vaginales avec une main et les maintenir dans cette position jusqu'à la fin de la collecte d'urine.
- Avec une débarbouillette ou une serviette en papier et de l'eau savonneuse (ou les lingettes fournies), nettoyer la vulve (zone autour de l'ouverture par laquelle l'urine passe).
- Sécher avec une débarbouillette ou une serviette en papier.
- Uriner un peu dans la toilette.
- Après quelques gouttes, uriner directement dans le contenant stérile jusqu'à ce qu'il soit environ à moitié plein.
- Avec soin, remettre le couvercle sur le contenant et bien le fermer.
- Se laver les mains avec de l'eau et du savon. S'assurer que le contenant porte le bon nom et le bon numéro d'assurance-maladie.

HOMMES : Directives pour la collecte d'urine

- Avec une débarbouillette ou une serviette en papier et de l'eau savonneuse (ou les lingettes fournies), nettoyer la tête du pénis. Les hommes incirconcis doivent rétracter le prépuce.
- Sécher avec une débarbouillette ou une serviette en papier.
- Uriner un peu dans la toilette.
- Après quelques gouttes, uriner directement dans le contenant stérile jusqu'à ce qu'il soit environ à moitié plein.
- Avec soin, remettre le couvercle sur le contenant et bien le fermer. Se laver les mains avec de l'eau et du savon. S'assurer que le contenant porte le bon nom et numéro d'assurance-maladie.

Étiquetage et transport

1. S'assurer que le couvercle est bien fermé et que l'extérieur du contenant est propre et sec.
2. Sur l'étiquette du contenant, inscrire : le nom et le numéro d'assurance-maladie du patient; l'heure et la date de la collecte d'urine; et le nom du médecin.
3. Apporter l'échantillon au laboratoire de l'hôpital le plus tôt possible (dans les 24 heures). En attendant, conserver l'échantillon au réfrigérateur. Apporter également le formulaire de demande d'analyse de laboratoire que le médecin aura dûment rempli.

Directives pour la collecte d'échantillons d'urine — dépistage de la gonorrhée et de la chlamydia par PCR

Directives pour la collecte d'urine -dépistage de la chlamydia et de la gonorrhée

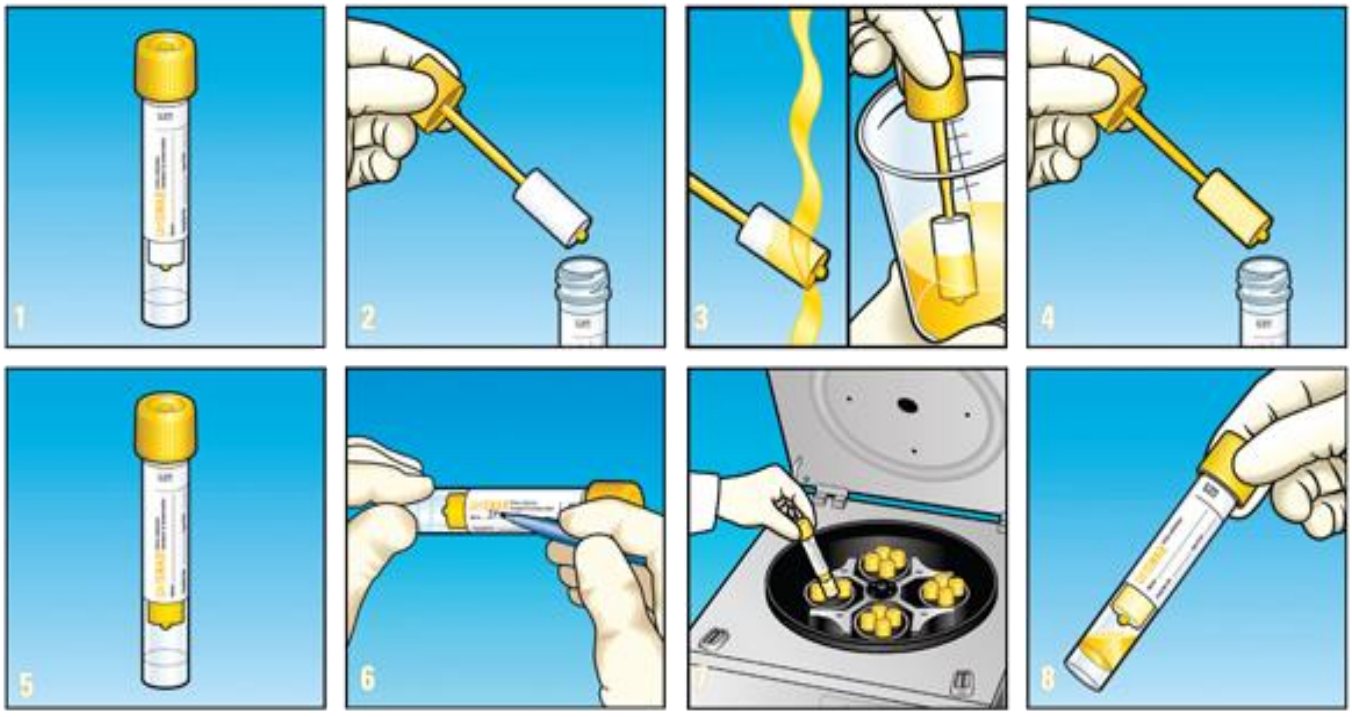
1. Ne pas uriner durant l'heure qui précède la collecte de l'échantillon.
2. Commencer à uriner directement dans le contenant stérile sec afin de recueillir le tout premier jet d'urine, soit environ 15 à 30 ml (ou 1/4 à 1/2 tasse) d'urine.
3. Se laver les mains avec de l'eau et du savon.
4. Étiqueter et transporter le contenant en suivant les directives ci-dessus.

HHN-0822 (02/18)

How to use UriSWAB Collection System

UriSWAB

1. ***Unscrew cap.***
2. ***Remove UriSWAB applicator.***
3. ***Dip applicator sponge into urine sample for 5 seconds to saturate OR hold applicator sponge in stream of urine to saturate.***
4. ***Return UriSWAB applicator to tube, close securely.***
5. ***Sponge retains sample.***
6. ***Write name and identifier on tube. Send to laboratory.***
7. ***In laboratory: centrifuge.***
8. ***Sample is released from sponge for use.***



Instructions for Collection of Pinworm Specimen

Collecting Pinworm Sample

Note: The best time to collect this specimen is early morning before arising and emptying the bowel.

1. Remove the cap with the attached clear plastic paddle. One side of the paddle is coated with a non-toxic, mildly adhesive material marked "sticky side". Do NOT touch this with your fingers.
2. Press the sticky surface against the perianal skin (area around the anus) using moderate pressure. Avoid contaminating the paddle with feces.
3. Screw the paddle/cap back into the container.
4. Write the following information on the specimen container:
   - Patient's full name
   - Patient's health care number
   - Date and time the sample was collected

Storing Pinworm Sample Before Delivering to Laboratory

The sample should be kept at room temperature. The sample, along with the filled out requisition, should be delivered to the Laboratory as soon as possible.

HHN-0763 (06/17)

Directives pour le prélèvement d'échantillons d'oxyure

Comment prélever un échantillon d'oxyure

Note : Le moment idéal pour obtenir un échantillon d'oxyure est tôt le matin au réveil, avant de se lever ou d'aller à la selle.

1. Tenir la spatule par le capuchon et la retirer du tube. L'un des côtés de la spatule est revêtu d'un matériau légèrement adhésif et non toxique. Cette surface collante porte la mention « sticky side ». NE la touchez PAS avec vos doigts.
2. Presser de façon assez ferme la surface collante contre la région périanale (*autour de l'anus*). Éviter de contaminer la spatule avec les selles.
3. Remettre la spatule dans le tube et viser le capuchon.
4. Inscrire les renseignements suivants sur le tube :
   - Nom au complet du patient
   - Numéro d'assurance maladie du patient
   - Date et heure du prélèvement de l'échantillon

Entreposage de l'échantillon d'oxyure en attendant son transport au laboratoire

L'échantillon doit être conservé à température ambiante (température de la pièce). L'échantillon ainsi que la formule de demande remplie doivent être livrés au laboratoire dès que possible.

HHN-0763 (06/17)

HICL

SALIVARY CORTISOL COLLECTION INSTRUCTIONS

Instructions for collecting saliva with the Salivette® for Cortisol determination

PATIENT INSTRUCTIONS

Collect one or more specimens at the time(s) specified by your physician. Use a new Salivette® for each collection.

- Usual collection times are morning (between 8 – 9 a.m.) and/or afternoon (between 4 – 5 p.m.) or late night (10 p.m. – midnight).
- Collect saliva no earlier than 30 minutes after eating, drinking or oral intake of drugs. In the morning, collect prior to using toothpaste or mouthwash.

1. After washing your hands, remove the sterile cotton wool swab (b) from the suspended insert (c) of the Salivette®. Gently chew the cotton wool swab for 30-45 seconds, allowing it to absorb your saliva.
2. Return the saturated swab (b) to the suspended insert (c) and close the Salivette® firmly with the stopper (a).
3. Label the centrifuge vessel (d) with patient name (Last, First), date of birth, collection date and collection time.
4. Return the Salivette® to your doctor or the lab. If it is not possible to return it immediately, or if you have to collect several saliva samples, you should keep the used, labeled Salivettes® in the fridge.

IMPORTANT NOTES

- Accurate and complete labeling is very important; failure to do so will cause sample rejection and re-collection will be required.
- Do not use this product for children under the age of 3 or patients with increased risk of swallowing the swab.
- Do not use past the expiry date (yyyy-mm) indicated on the Salivette® label.

LABORATORY INSTRUCTIONS

- Reject samples with obvious signs of blood from bleeding gums.
- Centrifuge the Salivette® in its' entirety, to extract all of the saliva from the swab (b) in the suspended insert (c). The saliva will pass through a hole in the bottom of the suspended insert (c) into the centrifuge vessel (d).
- Discard the swab (b) and the suspended insert (c) and recap the Salivette® firmly with the stopper (a).
- Store and send frozen. If the specimen thaws it is unsuitable for analysis.

Cortisol-Salivary-V02.doc	**Version #:**	V02	**Version Date:**	01-Oct-09

Hospitals In-Common Laboratory Inc. (416) 391-1499 Customer Service Ext. 248 or 249

Instructions for Collection of Sputum Specimens

For Routine Culture, Mycobacterial (TB) Culture and Fungal Culture

Collecting sputum sample	1. The ideal time to collect a sputum sample is early in the morning just after getting out of bed and before eating. However, a sample may be collected at any time sputum can be produced. 2. **Do not** use mouthwash, brush teeth with toothpaste, or rinse mouth with water immediately before collection. 3. Open the sputum collection container and hold it very close to your mouth. 4. Take as deep a breath as you can and cough up sputum from deep in your chest/ lungs. The sputum will usually look thick and be yellow or green in color. **Do not spit saliva into the container.** 5. To obtain a sufficient volume of sputum (15mL or 1 tablespoon), you may expectorate (cough) several times into the same container. 6. Close the container lid tightly. 7. Confirm the collection container is labeled correctly with: • First and last name • Date and time of collection • Medicare number NOTE: Incorrect or incomplete information on the specimen label will result in the specimen not be tested. 8. Seal the sample in a Ziploc (sealable) bag.
Storing sputum sample before delivering to Laboratory	Take the sputum sample, along with a completed Laboratory requisition, to the Laboratory as soon as possible. If unable to bring the sample to the Laboratory right away, the sample can be stored in the refrigerator for up to 24 hours. Prolonged delays will affect the test results.

Mycobacterial (TB) Culture

- Follow the "Collecting Sputum Sample" instructions as outlined above.
- For optimal testing, three separate sputum samples should be collected on three separate mornings.
- Samples should be brought to the Laboratory each day.

If necessary, three sputum specimens (either spontaneous or induced) can be collected on the same day, at least 1 hour apart.

HHN-0452 (02/15)

Directives pour le prélèvement d'expectoration

Pour la culture systématique, la culture de mycobactériologie (tuberculose) et la culture fongique

Prélèvement d'expectoration	1. Le moment idéal pour faire le prélèvement d'expectoration est tôt le matin, au lever, et avant le déjeuner. Cependant, il est possible de le faire à tout autre moment où vous avez des expectorations. 2. **Vous ne devez pas** vous brosser les dents avec du dentifrice ou vous rincer la bouche avec un rince-bouche ou de l'eau immédiatement avant le prélèvement. 3. Ouvrez le contenant de prélèvement et tenez-le très près de votre bouche. 4. Inspirez aussi profondément que vous le pouvez et toussez afin de faire remonter des expectorations du creux de vos poumons. Les expectorations seront habituellement épaisses et jaunes ou vertes. **Ne crachez pas de la salive dans le contenant de prélèvement.** 5. Vous devrez peut-être tousser plus d'une fois avant de pouvoir déposer un volume suffisant d'expectoration dans le contenant (15 ml ou 1 c. à table). 6. Quand vous avez fini, fermez bien le couvercle du contenant. 7. Assurez-vous que l'étiquette sur le contenant de prélèvement contient les renseignements suivants : • votre prénom et nom; • la date et l'heure du prélèvement; • votre numéro d'assurance-maladie. NOTE : Les échantillons dont l'étiquette comporte des renseignements incorrects ou incomplets seront rejetés. 8. Placez le contenant de prélèvement dans un sac scellable Ziploc.
Entreposage du prélèvement d'expectoration avant son transport au laboratoire.	L'échantillon d'expectoration doit être apporté au laboratoire dès que possible et être joint d'une demande d'analyse de laboratoire dûment remplie. Si vous n'êtes pas en mesure d'apporter l'échantillon au laboratoire immédiatement, vous pouvez l'entreposer au réfrigérateur pendant jusqu'à 24 heures. Tout délai prolongé peut nuire aux résultats de l'analyse.

<u>Culture de microbactériologie (tuberculose)</u>

- Veuillez suivre les directives du prélèvement d'expectoration ci-dessus.
- Pour assurer la fiabilité des résultats, veuillez faire le prélèvement d'expectoration trois matins de suite.
- Vous devez apporter votre échantillon au laboratoire chaque jour.

Vous pouvez faire les trois prélèvements la même journée si cela est nécessaire (expectoration spontanée ou induite), mais veuillez attendre au moins une heure entre chaque prélèvement.

Instructions for Collection of STOOL Specimens for Microbiology

Collecting Stool Sample

1. Empty bladder
2. Collect stool sample in a clean, dry, disposable plastic container or onto a clean piece of paper.

   Do NOT let water or urine mix with the stool sample.

Adding Stool Sample to Specimen Container

Some specimen containers contain a preservative liquid. **This liquid must not be removed.**

1. Using the spoon built into the lid of the container, or a clean disposable spoon, select areas of the stool that are especially bloody or slimy. Place a walnut size piece of the stool into the specimen container.

   Add stool just to the "FILL LINE" marked on the side of the container.
   Avoid over filling

2. Replace the cap on the specimen container and tighten.
3. Containers with preservative liquid should be **mixed well. Shake the container with the liquid to mix the liquid with the stool sample.**

4. Wash hands with soap and water.
5. **Write the following information on the specimen container:**
   - patient's full name
   - patient's Medicare number
   - date and time the stool sample was collected.

Storing Stool Sample Before Delivering to Laboratory

Stool samples in containers with preservative liquid should be kept at room temperature. Stool samples in containers that do not include preservative liquid should be refrigerated.The stool sample, along with the requisition, should be delivered to the Laboratory within 24 hours.

Collecting Multiple Stool Samples

If you have been asked to collect more than one stool sample using the same container type:

- collect them **at least 24 hours apart.**
- include the date and time of each collection on the container.

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Directives relatives au prélèvement de SELLES pour Microbiologie

Prélèvement d'échantillons de selles

1. Videz votre vessie.
2. Prélevez un échantillon de vos selles et déposez-le dans un récipient de plastique jetable, propre et sec, ou sur un morceau de papier propre.

   ÉVITEZ de laisser l'échantillon de selles entrer en contact avec de l'eau ou de l'urine.

Dépôt des selles dans le récipient à échantillon

Certains récipients à échantillon contiennent un liquide de conservation. **Ce liquide ne doit pas être enlevé.**

1. À l'aide de la petite cuillère attachée au couvercle ou d'une cuillère jetable, sélectionnez des morceaux sanglants ou visqueux. Déposez une quantité de selles équivalente à la taille d'une noix dans le récipient.

   Trouvez la LIGNE DE REMPLISSAGE sur le côté du récipient.
   Ne dépassez pas cette ligne.

2. Remettez le couvercle sur le récipient et vissez-le.

3. Si le récipient à échantillon contient un liquide de conservation, le tout doit être **bien mélangé. Agitez le récipient afin que le liquide soit mélangé avec l'échantillon de selles.**

4. Lavez-vous les mains avec de l'eau et du savon.

5. **Inscrivez les renseignements suivants sur le récipient à échantillon :**
   - le nom au complet du patient;
   - le numéro d'assurance-maladie du patient;
   - la date et l'heure du prélèvement de l'échantillon de selles

Entreposage de l'échantillon de selles avant le transport au Laboratoire

Les récipients à échantillon contenant un liquide de conservation doivent être gardés à la température de la pièce. Les récipients à échantillon sans un liquide de conservation doivent être gardés au réfrigérateur. L'échantillon de selles et le formulaire de demande doivent être déposés au Laboratoire dans les 24 heures qui suivent le prélèvement.

Prélèvement de multiples échantillons de selles

Si on vous a demandé de prélever plus d'un échantillon de selles dans le même récipient :

- prélevez-les à des **intervalles de 24 heures au moins.**
- Inscrivez la date et l'heure du prélèvement sur le récipient.

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Section 13: Alphabetical Listing of Laboratory Tests

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
AAT	**Refer to Alpha-1 Antitrypsin (AAT)**				
ABO, Rh Type & AB Detection	02/06/23	Transfusion Medicine	Lavender top tube BD #367863	• Specimen must be statused as collected in the computer system by collection agent • If manual requisition, collection agent must sign first and last name in "collected by' field and include date/time of collection • Transfusion history/obstetrical history/transplant history are required • **STAT REQUEST**: Order STAT. Notify Transfusion Medicine by telephoning 648-6535	Candidate for Transfusion: **STAT**: <1 hour **Routine**: <6 hours A
Abuse Screen (random urine): – Cocaine metabolite – Benzodiazepines – Amphetamines – Ethanol – Oxycodone – Opiates – Methadone Metabolite	06/24/16	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1 hr. required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8^{0}C or for up to 5 days • See specimen collection guide- section 12	A
Acanthamoeba Culture	05/25/16	• Microbiology • Referred out of Province	Plain sterile specimen container Culture swab SPD #0251388	• Tissue & CSF preferred • Send to lab ASAP • Special case history required • Serum – only special circumstances	D
ACA	**Refer to Cardiolipin Antibody**				
ACE	**Refer to Angiotension Converting Enzyme**				
Acetaminophen Included in "Toxic Screen"	06/24/16	Biochemistry	Plain Red top BD #367815		A
Acetone (Screen)	**Refer to Beta-Hydroxybutyrate**				
Acetone (Quantitative): Serum	**Refer to Volatile Screen**				
Acetone: urine	**Refer to Urinalysis (Ketones)**				
Acetylcholine Receptor Antibody	01/06/14	• Biochemistry • Referred out of Province	Gold top tube BD #367986 or Red top tube BD #367815	Deliver to lab ASAP	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
ACTH	**Refer to Adrenocorticotrophic hormone**				
Actinomyces	**Refer to Microbiology Specimen by Source**				A
Acylcarnitine	03/25/21	• Biochemistry Referred out of province for testing	Gold top tube BD #367986 or Red top tube BD #367815		D
Acylcarnitine (Blotter Card)	03/17/2022	• Biochemistry • Referred out of province for testing	NBS Blotter Card (4 blood spots)		D
ADAMTS 13		• Haematology • Referred out of Province	2 Blue top tubes, 2.7 ml each BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Collect prior to apheresis • Order on manual requisition • Send to lab ASAP	D
Adenosine deaminase		• Microbiology • Referred out of Province	Plain sterile specimen container	Send refrigerated ASAP	D
Adenovirus Testing		• Microbiology • Referred within province	Viral Swab or Sterile specimen container	• Throat/Eye specimens should be in viral transport media • Feces/Urine/CSF/NPA/ Bronch washes in sterile container • Send to lab ASAP	D
ADH	**Refer to Antidiuretic Hormone**				
Adrenal Antibodies	Jan 2014	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Red top tube BD #367815		D
Adrenocorticotrophic hormone (ACTH)	02/16/18	• Biochemistry	Lavender top tube BD #367861	• Collect between 7 and 10am unless specified by physician for a challenge test • Refrigerated centrifuge must be available on site, otherwise send patient to SJRH. • Collect in pre-chilled (10 min on ice) tubes • Deliver to laboratory on ice within 30 min	C
AFP	**Refer to Alpha Fetoprotein (Tumour Marker) or MSS**				
ALA	**Refer to Porphyrin Precursors**				
Alanine Aminotransferase (ALT)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Albumin	01/17/20	Biochemistry	Lime green top BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Albumin: random urine	10/11/19	Biochemistry	Sterile urine container	• Includes Creatinine • See specimen collection guide- section 12	A
Albumin: 24h urine	10/11/19	Biochemistry	24h urine container (plain)	• Includes Creatinine • See specimen collection guide- section 12	A
Alcohol, ethyl (Ethanol)**:** urine	**Refer to Abuse Screen**				
Alcohol, ethyl (Ethanol) Included in "Toxic Screen"	**Refer to Ethanol**				
Alcohol, methyl (Methanol) quantitative	**Refer to Volatile Screen**				
Aldosterone	11/02/21	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Red top tube BD #367815	• Collect at 8am, no later than 10am (after the patient has been active for 2 hours). • Specimen should be collected while patient is in upright position. Supine values are 50% lower than upright collections. • Simultaneous collection of aldosterone and renin activity should be done to aid with interpretation. • If possible, discontinue spironolactone for 4-6 weeks prior to collection if as it increases renin activity. • ACE inhibitors can falsely elevate renin, thereby affecting interpretation of the aldosterone-renin ratio.	D
Allergy Testing (previously called RAST Test or ImmunoCAP)	04/19/16	• Haematology • Referred within the province	Gold top tube BD #367986 or Plain red top BD #367815	Moncton Serum Allergy Testing request form must accompany specimen	D
ALP	**Refer to Alkaline phosphatase**				
Alkaline Phosphatase (ALP)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Alkaline Phosphatase Isoenzymes	10/15/19	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Plain red top BD #367815		D
Alpha-1 Antitrypsin (AAT)	09/10/21	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Alpha-1 Antitrypsin (AAT) Random Feces	10/04/2017	• Biochemistry • Referred out of province	Sterile container supplied by Mayo Clinic. Obtained from Central Receiving. Call 648-6575 option 5.	• Deliver to lab at room temperature or refrigerated	D
Alpha-1-Antitrypsin: Proteotype	04/19/16	• Biochemistry • Referred out of province	Gold top tube BD #367986 or Red top BD# 367815	• Referral lab will reflex to Phenotyping if necessary.	D
Alpha-2 Antiplasmin			**Refer to Antiplasmin, alpha-2**		
Alpha-2 Macroglobulin	3/22/2023	• Biochemistry Referred out of province	Red top BD# 367815		D
Alpha-fetoprotein (Maternal screen)		**Refer to MSS (Maternal Serum Screen)**			
Alpha-fetoprotein (AFP) (Tumour Marker)	09/10/21	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Alpha-Galactosidase (Fabry Disease)	11/28/22	• Biochemistry • Referred out of province	2x 4.0 mL Green top tube (sodium heparin) BD#367962	- Test collection should be pre-arranged with SJRH Central Receiving -Collect at SJRH at noon -Send STAT to lab. -Must arrive at out of province referral lab within 24h of collection.	D
Alpha Gene Mapping		• Haematology • Referred out of province for testing	Three Lavender top tubes BD #367861		D
Alpha-hydroxyprogesterone (17-OH, P)	**Refer to Hydroxyprogesterone, alpha (17-OH, P)**				
Alpha-Tocopherol	**See Vitamin E**				
ALT	**Refer to Alanine Aminotransferase**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Aluminum (plasma)	06/09/16	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	Deliver to laboratory within 20 minutes.	D
AMA	**Refer to Cytoplasmic Antibodies Screen**				
Amino Acids (CSF)	10/15/19	• Biochemistry • Referred out of province for testing	CSF (min 1 mL) in plain tube and Blood specimen collected in Green top tube (Lithium Heparin) BD #367962	• Plasma sample must accompany CSF (should be collected at same time or within 4 hours) • Please include recent medications, diet restrictions and history of seizures. • Referral laboratory requires age and clinical diagnosis of patient on their request form.	D
Amino Acids (plasma)	06/09/16	• Biochemistry • Referred out of province for testing	Lime green top tube BD Barricor #365049	• Deliver to laboratory within 30 min • Please indicate: - Fasting (preferred) or non-fasting - Special diet - Clinical indicators	D
Amino Acids: random urine (Screen)	10/11/19	• Biochemistry • Referred out of province for testing	Sterile urine container	• Minimum 5 mL • Please provide a clinical history • See specimen collection guide- section 12	D
Aminolevulinic Acid, delta (ALA) porphyrin precursors	**Refer to Porphyrin Precursors**				
Ammonia	06/08/20	Biochemistry	Lavender-EDTA tube BD #367856	• Refrigerated centrifuge must be available on site, otherwise send patient to SJRH • Deliver to laboratory on ice within 30 min	A
Amoeba Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986	Special case history required	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Amphetamines: urine (Included in Abuse screen)	6/28/16	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1 hr required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC for up to 5days • See specimen collection guide- section 12	A
Amylase	01/14/21	• Biochemistry Referred within the province	Gold top tube BD #367986	• In most cases order should be replaced with Lipase • Serum should be separated within 2h of collection • Biochemist approval required as of 2012	D
AMTD – Mycobacterium (Amplification Molecular Test Direct)		• Microbiology • Referred out of Province	Plain sterile container	• 1 mL CSF required • Fresh tissue should be moist with saline	D
ANA	**Refer to Anti-Nuclear Antibodies Screen**				
Anaplasma Serology (Human Granulocytic Erlichiosis)		• Microbiology • Referred out of Province	Gold top tube BD #367986		D
ANCA	**Refer to Neutrophil Cytoplasmic Antibodies**				
Androstenedione	06/15/16	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Red top BD #367815. (Plasma K2EDTA or Na/Li Heparin also acceptable)	Females: Collect 1 week before or 1 week after menstrual period.	D
Angiotensin Converting Enzyme (ACE)	07/29/19	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Red top BD#367815		D
Antidiuretic Hormone (ADH)	**Refer to Copeptin**				
Antiplasmin alpha-2	04/19/16	• Haematology • Referred out of province for testing	Three Light Blue top tube BD #363083	• Refrigerated centrifuge must be available onsite, otherwise send patients to SJRH • Tube must be filled to the etched fill indicator line on the tube. • Freeze 2 aliquots at -70°C	D
Antithrombin III	08/16/18	Haematology	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube.	D
Anti-cardiolipin antibodies	**Refer to Cardiolipin antibodies**				

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Anti-cylic citrullinated antibody (anti-CCP)	6/15/16	• Biochemistry • Referred within province for testing	Red top tube BD #367815	Separate serum from cells within 2 hours of collection. Referred out TAT 2 weeks	D
Anti-DNA	04/26/16	Haematology	Red top tube BD #367820 or Gold top tube BD #367986	Referred out TAT 2 weeks	D
Anti-Dnase B Titer	**Test no longer available**				
Anti-glomerular basement membrane (anti-GBM)	**Refer to Glomerular Basement Membrane antibodies**				
Anti-liver Kidney Microsomal (anti-LKM)		• Biochemistry Referred out of province for testing	Red top tube BD #367820 or Gold top tube BD #367986	Referred out TAT 2 weeks	D
Anti-microsomal antibodies	**Refer to Thyroid Peroxidase antibodies (Anti-TPO)**				
Anti-mitochondrial antibodies (AMA)	**Refer to Cytoplasmic Antibodies Screen**				
Anti-Mullerian Hormone (AMH)	11/09/18	Biochemistry Referred out of province for testing	Gold SST tube BD #367986 or Lt Green top BD #367962	Must be sent to lab immediately Referred out TAT 2 weeks	D
Anti-neutrophilic cytoplasmic antibodies (ANCA)	**Refer to Neutrophil cytoplasmic antibodies**				
Anti-nuclear antibodies (ANA) Screen		Haematology	Red top tube BD #367820 or Gold top tube BD #367986	Referred out TAT 2 weeks	D
Anti-reticulin antibodies (ARA)	**Refer to Cytoplasmic Antibodies Screen**				
Anti-streptolysin “O” Titre (ASOT)		• Microbiology • Referred out of Province	Gold top tube BD #367986	Referred out TAT 1 week	D
Anti-TPO	**Refer to Thyroid Peroxidase antibodies (Anti-TPO)**				
Anti-Tissue Transglutaminase	**Refer to T-Transglutaminase – AB**				
Apolipoprotein A_1	10/31/14	Biochemistry	**Test not available as of October 31, 2014**		
Apolipoprotein B	10/25/17	Biochemistry	Gold top tube BD #367986	Time required between requests is 6 weeks	D
Apolipoprotein C_2 Activation	10/31/14	Biochemistry	**Test not available as of October 31, 2014**		
APT Test (For swallowed blood syndrome in newborns)	12/02/15	Biochemistry	**Test not available as of January 2015**		
APTT	**Refer to Partial Thromboplastin Time Activated**				
ARA	**Refer to Cytoplasmic Antibodies screen**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Arbovirus	05/26/16	• Microbiology • Referred out of Province	Gold top tube BD #367986	Special case history must specify which Arbovirus they want and travel.	D
Arsenic: Urine (24 hr. or random)	10/11/19	• Biochemistry • Referred out of province for testing	24 hr. urine container (plain) or Sterile Specimen Container for random	• Avoid seafood consumption for 5 days prior to collection • Collect in a clean metal free collection basin • See specimen collection guide-section 12	D
Arsenic: Blood	04/19/16	Biochemistry	**Test not available as of December 2014**		
Arsenic: Hair	04/19/16	Biochemistry	**Test not available as of December 2014**		
Ascaris Serology		• Microbiology Referred out of Province	Gold top tube BD #367986	Special case history required	D
Ascorbic Acid (Vitamin C)	**Refer to Vitamin C**				D
ASOT	**Refer to Antistreptolysin "O" Titre**				D
Aspartate Aminotransferase (AST)	2/24/23	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Aspergillosis antibodies (Aspergillus IgE)	05/26/16	• Microbiology • Referred out of Province	Gold top tube BD #367986		D
Aspirin	**Refer to Toxic screen (Salicylate)**				
AST	**Refer to Aspartate Aminotransferase**				
Astrovirus Stool	3/14/18	• Send-out within province	Plain container	Part of Viral Testing Stool panel	D
ATRYP	**Refer to Alpha-1 Antitrypsin (AAT)**				
Avian Antigen Specific IgG Assay (Options) 1.Budgie IgG Antibodies 2.Parrot IgG Antibodies 3.Pigeon IgG Antibodies 4.Avian IgG Antibodies Panel used for Budgie and Pigeon	11/09/18	Haematology Referred out of province for testing	Full Plain red	Assay detects antibodies to serum protein, feathers, and droppings	D
B-Carotene	06/23/16	• Biochemistry • Referred out of province for testing	Full Red stopper tube	Avoid Hemolysis. Protect from light. Specimen must be labeled inside and outside light protecting wrap (FOIL). Off site: Aliquot serum and send frozen.	B

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BCR-ABL		• Molecular Diagnostics	2 Lavender top tubes BD #367861 Blood or Bone Marrow	• Order electronically in HIS or Fill out Molecular Diagnostics requisition. • Collection Monday to Thursday • Send specimen to laboratory with 24 hours of collection	C
Babesiosis Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986	Special case history required	D
Balamuthia		• Microbiology • Referred out of Province	(CSF) – Sterile container (Serum) – Gold top tube BD #367986	Special case history required	D
Barbiturates Screen	02/22/17	Biochemistry	**Test not available as of February 2017**		A
Bartonella serology (Cat Scratch Disease)	05/26/16	• Microbiology • Referred out of Province	(Fluids) – Sterile container Gold top tube BD #367986		D
Bartonella PCR	3/14/18	• Microbiology • Referred out of Province	Tissue/ Paraffin Block		D
Bence Jones Protein: urine	**Refer to Protein Electrophoresis: Random urine/24 hr. urine**				
Benzodiazepine Screen: urine (Included in Abuse screen)	06/27/16	Biochemistry	Sterile Specimen Container	• Refrigerate or keep on ice if more than 1 hr required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC or for up to 5 days • See specimen collection guide- section 12	A
Benzodiazepine Screen	02/22/17	Biochemistry	**Test not available as of February 2017**		A
Beta-2-microglobulin	**Refer to Microglobulin, beta-2**				
Beta Transferrin-fluid	11/13/18	Biochemistry • Referred out of Province	Sterile Container or Red top tube BD# 366703	Indicate source. Send to lab immediately on ice.	D
Beta-2-Glycoprotein	05/09/19	Hematology Referred out of Province for testing	Gold or Red Stoppered tube	If specimen thaws it will be unsuitable for analysis	
Beta-2 Transferrin	**Refer to Beta Transferrin**				
Bile Acids, Total	06/23/16	• Biochemistry • Referred within province for testing	Gold topped tube BD# 367986 or Lt Green top BD#367962	8 hour Fast required. Deliver to lab within 2 hours of collection, store upright at 4°C.	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Bilirubin (Neonatal) Total		Biochemistry	Amber 160emolysed 160r BD #365978		A
Bilirubin (Neonatal) Total & Direct	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Bilirubin, Total, serum or plasma	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Bilirubin, Total & Direct, serum or plasma	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Bioavailable Testosterone	01/14/21	• Biochemistry • Referred within province for testing	Gold top tube BD #367986	Deliver to lab within 2 hrs. of collection. If referred from outside SJRH, send frozen.	D
BK Viral Load		• Microbiology • Referred within Province	EDTA specimen (2)	Send to lab ASAP on ice within 6 hours	D
BK Viral Load		• Microbiology • Referred outside Province	Urine – plain container		D
Blastomyces serology		Microbiology • Referred out of Province	Gold top tube BD #367986		D
Bloodborne Pathogen Panel		Microbiology	Gold top tube BD #367986 (2)	HbsAg, HIV Ag/Ab, Syphilis, Anti-HCV (included)	B
Blood Culture	**Refer to Microbiology Specimen by Source**				A
Blood Gases (Arterial) (ABG)	3/8/2023	Biochemistry	Safe-Pico Self Fill Syringe SPD #0111903	Transport at Room Temperature to lab promptly. Samples beyond 30 minutes from collection will not be processed. DO NOT place on ice.	A
Blood Gases (Arterial Cord Gases)	3/8/2023	Biochemistry	Safe-Pico Self Fill Syringe SPD #0111903		A
Blood Gases (Capillary)	3/8/2023	Biochemistry	Heparinized capillary SDP #0113466	Transport at Room Temperature to lab promptly. Samples beyond 30 minutes from collection will not be processed. DO NOT place on ice.	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Blood Gases (Mixed Venous)	3/8/2023	Biochemistry	Safe-Pico Aspirator SPD #0111904	Transport at Room Temperature to lab promptly. Samples beyond 30 minutes from collection will not be processed. DO NOT place on ice.	A
Blood Gases (Venous Cord Gases)	3/8/2023	Biochemistry	Safe-Pico Aspirator SPD #0111904	Transport at Room Temperature to lab promptly. Samples beyond 30 minutes from collection will not be processed. DO NOT place on ice.	A
Blood Occult: Fecal	**Refer to Occult blood, stool**				
Body Fluids/Culture (Except CSF, Blood, Urine)	**Refer to Microbiology Specimen by Source**				
Body Fluids/Cell Count		Haematology	Lavender top tube BD #367861	Deliver to laboratory immediately	A
Body Fluid/Flow Cytometry Immunophenotyping		Haematology	5 Lavender top tubes BD #367861	See Immunophenotyping Analysis. Make arrangements with Haematology Lab before collection 648-6875	B
Bone Marrow: • Aspiration		Haematology	Plastic syringe 0.5-1.0 mL	Coordinate collection with physician and Haematology laboratory 648-6881	B
• Biopsy			B-Plus fixative in sterile specimen container		
• Flow Cytometry			Lavender top tube BD #367861	1 mL required	
• Cytogenetics			Green top tube BD #367871	1-2 mL minimum	
• Molecular DNA Probes		Haematology	Lavender top tube BD #367861	2-3 mL minimum	B
Bone Marrow Culture	**Refer to Microbiology Specimen by Source**				
Bordetella pertussis antibody	**Test no longer available**				
Bordetella pertussis PCR	**Refer to Microbiology Specimen by Source – Respiratory (nasopharyngeal)**				
Borrelia burgdorferi PCR (Lyme Disease)		• Microbiology • Referred out of Province	Plain sterile container	CSF/fresh tissue/synovial fluid Send ASAP on ice to lab	D
Borrelia burgdorferi serology (Lyme Disease)		• Microbiology • Referred out of Province	Gold top tube BD #367986		D

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Botulism Culture and Toxin		• Microbiology • Referred out of Province	Stools for culture in plain sterile container Blood for toxin testing in Gold top tube	Special case history required	D
BRAF		• Molecular Diagnostics	FFPE Tissue Block	• Fill out Molecular Diagnostics requisition with all required information and send to laboratory with specimen • Area of tumour must be identified by a pathologist on a corresponding H&E slide	C
Brucella serology		• Microbiology • Referred out of Province	Gold top tube BD #367986		D
BUN	**Refer to Urea**				
Buprenorphine (Suboxone), Random Urine	10/15/19	Biochemistry Referred within province for testing	Sterile Specimen Container		D
C. difficile	**Refer to Clostridium Difficile**				
C1 Esterase Inhibitor	5/25/23	• Biochemistry • Referred out of province for testing	Red Top tube BD #367815	• Sample must be collected at SJRH/SHC or CCH • Sample must be centrifuged and aliquoted within 1 hour of collection • Separate and send to SJRH	D
C-1 Esterase Inhibitor, Functional Assay	01/03/19	• Biochemistry • Referred out of province for testing	Red Top tube BD #367815	• Fasting specimen preferred • Rush to lab on ice, must be separated from cells within 30 minutes • Specimen stability when frozen is 6 days • If referred in – separate serum and ship frozen (ASAP)	D
C-Peptide	04/17/18	• Biochemistry • Referred within province for testing	Gold top tube BD#367986 or Red top tube BD #367820 acceptable	• Fasting specimen • Samples stable on red cells for 8 hours at room temperature	D
C-Reactive Protein	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
CA 15-3	09/01/22	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986		B
CA-19-9	10/15/19	• Biochemistry • Referred within province for testing	Gold top tube BD #367986 Green top tube (Li heparin) BD#367962	Time required between requests is 12 weeks Freeze serum or plasma if not sent to SJRH within 3D of collection (Friday, weekend, or holidays)	D
CA-27.29	09/30/14	**See CA 15-3**			
CA-125	10/15/19	Biochemistry	Gold top tube BD #367986 Green top tube (Li heparin) BD#367962	Time required between requests is 12 weeks	B
Cadmium- Whole Blood	06/23/16	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	• Do not open tube or separate • Store and send cold	D
Cadmium: 24 h urine	10/15/19	• Biochemistry • Referred out of province for testing	24 h urine container (plain)	• Collect in a clean metal free collection basin • See specimen collection guide- section 12	D
Caffeine	08/20/2015	Biochemistry	**Test not routinely available. Consult Clinical Biochemist 506-648-7805.**		
Calcitonin	04/12/21	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Plain Red top tube BD #367820 (Plasma **NOT** acceptable)	• Fasting specimen preferred but not mandatory • Specimen must be spun, separated and frozen **ASAP**	D
Calcium	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Calcium, Ionized	3/8/2023	Biochemistry	Safe-Pico Aspirator SPD #0111904	• Transport at Room Temperature to lab promptly. • Samples are stable at Room Temperature for 1 hour or up to 6 hours on ice/ refrigerated	A
Calcium, Ionized, Capillary	3/8/2023	Biochemistry	Heparinized capillary SDP #0113466		A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Calcium: 24 hr. urine	10/15/19	Biochemistry	24 hr. urine container (plain or HCl)	• See specimen collection guide- section 12	A
Calculus	**Refer to Stone analysis**				
Calprotectin (fecal)	7/20/21	• Biochemistry • Referred within province for testing	Plain sterile container	• Stool from first morning bowel movement	D
Cannabinoids: urine	**Refer to Marijuana Metabolite: Urine**				
Carbamazepine		Biochemistry	Plain red top tube BD #367815	Draw trough specimen (just before next dose) Specimen must be received in the lab within 2 hours of collection	A
Carbon Monoxide	**Refer to Carboxyhaemoglobin**				
Carboxyhaemoglobin		Biochemistry	Green top tube BD # 367886 OR Heparin coated syringe SPD# 0010545		A
Carcinoembryonic Antigen (CEA)	10/15/19	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Time required between requests is 12 weeks	B
Cardiac Markers	**Refer to Creatine Kinase (CK) and Troponin T**				
Cardiolipin Antibodies (includes IgG and IgM antibodies)		• Haematology • Referred out testing	Plain red top tube BD #367815	If referred from outside Saint John, send frozen serum. Lipemic or 164emolysed samples will not be processed.	D
Cat Scratch Fever Serology	**Refer to Bartonella**				
Catecholamines: 24 hr. urine	06/23/16	• Biochemistry • Referred out of province for testing	24 hr. urine container (in 6N HCl)	• Obtain container from SPD at SJRH • See specimen collection guide- section 12 • Restrict caffeine, nicotine, and alcohol for 4 hours prior to collection and for the 24 hours during collection period • Following physician consultation discontinue Methyldopa (Aldomet) at least 5 days prior to collection. Other drugs usually do not interfere with this assay.	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Catecholamines (plasma)	02/16/18	• Biochemistry • Referred out of province for testing	2 Lavender top tubes (pre-chilled) BD #367863	COLLECTION: • Collect after overnight fast (water and non-caffeinated drinks allowed). Catechol drugs may interfere, including alpha methyldopa, alpha-methyl-parap-tyrosine, isoproteronal, dobutamine and carbidopa. Provide list of medications. • Explain the procedure for the collection to the patient to alleviate any anxiety, then ask the patient to lie supine and relax in a quiet room • With the patient supine, insert an intravenous catheter or needle into a forearm vein • After he/she is supine for at least 15 min, withdraw sufficient blood to fill 2 pre-chilled lavender tubes • If additional blood specimens are being drawn from the patient in other positions (e.g.: sitting, standing), they should be collected after the patient has been in the appropriate position for at least 10 min • Be certain to clearly differentiate each specimen (e.g.: patient's position) • Rush on ice to laboratory immediately following collection (SJH collect immediately before next courier run).	D
CBC	**Refer to Complete Blood Count**				
CD4 Level	**Refer to Immunocompetence Profile**				
CD8 Level	**Refer to Immunocompetence Profile**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
CD34	August 30/12	Haematology Flow Cytometry	Lavender top EDTA BD# 367861	• Fax potential collection dates to Flow Cytometry Lab 638-2326 on Hematopoietic Progenitor Cell Apheresis Request Orders, Collection Notification Form • Lavender top EDTA BD #367861 • Minimum volume 2 ml • Maintain at room temperature (18-22˚C) • Specimen must be labelled with date and time of collection. • Specimen should be in the lab before 8am. • Collect immediately before sending to laboratory.	B
CEA	**Refer to Carcinoembryonic Antigen**				
Celiac Diagnostic Panel (include tTG-IgA and total IgA quantitation)	11/2/15	Biochemistry	Gold top tube BD #367986	• Patients ≤ 2 years of age will automatically be sent to out of province referral lab for Gliadin (Deaminated) Antibodies. • Adult patients with total IgA levels below lower limit of reference interval will be automatically referred out of province for Gliadin (Deaminated) Antibodies.	B/D
Ceruloplasmin	07/23/18	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection and refrigerated if being sent same day or next day. If specimen is arriving at SJRH more than 1 day after collection, please send frozen serum.	B
CH50	04/19/16	• Haematology • Referred out of province for testing	Gold top tube BD #367986 or Red top BD#367815	Must be received in lab within 60 minutes of collection.	D
Chagas Disease Serology (Trypanosoma cruzi)		• Microbiology • Referred out of Province	Gold top tube BD #367986	Special case history required	D
Chikungunya Serology	3/14/18	• Microbiology • Referred out of Province	Gold top tube BD #367986	Patient history required.	D
Chlamydia Antibody	3/14/18	**Testing no longer available**			
Chlamydia Detection (Culture and PCR and IFA)	**Refer to Microbiology Specimen by Source**				C
Chlordiazepoxide	06/23/16	**Test not Routinely Available**			
Chloride	**Refer to Electrolytes**				

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Chloride: fluid	**Refer to Electrolytes**				
Cholesterol, HDL	**Refer to Lipid Profile Fasting and Non-Fasting**				
Cholesterol, LDL	**Refer to Lipid Profile Fasting and Non-Fasting**				
Cholesterol	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Requires 9-12 hr. fast. Serum or plasma should be separated within 2h of collection	A
Cholinesterase Phenotyping	06/23/16	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 Or Red top BD#367815	If patient has had surgery, collect at least 24 hours post-surgery.	D
Cholinesterase, total	06/23/16	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 Or Red top BD#367815	Cholinesterase Phenotype will be analyzed (and billed) unless "Total only" is specified.	D
Chorionic Gonadotropin, human (hCG)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Chromium- whole blood	12/17/18	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	• DO NOT open tube • DO NOT centrifuge • Ship cold	D
Chromogranin A	06/23/16	• Biochemistry • Referred out of province for testing	Lavender #367861	Patient should abstain from proton pump inhibitor medication (Lansoprazole, omeprazole) for two weeks prior to collection	D
Chromosome (Fragile X)		• Genetics • Referred out of province for testing	Two Lavender top tubes BD #367861	• Collect Monday to Wednesday**.** • Telephone Genetics at (506) 648-6882	D
Chromosome (Tissue)		• Genetics • Referred out of province for testing	Sterile Physiological Saline	Telephone Genetics at (506) 648-6882	D
Chromosome, Karyotype (Amniotic Fluid)		• Genetics • Referred out of province for testing	Provided at test site.	• Restricted availability • Contact OBS & GYN department	D
Chromosome, Karyotype (Bone Marrow, includes FISH)		• Cytogenetics	Na Heparin Green top tube BD #367871	• Refer to Bone Marrow • Monday to Thursday collection only • 3 mL required	B
Chromosome, Karyotype (Peripheral Blood, includes FISH)		• Cytogenetics	Na Heparin Green top tube BD #367871	• Telephone Genetics at (506) 648-6882 • By appointment only • Monday to Thursday collection only • 5 mL required	B

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Circulating Anticoagulant	**Refer to Lupus Anticoagulant**				D
Citrate: 24 hr. urine	09/11/23	Biochemistry	24 hr. urine container (plain or HCl)	• Obtain container from SPD at the SJRH • See specimen collection guide- section 12	C
CJD **Special precautions in laboratory. This requires prior notification.*	3/20/18	• Microbiology • Referred out of Province	CSF – Plain sterile container (2-3mls) Whole blood – ACD or 2 tubes EDTA DO NOT SUBMIT in formalin. Postmortem blood is acceptable.	• Prior notification to lab and IPC is required. Consultation with a Microbiologist or ID Specialist is required • Send to lab immediately	D
CK	**Refer to Creatine Kinase**				
CK + CK-MB	**Refer to Creatine Kinase and MB-isoenzyme**				
Clobazam (Frisium)	06/23/16	• Biochemistry • Referred out of province for testing	Plain Red top tube BD #367820	• Draw trough specimen (just before next dose) • Also includes Desmethylclobazam.	D
Clonazepam	04/19/16	**Test not available**			
Clostridium difficile toxin testing	**Refer to Microbiology Specimen by Source**				A
Closure Time Test		Haematology	Two Blue top tubes BD #363083	• Deliver to lab within 3 hours from time of collection • Do not send through PTS • Store at room temperature • Tube must be filled to the etched fill indicator line on the tube. • Performed Monday to Friday	B
Clozapine	01/06/20	• Biochemistry • Referred out of province for testing	Serum Plain Red top only (avoid gel separators)	• Also includes Norclozapine	D
CMV PCR (Viral Load)	**Refer to Cytomegalovirus PCR (Viral Load)**				
CMV antibodies	**Refer to Cytomegalovirus IgG/IgM**				C
CO2 Content	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A

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Cocaine metabolite: urine (Included in Abuse screen)	06/27/16	Biochemistry	Sterile Specimen Container	• Refrigerate or keep on ice if more than 1 hr required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC or for up to 5 days • See specimen collection guide- section 12	
Coccidiodes		• Microbiology • Referred out of Province	Gold top tube BD #367986		D
Cold Agglutinin Titre	02/06/23	Transfusion Medicine	Lavender top tube BD #367863	- Specimen should be kept at room temperature and delivered to the laboratory as soon as possible. - Specimens cannot be collected at Grand Manan Hospital for cold agglutinin testing. - Specimen must be statused as collected in the computer system by collection agent - If manual requisition, collection agent must sign first and last name in “collected by’ field and include date/time of collection	A *(<48 hours)*
Complement	05/05/2023	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Complete Blood Count (CBC)		Haematology	Lavender top tube BD #367861	TAT performed daily	A
Copeptin	10/15/19	• Biochemistry Referred out of province for testing	Plasma (Lime green top tube BD Barricor #365049) Serum (Red or Gold acceptable)		D
Copper: Plasma	06/24/16	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	• Plasma must be separated from cells within 20 minutes of collection.	D
Copper: 24 hr. urine	10/15/19	• Biochemistry • Referred out of province for testing	24 hr. urine container (plain)	• Collect in a clean metal free collection basin • Avoid mineral supplements for 5 days • See specimen collection guide- section 12	D

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Coproporphyrins	**Not routinely available. Consult Biochemist.**				
Cord Blood	02/06/23	Transfusion Medicine	Lavender EDTA) tube – 6ml BD #367863	• Includes ABO, Rh, Direct antiglobulin test (DAT) • Specimen must be statused as collected in the computer system by collection agent • If manual requisition, collection agent must sign first and last name in "collected by' field and include date/time of collection	A (<24 hours)
Coronavirus (**Not Covid)** (tests for 229E, OC43, NL63, HKU1)	3/14/18	• Microbiology • Referred within province		• Respiratory specimens (NPA, BAL, NP swab, throat…) • Viral transport • Part of resp. viral panel	D
Cortisol	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	If morning collection, order 0800h for collection between 0600h-1000h. If afternoon collection, order 1600h for collection between 1600h-2000h. If not collecting between times listed, collect a random. Serum or plasma should be separated within 2h of collection	B
Cortisol, Salivary	6/26/23	• Biochemistry • Refer out of Province	Salivette collection container supplied by Hospitals In Common. Obtained from Central Receiving. Call 648-6575 option 5.	• Notify Lab prior to collection. 648-6575 option 5 • See Collection Instructions for detailed collection times and instructions. • Samples with obvious blood contamination from bleeding gums are unsuitable.	D
Cortisol, free (24hr urine)	10/15/19	• Biochemistry • Referred out of province for testing.	24 hr. urine container (plain)	• See specimen collection guide- section 12	D
Covid-19	**Refer to "Microbiology Specimen by Source"**				D/ A
Corynebacterium diptheriae culture	**Refer to "Microbiology Specimen by Source"**				
Creatine Kinase (CK)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Creatine Kinase MB isoenzyme (CK-MB, mass)		Biochemistry	**Test not available as of November 2011**		

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Creatinine	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or Plasma should be separated within 2h of collection	A
Creatinine Clearance	01/17/20	Biochemistry	Gold top tube BD #367986 Or Red top BD#367815	• Indicate height and weight • Collect blood within 48 hr. of urine collection See Specimen Collection Guide (Section 12) or Print Shop form #60487	A
Creatinine: fluid		Biochemistry	Plain Red top tube BD #367815		A
Creatinine: 24 hr. urine		Biochemistry	24 hr. urine container (plain or HCl)	See specimen collection guide-section 12	A
Creatinine: random urine	03/29/12	Biochemistry	Sterile specimen container	See specimen collection guide-section 12	A
CRP/CRP-hs	**Refer to C-Reactive Protein**				
Cryofibrinogen (includes Cryoglobulin)	10/25/2017	Biochemistry	Lavender top tube BD #367863 And Plain Red top tube BD #367820	Only collect at SJRH, CCH&SHC. Collect in prewarmed tube (warmed 10 minutes at 37°C). Deliver to lab immediately. Keep at 37°C during transport. SJRH: Must arrive in lab Mon-Fri 830AM-12 noon. CCH/SHC: Must arrive in lab Mon-Thurs 830AM-12 noon. For inpatients: Notify lab prior to collection, lab will provide prewarmed tube. Phone: SJRH – 7185, CCH – 4486, SHC – 3186	B
Cryoglobulins	10/01/16	Biochemistry	Plain Red top tube BD #367820	Only collect at SJRH, CCH&SHC. Collect in prewarmed tube (warmed 10 minutes at 37°C). Deliver to lab immediately. Keep at 37°C during transport. SJRH: Must arrive in lab Mon-Fri 830AM-12 noon. CCH/SHC: Must arrive in lab Mon-Thurs 830AM-12 noon. For inpatients: Notify lab prior to collection, lab will provide prewarmed tube. Phone: SJRH – 7185, CCH – 4486, SHC – 3186	B
Cryptococcus Latex Agglutination (CSF)	**Refer to Microbiology Specimen by Source – Fungal Culture (CSF)**				A
Cryptococcus Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986		D

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Crystals: Synovial fluid		Biochemistry	Plain Red top tube BD #367820	If possible, obtain specimen in a.m. for same day delivery to SJRH laboratory. Do not refrigerate.	A
CSF Cell Count		Haematology	Sterile vial SPD # 0080118 OR BD #366703	• Deliver to laboratory immediately • Do not send through PTS • Do not collect in SST tube • Send tube #2 • Send tubes #2 and #4 for traumatic tap	A
CSF Culture	**Refer to Microbiology Specimen by Source**				A
CSF: Glucose & Protein		Biochemistry	Sterile vial SPD # 0080118 OR BD # 366703	Send tube #1	A
CSF: Immunoglobulins	10/15/19	Biochemistry Referred within province for testing	Sterile vial lumbar puncture tray SPD # 0080118	Includes Quantitative IgG	D
CSF: Oligoclonal Banding	05/01/17	Biochemistry Referred within province for testing	1 mL CSF in Sterile vial lumbar puncture tray SPD # 0080118 **and** 7 mL of blood in gold tube BD# 367986	Send patient to SJRH for collection. Both serum and CSF are required and should be collected at the same time. Send to lab IMMEDIATELY after collection	D
CSF: Flow Cytometry Immunophenotyping Analysis		Haematology	Plain Red top tube BD #366703	Make arrangements with Haematology before collection 648-6875. *See Immunophenotyping Analysis*	B
CSF: Protein Electrophoresis	**Refer to CSF: Oligoclonal banding**				
Cyclosporin A		Biochemistry	Lavender top tube BD #367861	Obtain trough specimens (just before next dose)	C
Cysticercosis Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986		D

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Cystine, qualitative (screen) and quantitative (monitoring)	06/24/16	• Biochemistry • Referred out of province for testing	• Random Urine • Sterile specimen container	• Specimen will be screened at the SJRH prior to sending to referral laboratory • Tested as part of Amino Acid Quantitation which includes results for Arginine, Cystine, Lysine and Ornithine. • Keep at 4^0C until delivered to SJRH Lab. • 10 mL required • See Specimen Collection Guide (Section 12) or Print Shop Form #60503 • See specimen collection guide- section 12	D
Cytomegalovirus (CMV) Testing (PCR) (urine, saliva, tissue)		• Microbiology • Refer within Province	Plain Sterile container	• Three consecutive first morning midstream urines • Deliver to laboratory immediately after collection	D
Cytomegalovirus (CMV) PCR/Viral Load		• Microbiology • Refer within Province	Lavender top tube (2) BD #6455 EDTA	Send to lab on ice and within 6 hours of collection	D
Cytomegalovirus (CMV) – IgG, IgM	05/26/16	Microbiology	Gold top tube BD #367986		C
Cytoplasmic Antibodies Screen	04/20/16	Haematology Referred out	Red top tube BD #367815	Includes AMA (Mitochondrial Antibodies), SMA (Smooth Muscle Antibodies), PCA (Parietal Cell Antibodies), ARA (Reticulin Antibodies) Referred out TAT 2 weeks	D
Cytotoxin Assay	**Refer to Clostridium Difficile**				
Darvon	**Refer to Propoxyphene**				
DAT	**Refer to Direct Antiglobulin Test**				
D-Dimer Test		Haematology	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Deliver to laboratory within 60 min • SJH collect immediately before next courier run • TAT performed daily	A
Dehydroepiandrosterone Sulphate (DHEAS)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Delta-Aminolevulinic Acid (Delta-ALA)	**Refer to Porphyrin Precursors**				
Dengue Serology		• Microbiology • Refer out of Province	Gold top tube BD #367986	• Special required • Case history, i.e., travel	D
Deoxyribonucleic acid antibody	**Refer to Anti-DNA**				

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Desipramine	06/24/16	• Biochemistry • Referred out of province for testing	Plain Red top BD #367815 or Lavender BD#367863	• Submit trough specimen (i.e., Collect specimen1 hour prior to next dose or at least 12 h after last dose). • **RUSH** to lab Separate within 2 h	D
DHEA-S		**Refer to Dehydroepiandrosterone Sulphate**			
DHT		**Refer to Dihydrotestosterone**			
Diabetes Mellitus Type 1 Evaluation	11/24/21	• Biochemistry Referred out of province.	Gold tube BD #367986 or Red top BD#367815	Collect 2 full tubes Test includes GAD 65 Antibody, IA-2 Ab, Insulin Ab, ZnT8 Ab	D
Diazepam	06/24/16	**Not Routinely available**			D
Differential LKC (Leukocyte Count)	**Refer to Complete Blood Count**				
Digoxin	06/28/16	Biochemistry	Plain Red top tube BD #367815	Collect 8 h post dose Specimen must be received in lab within 2 hrs. of collection	A
Dihydrotestosterone	06/24/16	• Biochemistry • Referred out of province.	Gold tube BD #367986 or Red top BD#367815		D
Dihydroxy Vitamin D; 1,25 (Referred)	**Refer to Vitamin D**				
Diphtheria Antibody	**N/A – No Accredited Lab Testing**				
Diphtheria Cultures	**Refer to Corynebacterium diphtheriae**				
Direct Antiglobulin Test (DAT)	02/06/23	Transfusion Medicine	Lavender top tube BD #367863	• Specimen must be statused as collected in the computer system by collection agent • If manual requisition, collection agent must sign first and last name in "collected by' field and include date/time of collection	**STAT:** <1 hour **ROUTINE:** <24 hours A
Disopyramide	04/20/16	Biochemistry	**Test not routinely available as of Sept 2015**		
DNA antibody	**Refer to Anti-DNA**				
DNA Probe		• Genetics • Referred out of province for testing	Peripheral blood: Three Lavender top tubes BD #367861	• Telephone Genetics at (506) 648-6882 • **By appointment only**	D
			Bone marrow: One Lavender top tube BD #367861	• 3 mL required • Telephone Genetics at (506) 648-6882 • **By appointment only**	
Doxepin	10/15/19	• Biochemistry • Referred out of province for testing	Red top BD #367820 or Lavender BD#367863	• Submit trough specimen (i.e., within 1 hour prior to next dose or at least 12 hours after last dose) • Separate within 2 hours • Assay includes desmethyldoxepi.	D

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DPYD (dihydropyrimidine dehydrogenase)	01/27/23	• Molecular Diagnostics	One Lavender top tube BD #367861	• Order electronically in HIS or fill out Molecular Diagnostics requisition. • Send specimen to laboratory within 48 hours of collection.	C
Drug Screen: random urine	10/15/19	• Biochemistry • Referred out of province for testing	Sterile specimen container	• 10 mL minimum • Store at 2-8^{0}C or freeze if not tested within 5 days • Results are not for Medicolegal purposes. • See Specimen Collection Guide (Section 12) or Print Shop form #60503 • See specimen collection guide- section 12	D
Drug Screen; serum	**Refer to Toxic Screen**				
Drugs of Abuse Screen: random urine	**Refer to Abuse Screen**				
D-Xylose Absorption	**Refer to Xylose (D) Absorption**				
EBV Serology	**Refer to Epstein Barr Virus**				
Echinococcus Serology		• Microbiology • Referred out of province for testing	Gold top tube BD #367986	Special case history, i.e., travel	D
Echovirus Testing	**Refer to Enterovirus**				
Ectoparasites – Ticks	**Refer to Microbiology Specimens by Source – see Stool/GI Tract (Other)**				
Ectoparasites – Scabies		Microbiology	Plain sterile container SPD# 0250348	Scrapings from the terminal portion of a burrow	C
Electrolytes (Sodium, Potassium and Chloride)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Electrolytes, fluid		Biochemistry	Red top BD #367820		A
Electrolytes: 24 hr. urine	10/15/19	Biochemistry	24 hr. urine container	• See specimen collection guide- section 12	A
Electrolytes: random urine	10/15/19	Biochemistry	Sterile specimen container	• See specimen collection guide- section 12	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
EM (Electron Microscopy)	**Refer to Viral EM, page 57 & Anatomical Pathology Section 7.**				
EMA	**Refer to Eosin-5-Maleimide**				
ENA	**Refer to Extractable Nuclear Antibodies**				
Endomysial Antibodies	10/15/19	Biochemistry Referred out of province for testing	Gold top tube BD #367986 or Red top BD #367820		D
Enterobius vermicularis (Pinworm)	**Refer to Microbiology Specimens by Source – see Stool/GI Tract (Other)**				
Enterovirus Testing		• Microbiology • Refer within Province • See Specimens by Source.	Viral swab or plain sterile container	Send on ice to lab ASAP	D
Eosin-5-Maleimide (EMA) (formerly Osmotic Fragility)		• Haematology • Referred out of province for testing	Lavender top tube BD #367861	• Deliver to laboratory immediately. • Must be received in the Lab before 11 am on Mon-Wed only • Shipped at 4ºC	D
Eosinophil Smear		Haematology	Dry swab		A
Epstein Barr Virus		• Microbiology • Refer within Province	Gold top tube BD #367986	Panel includes: • EBV-VCA-IgM • EBV-VCA-IgG • Anti-EBNA	D
Epstein Barr Virus PCR		• Microbiology • Refer out of Province	2 Lavender top tubes EDTA BD#367661	Send immediately to Laboratory within 6 hours of collection	D
ERC Enzyme Screen	**Refer to Pyruvate Kinase Screen**				
ERC Folate	**Refer to Folate (ERC)**				
Erythrocyte Sedimentation Rate (ESR)	12/20/18	Haematology	Black Excyte ESR tube Meditech # 7031971	• Deliver to laboratory within 4 h of collection at room temperature. • Utilization Rule: ESR cannot be ordered in conjunction with CRP, unless ordered as ESR Exception.	A
Erythropoietin	04/19/22	• Haematology • Referred out of province for testing	Gold top tube BD #367986 or Red top BD#367815	• Morning specimen preferred. • **Rush** to lab. Serum should be separated within 2 h. of collection	D
ESR	**Refer to Erythrocyte Sedimentation Rate**				
Estradiol	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Ethanol (Ethyl alcohol) Included in "Toxic Screen"		Biochemistry	Plain Red top tube BD #367815	Do not use alcohol or other volatile disinfectants at the site of venipuncture. If referred from outside SJRH, send frozen serum	A
Ethanol: urine	**Refer to Abuse Screen**				
Ethosuximide (Zarontin)	10/15/19	• Biochemistry • Referred out of province for testing	Plain Red top tube BD #367820 (Avoid gel separator tubes)	• Submit trough specimen (i.e., within 1 hour prior to next dose or at least 12 hours after last dose).	D
Ethylene Glycol	02/12/21	• Biochemistry • Referred within province for testing	Grey top tube BD #367922 Or BD Barricor #365049	• Do not use Alcohol to disinfect Skin • Tube must be completely filled • Keep tube sealed and send to lab **ASAP**. • **DO NOT Centrifuge** • If referred to SJRH for Shipping, ship cold	D
Extractable Nuclear Antigens (ENA)		• Haematology • Referred within province for testing	Plain Red top tube BD #367815	Referred out TAT 2 weeks	D
Fabry	**Refer to Alpha-Galactosidase**				
Factor II	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor V	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor V Leiden-Mutation (PCR DNA)	01/27/23	• Molecular Diagnostics	One Lavender top tube BD# 367861	• Order electronically in HIS or fill out Molecular Diagnostics requisition. • Send specimen to laboratory within 48 hours of collection.	C

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Factor VII	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor VIII	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	A
Factor VIII Inhibitor	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	C
Factor IX	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor X	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor XI	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D

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Factor XII	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Factor XIII Screen	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Fasciola Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986	Special case history required	D
Fat – 3 day, fecal	10/15/19	Biochemistry Referred out of province	Stool container Kit T291(from Mayo)	Diet: high fat, 100-150 g 3 days prior to and during the collection period. • No barium, laxatives, or enemas 3 days prior to and 3 days during test • No synthetic fat substitutes or fat blocking nutritional supplements • Obtain containers from Chemistry LAB at the SJRH • Collect feces for 24, 48 or 72 hours • Do not exceed fill line on can • Refrigerate during collection	D
Fat globules: random urine (microscopic exam)		Biochemistry	Sterile specimen container		A
Father's Blood	02/06/23	Transfusion Medicine	Lavender top tube BD #367863	• Ordered if pregnant partner is Rh negative or has antibodies • Include pregnant partner's full name and Medicare # • Specimen must be statused as collected in the computer system by collection agent • If manual requisition, collection agent must sign first and last name in "collected by' field and include date/time of collection	<72 hours B

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Fatty Acids, Long chain	06/24/16	• Biochemistry • Referred out of province	Serum (Gold or Red top tube) Plasma (ETDA tube)	• Collect fasting specimen. • Separate within 45 minutes of collection and freeze ASAP	D
Fentanyl Screen (random urine):	01/02/18	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1 hr. required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • See specimen collection guide- section 12	A
Ferritin	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Time required between requests is 4 weeks	A
Fetal Hemoglobin	**Refer to APT Test**				
Fetal Genotyping on Maternal Plasma	02/09/23	-Transfusion Medicine -Referred out of country for testing	SEE: blood.ca	**-Notify Transfusion Medicine who will contact CBS.** **- Complete the International Blood Group Reference Laboratory Requisition** (mother's sample) **-Complete CBS Perinatal requisitions** **-Complete Consent for Release of Neonatal Test Results to CBS & attach to the International Blood Group Reference Lab req** (samples without signed consent are not processed) Mother (parents) brings completed reqs, and consent plus **Fetal Genotyping on Maternal Plasma Collection Site Instructions** to the scheduled appointment at Specimen Collection, SJRH. Specimens are sent to CBS NIRL, Brampton, who send to the reference lab in Bristol, England	D

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Fetal Lung Maturation	10/05/17	• Biochemistry • Referred out of province for testing	Plain Red top tube BD #367815 Amniotic fluid or 15mL conical centrifuge tube	• Send to Lab **ASAP** • Do not centrifuge. • Do not freeze. • Must include gestational age, reason for request, physicians name and telephone number. • Specimen must be free of blood and meconium.	D
Fetal Scalp pH	**Refer to pH: Fetal Scalp**				
Fibrinogen		Haematology	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • TAT performed daily	A
Fifth Disease (Erythema infectiosum)	**See Parvovirus B-19**				
FISH (Fluorescent in Situ Hybridization)	**Refer to Chromosome, Karyotype**				
Fitzgerald Factor (Kininogen)		• Haematology • Referred out of province for testing	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Telephone Haematology prior to collection at 648-6876	D
FK 506	**Refer to Tacrolimus**				
Fletcher Factor (Prekallikrein)		• Haematology • Referred out of province for testing	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Telephone Haematology prior to collection at 648-6876	D
Flow Cytometry: – ICP – IDS – Immunophenotyping Panels: Acute Leukemia, Lymphoma Screen, Lymphocytosis CLL, Lymphocytosis LGL, Multiple Myeloma, MDS, NHL Lymphoma Staging. – MDS, Lymphocytosis, Multiple Myeloma – PNH		Haematology	Refer to Individual Test Listings	• Flow Lab open 8am-4pm Mon-Fri, excluding holidays • Tests must be booked with lab prior to collection • Call 648-6875	B
– Platelet Glycoprotein Panels: PLT GpIb/IX/V PLT Gp (GpIbd, Gp II6, Gmp140)		Haematology	Refer to Individual Test Listings	**By appointment only** Call 506-648-6875	B

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Flurazepam	04/20/16	**Test not Routinely available**			
Folate (ERC)		Biochemistry	**Test not available at SJRH as of January 2012**		B
Folate, Serum	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Fasting specimen preferred. • Time required between requests is 1 year **Outside Laboratory**: • Protect from light or freeze serum if testing will not be performed within 8 hours of collection.	B
Follicle Stimulating Hormone (FSH)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Fragile X	**Refer to Chromosome (Fragile X)**				
Free Light Chains	06/01/23	• Biochemistry • Referred within province for testing	Gold top tube BD #367986	Includes Free Kappa and Free Lambda Light Chains Specimen type is serum collected in a gold top (SST) tube. Serum should be separated within 2h of collection and frozen. Send frozen aliquot.	D
Free PSA	**Refer to Prostatic Specific Antigen (PSA)**				
Free T_3	**Refer to Tri-iodothyronine, Free**				
Free T4	**Refer to Thyroxine, Free**				
Free Thyroxine (Free T4)	**Refer to Thyroxine, Free**				
Frisium	**Refer to Clobazam**				
Fructosamine	06/24/16	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Red Top BD#367815		D
FSH	**Refer to Follicle Stimulating Hormone**				
Fungus Culture	**Refer to Microbiology Specimen by Source**				D
G-6-PD	**Refer to Glucose-6-phosphate Dehydrogenase TAT 2 weeks**				
Galactomannan	05/26/16	• Microbiology	Gold top tube BD #367986 (Bronchial Lavage) – Plain sterile container		C *(Tues & Thurs – unless holiday week)*

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Galactose -1 – Phosphate Uridyl Transferase	06/24/16	Biochemistry Referred out of province for testing	Green top (Sodium Heparin) BD#367871	• Avoid gel separator tubes. • Galactose will not be performed unless Reducing Substance (urine) is positive. • Blood Transfusion within the past 3 months invalidates results. • If screen is positive, quantitation will be performed	D
Galactosemia Screen	**Refer to Galactose -1-Phosphate Uridyl Transferase**				
Gamma GT (γ-glutamyltransferase) (GGT)	**Refer to Glutamyltransferase, gamma**				
Gastrin	06/24/16	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815	• Collect after an 8 h fast or prior to next feeding in infants. • **For 12 hours before specimen collection, do not** take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins.	A
GC Culture	**Refer to Microbiology Specimen by Source**				
Gentamicin	12/17/18	Biochemistry	Plain Red top tube BD #367815	• Trough (Pre-Dose) Level: Sample to be drawn just prior to giving antibiotic • Peak (Post-Dose) Level: For IV – Collect sample 1h after the beginning of infusion of antibiotic For IM – Collect sample 1h after injection • Extended Interval Dosing: Sample to be drawn 6h prior to 2nd and 6th dose • Specimen must be received within 2h of collection • For external sites, serum must be separated, ship to SJRH lab refrigerated.	A
German measles	**Refer to Rubella**				
GGT	**Refer to Glutamyltransferase, gamma**				
Gliadin Antibodies (includes IgA and IgG antibodies)	**TEST NOT AVAILABLE – Refer to Celiac Diagnostic Panel**				
Glomerular Basement Membrane Antibody (anti-GBM)		Biochemistry	Gold top tube BD #367986		C

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Glucagon	07/05/18	• Biochemistry • Referred out of province for testing	2 large Lavender top BD#367863	Fasting overnight required. Pre-chill tube at 4°C before drawing specimen. Transport tube to lab in wet ice.	D
Glucose: fasting (a.c.)		Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	-Fasting: minimum 8 h fast -Must be centrifuged within 2 hours of collection	A
Glucose: 2 h (p.c.)		Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	-Collect 2 h post meal or glucose drink -Must be centrifuged within 2 hours of collection	A
Glucose & Protein: CSF	**Refer to CSF: glucose & protein**				
Glucose Challenge, antepartum		Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	-Collect 1 h post 50 g Glucose (No dietary restrictions) -Must be centrifuged within 2 hours of collection	A
Glucose: fluid		Biochemistry	Plain Red top tube BD #367815		A
Glucose: micro		Biochemistry	Gray top 184emolysed 184r, SPD #043410		A
Glucose Random		Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	-Must be centrifuged within 2 hours of collection	A

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Glucose Tolerance Test (GTT)	06/12/23	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Fasting: minimum 8 h fast • Hold breakfast till exam complete • No vigorous activity, smoking, eating until testing is complete • Collect “ac” blood • Adult: 75 g. Children under 42 kg: 1.75 g/kg to max. 75 g Pregnancy: 75 g • Collect blood at 2 h post glucose • If patient is pregnant, collect bloods at 1h and 2h post glucose (antepartum) • Collect additional bloods if requested • Deliver bloods to laboratory • Must be centrifuged within 2 hours of collection • **NOTE:** If patient is unable to tolerate the glucose drink, call Specimen Collection Supervisor #7798 for further information.	A
Glucose-6-phosphate dehydrogenase	10/12/22	• Haematology • Referred out of province for testing	Lavender top tube BD #367861	• Collect on Monday or Tuesday AM only • Do not freeze	D
Glutamic Acid Decarboxylase Antibodies (Anti-GAD)	11/22/22	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815	• Serum should be separated within 2h of collection • Biochemist approval required	D
Glutamyltransferase, gamma (GGT)	01/14/21	• Biochemistry • Referred within province for testing	Gold top tube BD #367986	• Serum should be separated within 2h of collection • Restricted order available only for Clinical Trial, Transplant patients or if requested by ‘exception’.	D
Glycated Haemoglobin (HbA1c)	**Refer to Haemoglobin A1c**				
Glycosylated Haemoglobin (Hgb A1c)	**Refer to Haemoglobin A1c**				
Growth Hormone, human (hGH)	05/05/2023	Biochemistry	Gold top BD #367986 or Red top BD#367815 or Lime green top tube BD Barricor #365049	• Serum or plasma should be separated within 2h of collection • Separated aliquot is stable 8 hours at room temperature, 1 day at 2-8 °C, or 28 days frozen.	B

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GTT	**Refer to Glucose Tolerance Test**				
Haemoglobin A1c	06/28/16	Biochemistry	Lavender top tube BD # 367861	Time required between requests is >80 days	B
Haemoglobin A2 (HGB A2)	8/14/14	**Include ethnicity Refer to Haemoglobin electrophoresis**			D
Haemoglobin electrophoresis (HGB electrophoresis)	10/15/19	• Haematology • Referred out of province for testing	Lavender top tube BD #367861	Include ethnicity (CBC must be performed)	D
Haemoglobin F (HGB F)	08/14/14	**Include ethnicity Refer to Haemoglobin electrophoresis**			D
Haemoglobulinopathy Investigation	08/14/14	**Include ethnicity Refer to Haemoglobin electrophoresis**			D
Haemosiderin, Urine		Haematology	Midstream urine in sterile specimen container		B
Hantavirus		• Microbiology Refer out of Province	Gold top tube BD #367986 CSF plain container	Case history required IgM performed on serum	D
Haptoglobin	07/23/18	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection and refrigerated if being sent same day or next day. If specimen is arriving at SJRH more than 1 day after collection, please send frozen serum/plasma.	B
hCG	**Refer to Chorionic Gonadotrophin (human)**				
hCG: random urine (pregnancy test)	03/29/12	Biochemistry	Sterile urine container	• 5 mL required. First void of the morning preferred • See specimen collection guide- section 12	A
HCV	**See Hepatitis C**				
HDL Cholesterol (high-density lipoprotein)	**Refer to Cholesterol, HDL**				
Heinz Bodies		Haematology	Lavender top tube BD #367861	• Telephone Haematology at 648-6881 • **By appointment only**	B
Helicobacter pylori Screen	**Refer to H. pylori stool antigen – Microbiology Specimens by Source**				D
Helicobacter pylori Serology	12/31/16	• Microbiology • Refer within Province	Gold top tube BD #367986	**Restricted order. Must be approved by Microbiologist. See H. pylori stool antigen.**	D
Hemochromatosis HLAH/HFE	01/27/23	• Molecular Diagnostics	1 Lavender top tube BD #367861	• Fill out Molecular Diagnostics requisition with all required information and send to laboratory with specimen • Send specimen to laboratory within 48 hours of collection	C

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Heparin Induced Thrombocytopenia (HIT)	8/16/18	Haematology	3 Light Blue top tubes BD #363083 2 Gold top tube BD #367986	• Deliver to laboratory within 60 minutes of collection • Blue Tubes must be filled to the etched fill indicator line on the tube.	B/D
Heparin-Xa		Haematology	2 Light Blue top tubes BD #363083	• Specimen must be delivered to SJRH Lab within 2 hours of collection • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube. • Please indicate type of Heparin Therapy when ordering and time of last dose.	B/C
Hepatitis A					
HepA IgM	05/26/16	Microbiology	Gold top tube BD #367986		C
HepA IgG	05/26/16	Microbiology	Gold top tube BD #367986		C
Hepatitis B					
HbsAg		Microbiology	Gold top tube BD #367986		B
Anti-HBs		Microbiology	Gold top tube BD #367986		B
Hepatitis B Core IgM	05/26/16	Microbiology	Gold top tube BD #367986		C
Hepatitis B Core Total (IgM/IgG)	05/26/16	Microbiology	Gold top tube BD #367986		C
Hepatitis B e Antigen/Antibody		• Microbiology Refer out of Province	Gold top tube BD #367986	Patient must be confirmed Hepatitis B positive	D
Hepatitis B Viral Load		• Microbiology • Referred within Province	Lavender (EDTA) (2) #367861	• Patient must be confirmed Hepatitis B positive • Send to lab on ice within 6 hours of collection	D
Hepatitis B Genotype		• Microbiology • Refer out of Province	Lavender (EDTA) #367861 or Gold top tube #367986	• Patient must be confirmed Hepatitis B positive • Send to lab on ice within 6 hours of collection	D
Hepatitis C					
Anti-HCV		Microbiology	Gold top tube #367986		B

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HCV Viral Load or HCV Viral Load/Genotype	05/26/16	• Microbiology • Refer within Province	Lavender (EDTA) (2) #367861	• Patient must be HCV confirmed positive • Send to lab on ice within 6 hours of collection	D
Hepatitis D	05/26/16	• Microbiology • Referred outside Province	Gold top tube BD #367986	Antibody test for DELTA *[patient usually Hep B (+)]*	D
Hepatitis E	3/14/18	• Microbiology • Referred outside Province	Gold top tube BD #367986	IgG/IgM will be performed	D
Herpes IgG/IgM Serology		• Microbiology • Refer within Province	Gold top tube BD #367986		D
hGH	**Refer to Growth Hormone, human**				
5-HIAA: 24 h urine	**Refer to Hydroxyindol Acetic acid**				
High Molecular Weight Kininogen Deficiency (Fitzgerald Factor)		• Haematology • Referred out of province for testing	Light Blue top tube BD #363083	Tube must be filled to the etched fill indicator line on the tube. Contact Haematology prior to collection at 506-648-6876	D
H. Influenza IgG Ab		• Microbiology Refer out of Province	Gold top tube BD #367986	For PRP post vaccination	D
Histamine	10/15/19	• Biochemistry • Referred out of province for testing	Lavender top tube BD #367861	• Refrigerated centrifuge must be available on site, otherwise send patient to SJRH • Collect in pre-chilled (10 min on ice) tubes • Deliver to laboratory on ice within 30 min • Specimen must be collected Saturday-Monday only as per referral site. • Patient must avoid histamine rich foods for 5 h prior to specimen collection (cheese, wine, red meats, spinach, tomatoes). • Avoid allergy causing drugs, antihistamines, oral corticosteroids, and substances which block H2 receptors for at least 24 hours prior to collection and during collection.	D
Histoplasma Culture	**Refer to Fungus culture**				
Histoplasma Serology		• Microbiology • Refer out of Province	Gold top tube BD #367986		D
Histoplasma Urine Antigen	**Test not available**				

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HIT	**Refer to Heparin Induced Thrombocytopenia**				
HIV (Human Immunodeficiency Virus)					
HIV Antigen/Antibody Screen		Microbiology	Gold top tube BD #367986		B
HIV Viral Load		• Microbiology • Refer within Province	Lavender EDTA (2) BD #367861	• Patient must be HIV positive • Send to lab on ice within 6 hours of collection	D
HIV Genotype (Drug Resistance)	05/26/16	• Microbiology • Referred outside Province	Lavender EDTA (2) BD #367861	• Patient must be HIV positive • Send to lab on ice within 6 hours of collection • Also know was Drug Resistance	D
HLA-B27	8/16/18	• Molecular Diagnostics	1 X 4ml EDTA lavender top tubes BD #367861	• Fill out Molecular Diagnostics requisition with all required information and send to laboratory with specimen. Send specimen to laboratory within 48 hours of collection	C
HLA-B5701		• Microbiology • Referred out of Province	2 EDTA lavender top tubes BD #367861	Send to lab immediately	D
HLA Antibody Testing (PRA, Cytotoxic Antibodies)	02/09/23	• Transfusion Medicine • Referred out of province for testing • Answer question: Forward to QEII hospital, yes or no	1x6 mL serum (Plain red top) BD# 367815 for QEII	**If yes**, sending to QE2: Transport blood specimens at room temperature and protect from freezing on the same day of collection if possible. Fill out the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection. Transport blood specimens at room temperature and protect from freezing. Specimens should arrive in the QE2 HLA laboratory within 96 hours of collection. Frozen serum specimens should be packed with sufficient dry ice/ice packs to arrive frozen. Specimens arriving after 3 pm on Friday will be processed the next business day. **If no,** specify location. Check container requirements on test request sheet. Fill out the test requisition for the HLA service and send to Laboratory with specimen.	D *(<2 weeks and results sent directly to physician)*

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
HLA Typing: Bone Marrow Transplant HLA typing 1st sample HLA typing 2nd sample verification	02/09/23	• Transfusion Medicine • Referred out of province for testing • Answer question: Forward to QEII hospital, yes or no	2 X 4 ml EDTA BD #367861 for 1st sample 2 X 4 ml EDTA BD #367861 For 2nd verification sample.	Transport specimens at room temperature and protect from freezing on the same day of collection if possible. Specimens should arrive in the HLA lab (QEII) within 7 days of collection date. Specimens arriving after 3 pm on Friday will be processed the next business day. Fill out the Bone Marrow Transplant section of the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection. 1st sample and 2nd sample verification cannot be collected at the same time.	D *(<2 weeks and results sent directly to physician)*
HLA typing autoimmune	01/27/23	• Molecular Diagnostics • Referred out of province for testing: QEII hospital in Halifax, NS	2 x 4 ml EDTA (lavender top)	Fill out the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Transport blood specimens at room temperature and protect from freezing. Specimens should arrive in the HLA laboratory within 7 days of collection. Specimens arriving after 3 pm on Friday will be processed the next business day.	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
HLA Crossmatch: Living Donor	02/09/23	• Transfusion Medicine • Referred out of province for testing: QEII hospital in Halifax, NS	4x6 mL ACD (Yellow top) BD#364816	Collection times: Monday to Wednesday by 1100h, except holidays. If Friday is a Holiday, collection times are Monday to Tuesday. Testing is performed at the QEII Hospital **by appointment only.** Contact the HLA Laboratory in Halifax at 902-473-7841 during regular working hours to book an appointment. Samples must be received in the HLA laboratory by 0900 on the scheduled crossmatch date. Fill out the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection. **Shipping:** Transport blood specimens at room temperature and protect from freezing. Specimens should arrive in the HLA laboratory within 72 hours of collection.	D *(<2 weeks and results sent directly to physician)*

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
HLA Crossmatch: Recipient	02/09/23	• Transfusion Medicine • Referred out of province for testing QEII hospital in Halifax, NS	1x6 mL serum (Plain red top) BD# 367815 + 4x6 mL ACD (Yellow top) BD#364816	Collection times: Monday to Wednesday by 1100h, except holidays. If Friday is a Holiday, collection times are Monday to Tuesday. Testing is performed at the QEII Hospital **by appointment only.** Contact the HLA Laboratory in Halifax at 902-473-7841 during regular working hours to book an appointment. Samples must be received in the HLA laboratory by 0900 on the scheduled crossmatch date. Fill out the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection. **Shipping:** Transport blood specimens at room temperature and protect from freezing. Specimens should arrive in the HLA laboratory within 72 hours of collection.	D *(<2 weeks and results sent directly to physician)*
HLA-Typing: Bone Marrow Recipient and Donor (HLA, A, B, C, DR, DQ, DP)	02/09/23	• Transfusion Medicine • Referred out of province for testing: QEII hospital in Halifax, NS	2x4 mL EDTA (Lavender top) BD #367861 Or 2 x buccal swabs	Transport specimens at room temperature and protect from freezing on the same day of collection if possible. Specimens should arrive in the HLA lab (QEII) within 7 days of collection date. Specimens arriving after 3 pm on Friday will be processed the next business day. Fill out the Bone Marrow Transplant section of the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection. Contact Histocompatibility Lab at 902-473-7841 for directions for collecting buccal swabs. Swabs in culture media are not appropriate for HLA testing.	D *(<2 weeks and results sent directly to physician)*

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
HLA Typing-Multi Organ Transplant Recipient and Donor (HLA-A, B, C, DR, DQ, DP)	02/09/23	• Transfusion Medicine • Referred out of province for testing: QEII hospital in Halifax, NS	2x4 mL EDTA (Lavender top) BD #367861	Transport specimens at room temperature and protect from freezing on the same day of collection if possible. Specimens should arrive in the HLA lab (QEII) within 7 days of collection date. Specimens arriving after 3 pm on Friday will be processed the next business day. Fill out the Multi-organ Transplant Section of the Histocompatibility Requisition (CD0004) and send to Laboratory with specimen. Requisition which must be signed (full name) by the phlebotomist and include date and time of collection.	D *(<2 weeks and results sent directly to physician)*
HLA testing at University Health Network (UHN), Princess Margaret Cancer Center: HLA Typing and/or HLA Antibody Testing and/or HLA Crossmatch	02/09/23	-Transfusion Medicine -Referred out of province for testing: UHN, Princess Margaret Cancer Center, Toronto, Ontario	See Manual UHN Regional Histocompatibility Lab requisition for specimen requirements	-Specimens must be accompanied by manual UHN Regional Histocompatibility Lab requisition which must be signed (full name) by the phlebotomist. -Order the test in HIS using "Transfusion Medicine Referral Type-in", and log the specimens into ***UHN Log-in***.	D
Homocysteine	02/16/18	• Biochemistry • Referred within province for testing	Prechilled (10 minutes on ice) Lavender top BD #367856	• 8 hour fast required. • Deliver to laboratory on ice within 60 min • Refrigerated centrifuge must be available on site, otherwise send patient to SJRH. **(**SJH collect immediately before next courier run.)	D
HTLV ½ Serology		• Microbiology • Refer within Province	Gold top tube BD #367986		D
Human Bocavirus	3/14/18	• Microbiology • Refer within Province		• Respiratory samples (NPA, swab, throat) • Viral transport • Part of viral resp. panel.	D
Human Granulocytic Ehrlichiosis (HE)	**Refer to Anaplasma Serology**				
Human Herpes Virus 6 (HHV6) (Roseola) PCR		• Microbiology • Refer out of Province	Serum: Gold top tube BD #367986 Plasma: EDTA CSF: Plain sterile container	Case history required	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Human Herpes Virus 7 PCR		• Microbiology • Refer out of Province	Serum: Gold top tube BD #367986 Plasma: EDTA CSF: Plain sterile container	Case history required	D
Human Herpes Virus 8 PCR		• Microbiology • Refer out of Province	Serum: Gold top tube BD #367986 Plasma: EDTA CSF: Plain sterile container	Case history required	D
Human papilloma virus (HPV) – cervical specimens collected in – liquid-based Cytology media	12/29/16	**Refer to Microbiology Specimens by Source**			C
Human papilloma virus (HPV) – lesion/biopsy		• Microbiology • Referred out of Province	Viral swab	Send on ice ASAP. If looking for STI – not high risk for cancer screening.	D
Hydroxyproline: 24 h urine		**Test no longer available as of June 2012**			
Hydroxyindole Acetic Acid: 24 h urine (5-H1AA)		• Biochemistry • Referred out of province for testing	24 h urine container (HCl)	• See specimen collection guide- section 12 • For 48 hrs. prior to starting collection and during the 24 hrs. of collection patients are to limit the following to 1 serving per day: Fruits, vegetables, nuts, caffeinated beverages, or foods. If clinically feasible discontinue the following meds at least 48 hrs. Prior to collection: Acetaminophen, Aspirin, Antihistamines, Cough Syrup, Cold and flu medications.	D
Hydroxyprogesterone, alpha (17-OH, P)	10/15/19	• Biochemistry • Referred out of province	Gold top tube BD #367986 or Green top tube (Li heparin) BD#367962	Avoid Hemolysis	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
ICP	**Refer to Immunocompetence Profile**				
IGF-1	**Refer to Insulin-like Growth Factor 1, IGF-1**				D
IGFBP3	**Refer to Insulin-like Growth Factor Binding Protein-3**				D
IgG Subclasses	10/09/20	• Biochemistry • Refer within province	Gold top tube BD #367986	Assay includes IgG1, IgG2, IgG3 and IgG4	D
IgG4 Subclasses	10/09/20	• Biochemistry • Refer within province	Gold top tube BD #367986	Can be ordered as a stand-alone test	D
IGRA (Interferon Gamma Release Assay)	**Refer to Microbiology Specimens by Source**				C
Imipramine, included in Tricyclic Antidepressant Screen (part of Toxic screen)	**Refer to Toxic screen (Serum)**				
ImmunoCAP	**Refer to Allergy Testing**				
Immunocompetence Profile (ICP) (CD4 – CD8 Lymphocytes)	8/16/18	Haematology	Lavender top tube BD #367861 (peripheral blood)	Collect samples **Monday** through **Thursday**, in the morning **only,** excluding holidays and weekends. Samples must be received in the SJRH lab by **noon**, on the same day of collection to allow for same day shipment to Moncton. Minimum volume 2 ml Store and ship samples at room temperature 18-25ºC.	D
Immunodeficiency (Flow-ID1, Flow-ID 2, T cell/NK profile-Flow ID1 (CELLSMIT), B Cell-Flow ID2(CELLSMIB)	Sept 2020	Haematology Flow Cytometry	Lithium Heparin Vacutainer BD#367884	Collect Mon-Thurs am only Specimen(s) must be at SJRH Laboratory by 11am to allow for same day shipment to referral laboratory. Send copy of requisition with specimen to flow lab. Maintain at room temperature. **CBC must be collected at same time.**	D
Immunoelectrophoresis: Serum or Urine	**Refer to: Protein Electrophoresis: Serum or Urine**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Immunoglobulin-E	07/23/18	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection and refrigerated if being sent same day or next day. If specimen is arriving at SJRH more than 1 day after collection, please send frozen serum/plasma.	B
Immunoglobulins, quantitative Includes : IgG, IgM, IgA,	07/23/18	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection and refrigerated if being sent same day or next day. If specimen is arriving at SJRH more than 1 day after collection, please send frozen serum/plasma.	B
Immunophenotyping Analysis: – Acute Leukemia Panel – Lymphoma Panel – Lymphocytosis CLL Panel – Lymphocytosis LGL Panel – Multiple Myeloma Panel – MDS Panel – NHL Staging Panel		Haematology	<u>Peripheral Blood</u> Lavender top tube BD # 367861	• Clinical history must accompany specimen • Make arrangements with Haematology before collection (648-6875) • Maintain specimen at room temperature (18-22°C) • Specimen must be labeled with day and time of collection • Minimum volume 2 ml • Deliver to laboratory within 2h of collection	B
		Haematology	<u>Bone Marrow</u> Lavender top tube BD # 367861	• Clinical history must accompany specimen • Make arrangements with Haematology before collection (648-6875) • Haematology technologist MUST be present at collection • Add 1-2 mL of bone marrow to a lavender top tube, mix continuously for 5 min • Maintain specimen at room temperature (18-22°C) • Specimen must be labeled with date and time of collection • Deliver to laboratory within 2 h of collection	B

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
		Haematology	<u>Body Fluid</u> 5 Lavender top tubes BD #367861	• Clinical history must accompany specimen • Make arrangements with Haematology before collection (648-6875) • Maintain specimen at room temperature (18-22°C) • Specimen must be labeled with date and time of collection • Deliver to laboratory within 20 min of collection	B
Immunophenotyping Analysis *(continued)*		Haematology	<u>Spinal Fluids</u> 3 mL Plain Red top plastic tube BD #366703 or Specimen vials with caps (10 mL) included in lumbar puncture trays.	• Clinical history must accompany specimen • Make arrangements with Haematology before collection (506-648-6875) • Maintain specimen at room temperature (18-22°C) • Specimen must be labeled with date and time of collection • Deliver to laboratory within 20 min of collection • 2 mL if possible	B
		Haematology	<u>Bronchial Wash</u> Sterile specimen container	• Clinical history must accompany specimen • Make arrangements with Haematology before collection (648-6875) • Maintain specimen at room temperature (18-22°C) • Specimen must be labeled with date and time of collection • Deliver to laboratory within 20 min of collection • 0.5-100 mL well mixed sample	B

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Immunophenotyping Analysis *(continued)*		Haematology	<u>Tissue/Nodes</u> Sterile specimen container or red top tube with Flow Cytometry storage media to completely cover the tissue.	• Usually processed through Pathology, refer to Section 7 of this manual If sent to Haematology (Flow Cytometry) do the following: • Clinical history must accompany specimen • Make arrangements with Haematology before collection (648-6875) • Place tissue/node directly into Flow Cytometry storage media • Do not place sample on gauze or other surface prior to placing into storage media • Maintain specimen at room temperature if delivering immediately. For longer duration maintain at 4°C (wet/ice) • Specimen must be labeled with date and time of collection • Deliver to Haematology within 2 h of collection • Notify Lab that specimen is coming 506-648-6875 NOTE: If Flow Cytometry storage media is not available, the following can be used: RPMI 1640, phosphate buffered saline, McCoy's modified media or Hank's buffered salt solution.	B

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Immunophenotyping Analysis *(continued)*		Hematology	<u>Fine Needle Aspirate/Core Biopsy for Lymphoma</u> Red top tube with Flow Cytometry storage media.	• Make arrangements with Hematology before collection 506-648-6875 • Cellular material aspirated by FNA is placed directly into Flow Cytometry storage media. Physicians should make enough passes through the tumor to make solution cloudy or 3-4 core samples • DO NOT place sample on gauze or other surface prior to placing into storage media • Recap tube immediately • Samples for Flow Cytometry must be taken in addition to samples for Cytology and/or Pathology • Specimen must be labeled with date and time of collection • Maintain specimen at room temperature if delivering immediately. For longer duration maintain at 4°C (wet/ice) • Deliver to Hematology within 2h • Clinical History must accompany specimen NOTE: If Flow Cytometry storage media is not available, the following can be used: RPMI1640, phosphate buffered saline, McCoys Modified Media, Hanks buffered salt solution.	B
Infectious Mononucleosis Screen		Haematology	Red top BD #367815		A
Influenza (PCR) – Viral Culture	**Refer to Microbiology Specimen by Source – Viral Culture (Respiratory)**				D
International Normalized Ratio (INR)	**Refer to Prothrombin Time**				
Insects (Ticks)	**Refer to Microbiology Specimen by Source – Stool/GI Tract (Other)**				D
Insulin	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection Fasting preferred but not required	B
Insulin antibodies	06/24/16	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815		D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Insulin-like Growth Factor 1 (IgF-1)	05/05/2023	Biochemistry	Gold top BD #367986 or Red top BD#367815 or Lime green top tube BD Barricor #365049	• • Serum or plasma should be separated within 2h of collection • Separated aliquot is stable 24 hours at room temperature, 48 hours at 2-8 °C, or 28 days frozen	B
Insulin-like Growth Factor-Binding Protein-3 (IGFBP3)	10/29/21	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815	• Serum should be separated within 2h of collection	D
Ionized Calcium	**Refer to Calcium, Ionized**				
Iron, IBC, % Saturation; serum	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Specimens should be collected in the morning to avoid low IBC results due to diurnal variation. • Time required between requests is 4 weeks	A
Iron; urine	**Refer to Haemosiderin; urine**				
Isopropanol (qualitative)	08/31/15	**Refer to Volatile Screen**			
Jamestown Canyon Virus	3/14/18	• Microbiology • Referred out of Province	Serum Gold top tube BD #367986		D
JC Virus (John Cunningham)	3/14/18	• Microbiology • Referred out of Province	CSF: plain container Urine: plain container Plasma: Lavender top tube BD #367863		D
Ketone Screen: Serum	**Refer to Beta – Hydroxybutyrate**				
Kininogen	**Refer to Fitzgerald Factor**				
Kleihauer Betke Postpartum		Transfusion Medicine	Lavender top tube BD# 367863	Provide patient's height and weight	<24 hours A
Kleihauer Betke Antepartum		Transfusion Medicine	Lavender top tube BD #367863	Deliver to laboratory immediately.	<4 hours A A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Lactate	04/07/2020	Biochemistry	Gray top tube BD #367922	• Venous or arterial specimen acceptable • Patients should rest for 30 minutes after vigorous exercise prior to collection • Avoid the use of a tourniquet if possible. If not possible, remove the tourniquet within 30 seconds. • Transport on ice. Must be received in lab and separated within 15 min of collection	A
Lactate, CSF		Biochemistry	BD Plastic #366703	Same as blood	A
Lactate Dehydrogenase (LDH)		Biochemistry	Gold top tube BD #367986 or Green top tube (Li heparin) BD#367962		A
Lactate Dehydrogenase isoenzymes	04/20/16	**Test not routinely available**			
Lactose Tolerance		Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Fasting: minimum 8 h fast • No activity, smoking, eating during exam. Collect “0”h “ac” blood • Give 1 g lactose/kg body weight orally in H_20 to a maximum dose of 50g • Collect glucose specimens 30, 45, 60, 90 min post lactose • Send all bloods to laboratory	A
Lamellar Body Count (LBC)	**Refer to Fetal Lung Maturation**				
Lamotrigine (201amictal)	06/24/16	• Biochemistry • Referred out of province for testing	Red top tube BD #367815	Collect trough level prior to next dose.	D
L-asparaginase	6/26/23	• Biochemistry • Referred out of province for testing	Lavender top tube BD# 367863	• Consult with lab prior to collecting specimen • Completed referral site specific requisition required • Deliver to lab immediately on ice following collection as plasma must be separated from cells immediately after collection.	D
LDH	**Refer to Lactate Dehydrogenase**				
LDH: fluid	**Refer to Lactate Dehydrogenase**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Lead: whole blood	06/24/16	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	• Do not freeze • Whole blood • Do not centrifuge	D
Lead: 24 hr. urine	10/15/19	• Biochemistry • Referred out of province for testing	24 hr. urine container (plain)	• Collect in a clean metal free collection basin • See specimen collection guide- section 12	D
Legionella Culture	**Refer to Microbiology Specimens by Source**				A
Legionella Serology		• Microbiology • Refer out of Province	Gold top tube BD #367986		D
Legionella Urinary Antigen	**Refer to Microbiology Specimens by Source**				D
Leishmania Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986		D
Leishmania PCR		• Microbiology • Referred out of Province	Tissue in plain sterile container		D
Leptospira PCR		• Microbiology • Referred out of Province	Tissue in plain sterile container		D
Leptospira Serology		• Microbiology • Refer out of Province	Gold top tube BD #367986	IgM (ELISA) collect specimen ASAP after symptoms start. IgM can be detected within about 5 days.	D
Levetiracetam (Keppra)	03/17/2022	• Biochemistry Referred out of province for testing	Red top tube BD #367815 or Gold top tube BD #367986	-Trough specimen collected prior to next dose	D
Lyme Serology/PCR	**Refer to Borrelia burgdoferi**				
LH	**Refer to Luteinizing Hormone**				
Librium	**Refer to Chlordiazepoxide**				
Lipase	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Lipid Profile Fasting (TG, TC, HDL-C, LDL-C, and TC/HDL-C)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • 9-12 h fast • Time required between requests is 6 weeks	A
Lipid Profile Non-Fasting (TC, HDL-C, and non HDL-C)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Fasting not required • Time required between requests is 6 weeks	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Lipoprotein (a)	8/10/22	Biochemistry	Red top tube BD #367815 or Gold top tube BD #367986	Specimen must be received in lab within 2 hours of collection	D
Lithium	6/28/16	Biochemistry	Red top tube BD #367815 or Gold top tube BD #367986	Collect trough specimen 12 h after last dose Specimen must be received in lab within 2 hours of collection	A
LKM Antibody	**Refer to Anti-Liver Kidney Microsomal**				
Lorazepam	04/20/16	**Test not routinely available as of June 2014**			
Lupus Anticoagulant	08/16/18	Haematology	4 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature. • Tube must be filled to the etched fill indicator line on the tube.	D
Luteinizing Hormone (LH)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Lyme Disease antibodies	**Refer to Barrellia burgdorferi Antibody**				
Lysosyme (muramidase)	06/24/16	• Biochemistry • Referred out of province for testing	Lavender top BD #367863	Plasma must be separated AND frozen within 2 h of collection.	D
Magnesium	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasm should be separated within 2h of collection	A
Magnesium: 24 hr. urine	10/15/19	Biochemistry	24 hr. urine container (plain or HCl)	• Collect in a clean metal free collection basin • See specimen collection guide- section 12	A
Malarial Parasites		Haematology	Lavender top tube BD #367861	• Provide patient history, including possible exposure (time) and treatment(s) • Deliver to laboratory immediately	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Marijuana Metabolite: urine	6/28/16	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1h required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC for up to 72 hrs • Freeze sample if not able to be tested within 72 hrs • See specimen collection guide- section 12	A
Maternal Serum Alpha Fetoprotein	**Refer to MSS**				
Measles (Red) (Rubeola) – serology		• Microbiology • Refer within Province	Gold top tube BD #367986	IgG (immune status) and IgM (acute infection) available – specify which is required.	D
Measles (Red) (Rubeola) – PCR		• Microbiology • Refer within Province	Urine: sterile container NP swab/ throat UTM		D
Meconium Toxicology Testing	08/21/15	**Test not currently available**			
Mercury: whole blood	10/15/19	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	• Do not open tube. • Do not centrifuge.	D
Mercury: 24 h urine	10/15/19	• Biochemistry • Referred out of province for testing	24 h urine container (plain)	• Collect in a clean metal free collection basin • Avoid mineral supplements for 5 days • See specimen collection guide- section 12	D
Metanephrines: 24 h urine (includes normetanephrine)	06/25/16	• Biochemistry • Referred out of province for testing	24 h urine container (HCl)	• Obtain container from SPD at SJRH • Restrict caffeine, nicotine, and alcohol 24 h prior to collection. • Discontinue Methyldopa (Aldomet) at least 5 days prior to collection. Other drugs usually do not interfere with this assay. • See specimen collection guide- section 12	D
Metanephrines: Plasma	04/16/19	• Biochemistry • Referred out of province for testing	Lavender top BD#367861	• Specimen should not be collected if Patient has used an Epi-pen within 7 days. • Plasma must be separated within 2 hours of collection	R

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Methadone Metabolite: urine	6/28/16	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1 hr required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC for up to 5 days • See specimen collection guide- section 12	A
Methadone Panel: (random urine) – Cocaine metabolite – Benzodiazepines – Opiates – Methadone Metabolite – Oxycodone		Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1 hr required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC for up to 5 days • See specimen collection guide- section 12	A
Methanol	**Refer to Volatile Screen**				
Methemoglobin	9/26/18	Biochemistry	Green top tube BD #6481 or Heparin coated syringe SPD #0010545	Deliver immediately to laboratory on ice.	A
Methotrexate	10/15/19	Biochemistry	Red top tube BD #367815	• Deliver to lab within 60 min. • Protect from light. Wrap original container and aliquot in foil.	A
5 Methyltetrahydrofolate-CSF	06/25/16	• Biochemistry • Referred out of province for testing	NML Supply T657	• CSF collected using a Medical Neurogenetics collection kit supplied by Mayo (NML Supply T657) • CSF should be collected from the first drop in the tubes in the numbered order. Fill each tube to the marked line with the required volumes. Place a patient label on each tube leaving the tube number visible: - Tube 1: 0.5 mL - Tube 2: 0.5 mL - Tube 3: 1.0 mL - Tube 4: 1.0 mL - Tube 5: 0.5 mL • Send immediately to the laboratory	D
Microalbumin: random urine	**Refer to Albumin: random urine**				

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Microalbumin: 24h urine	**Refer to Albumin: 24h urine**				
Microglobulin, beta-2	05/05/2023	Biochemistry	Serum or plasma should be separated within 2h of collection	Serum or plasma should be separated within 2h of collection	B
Microscopic examination: faeces	01/24/14	Biochemistry	**Testing not available as of January 24, 2014.**		
Microscopic examination: urine	**Refer to Urinalysis**				
Microsomal antibodies	**Refer to Thyroid Peroxidase antibodies (Anti-TPO)**				
Mitochondrial antibodies	**Refer to IFA screen**				
Mono Test	**Refer to Infectious Mononucleosis Screen**				
MRSA (Methicillin Resistant Staphylococcus Aureus	**Refer to Microbiology Specimen by Source**				
MSS (Maternal Serum Screen)	1/18/24	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or	• Specimen must be drawn between 9-13 weeks gestation for first trimester and 15-20 weeks for second trimester interpretation. • Specimen must be accompanied by completed, (all patient information must be filled in), IWK requisition which includes gestational age (to the day from beginning of last menstrual period), mother's age, race, and weight • Results include AFP and βhCG levels with computerized interpretation. • Note: effective mid March 2024, referral testing for Maternal Serum Screening will change from IWK to North York general. Please ensure to use the North York requisition: https://www.prenatalscreeningontario.ca/en/pso/resources/Remediated-PDFs-2020/Common-MMS-requisition-FINAL-NYGH-V3-May-2022.pdf	D
Mucopolysaccharides-Random urine	10/23/18	• Biochemistry • Referred out of province for testing	Sterile specimen container	• Refrigerate or keep on ice if more than one (1) h required to arrive at SJRH laboratory • See Specimen Collection Guide (Section 12) or Print Shop form #60503	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Mumps PCR		• Microbiology • Refer within Province	Plain sterile container (urine) Viral transport (saliva & buccal)	Send ASAP on ice	D
Mumps Serology		• Microbiology • Refer within Province	Gold top tube BD #367986	IgG (immune status) and IgM (acute infection) available – specify	D
Muramidase	**Refer to Lysosyme**				
MuSK Antibodies	3/2/22	• Biochemistry Referred out of Province	Gold top tube BD #367986 or Red top tube BD #367815	Deliver to lab ASAP	D
Myasthenia Gravis	**Refer to Acetylcholine Receptor Antibody**				
Mycobacterium (AFB)	**Refer to TB Culture**				
Mycophenolate	06/25/16	• Biochemistry • Referred out of province for testing	Lavender top tube BD #367861	Deliver to lab ASAP.	D
Mycoplasma pneumoniae hominis culture		• Microbiology • Refer out of Province	Viral transport media for urethral, cervical, and vaginal. Plain sterile container for tissue.	Send ASAP on ice	D
Mycoplasma pneumoniae PCR		• Microbiology • Refer within Province	Plain sterile container (NPA, sputum, bronch wash, tissue, CSF). Viral swab (NP, throat).	Send ASAP on ice	D
Mycoplasma pneumoniae serology	3/14/18	**Testing no longer available**			
Myoglobin qualitative: random urine	10/15/19	Biochemistry	Collected in sterile specimen container	• Send to lab immediately • See specimen collection guide- section 12	A
N-Acetyl procainamide (NAPA)	04/20/16	**Test is not Routinely Available**			
NAPA (N-acetyl)	04/20/16	**Test is not Routinely Available**			
NT-pro BNP	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Repeat testing for inpatients will not be permitted within 7 days. • Repeat testing for outpatients will not be permitted within 6 weeks.	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Needlestick Panels					
Needle EXP *(HbsAg, HBs antibody, Total HB core antibodies, HCV antibody screen, HIV Ag/AB screen; ALT aminotransferase)*	05/25/16	Microbiology	2 Gold top tubes (SST) BD #367986		B
Needle PEP *(HbsAg, HBs antibody, Total HB core antibodies, HCV antibody screen, HIV Ag/AB screen; ALT aminotransferase, alk phosphatase, creatinine, electrolytes, bilirubin total; CBC)*	05/25/16	Microbiology	2 Gold top tubes (SST) BD #367986 1 (EDTA) lavender top tube BD #367861		B
Needle SC *(HbsAg, HCV antibody screen, HIV Ag/Ab screen)*	05/25/16	Microbiology	1 Gold top tubes (SST) BD #367986		B
Neutrophil Cytoplasmic antibodies (ANCA) (Includes MPO and PR3 AB)		Biochemistry	Gold top tube BD #367986	If referred from outside Saint John, send frozen serum aliquot. Lipemic or hemolysed samples will not be processed.	C
Newborn Screening (for inquiries, contact the Maritime Newborn Screening Program – IWK Health Center: 1-902-470-7998)	06/25/16	• Biochemistry • Referred out of province for testing	Whole blood collected on newborn blotter card.	• Fax live birth information to IWK 1-902-470-6974 (Maritime Newborn Screening Program) • Heel prick specimen – 4 circles must be completely filled. • Air dry, separate card and ship to appropriate labs in supplied envelopes	D
Niacin	**Refer to Vitamin B_3**				
Nickel, plasma	12/17/19	• Biochemistry • Referred out of province	Royal Blue top BD #368381	Send to lab within 20 minutes of collection.	D
Nicotine: random urine	10/15/19	• Biochemistry • Referred out of province	Sterile specimen container	Expected processing time provided by referral lab is 2 days. See specimen collection guide-section 12	D
Nocardia Culture Microbiology	**Refer to Microbiology Specimen by Source**				
Norclozapine	03/06/14	**See Clozapine**			
Nortriptyline, included in Tricyclic Antidepressant Screen (part of Toxic Screen)	**Refer to Toxic Screen (serum)**				
Norwalk virus (Norovirus)	**Refer to Microbiology Specimen by Source – Stool/GI Tract – Viral Testing**				
Nuclear antibodies (ANA)	**Refer to Anti-Nuclear Antibodies Screen**				

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Occult Blood: Stool	06/28/16	Biochemistry	Prepared envelopes SPD #0251045	• Patient must follow diet three days prior and during test period • Not performed on Inpatients as of July 2013. • See envelope for diet and restrictions • See section 12, page 25 Specimen Collection Container Guide for Laboratory Testing. • If you have any further questions call the lab at 648-6587 • Deliver to the lab within 10 days of collection	B
Oligoclonal Banding: CSF	**Refer to CSF: Oligoclonal Banding**				
Oligosaccharides	10/15/19	• Biochemistry • Referred out of province	Sterile specimen container	• Mucopolysaccharides are not included in this assay, a separate specimen is required. (see separate listing).	D
Opiates: urine (Included in Abuse screen)	06/27/16	Biochemistry	Sterile Specimen Container	• Refrigerate or keep on ice if more than 1h required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8^{o}C or for up to 5 days • See specimen collection guide- section 12	A
Organic Acids, random urine	5/25/23	Biochemistry Referred out of province	Sterile Specimen Container	See specimen collection guide-section 12 Requires Biochemical Genetics Testing Requisition to be sent with sample	D
Organ (Donor) Panel		• Microbiology • Refer within Province	Gold top tube BD #367986	Refer to Organ Donor protocol	A
Osmolal gap		Biochemistry	Gold top tube BD #367986	Must be received in the lab within 2 hours of collection	A
Osmolality		Biochemistry	Gold top tube BD #367986	Must be received in the lab within 2 hours of collection	A
Osmolality: random urine	10/15/19	Biochemistry	Random urine collected in sterile specimen container	See specimen collection guide-section 12	B
Osmotic Fragility	**Refer to Eosin-5-maleimide EMA**				
Ova & Parasites	**Refer to Microbiology Specimen by Source**				C

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Oxcarbazepine Metabolite (MHC)		• Biochemistry • Referred out of province	Red top BD#367815	• Draw immediately before next dose • Send to lab ASAP (must be separated within 2 hours of collection)	D
Oxalate: 24 hr urine	09/11/23	Biochemistry	24 hr. urine container (plain or HCl)	• Restrict Vitamin-C rich foods and Vitamin C supplements for 48 hours prior to and during collection period. • See specimen collection guide- section 12	C
Oxycodone: urine (Included in Abuse screen)	6/28/16	Biochemistry	Sterile specimen container	• Refrigerate or keep on ice if more than 1h required to arrive at SJRH laboratory • Results are semi-quantitative, reported as ND or Present • 10 mL required • Store at 2-8ºC for up to 5 days • See specimen collection guide- section 12	A
Parainfluenza 1, 2, 3 Viral Testing		• Microbiology • Refer within Province	Viral swab or Plain sterile container	Send ASAP on ice	D
Paraneoplastic Antibody Panel-CSF		Biochemistry Refer within Province	Sterile container		D
Paraneoplastic Antibody Panel-serum		Biochemistry Refer within Province	Gold top tube BD #367986 Red top BD#367815	Send to lab ASAP (must be separated within 2 hours of collection)	D
Parasite Serology		Microbiology	Gold top tube BD #367986	• Case history required • Specify parasite(s)	D
Parathormone-Intact (PTH)	**Refer to Parathyroid Hormone-Intact (PTH)**				B
Parathyroid Hormone-Intact (PTH)		Biochemistry	Lavender top tube BD# 367861	Outside laboratories, separate plasma, and ship frozen	B
Parathyroid Hormone-Related Peptide	12/21/18	• Biochemistry • Referred out of province	Pre-chilled EDTA Lavender tube BD # 367861	Deliver to lab immediately on ice	D
Parietal Cell antibody (PCA)	**Refer to Cytoplasmic Antibodies Screen**				
Paroxysmal Nocturnal Hemoglobinuria (PNH)	**See PNH Telephone Haematology at 648-6875 for Flow Cytometry, by appointment only Monday-Thursday morning**				D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Partial Thromboplastin Time-Activated (APTT)		Haematology	Light Blue top tube BD #363083	• Deliver to laboratory within 60 minutes of collection • SJH collect immediately before next courier run • Tube must be filled to the etched fill indicator line on the tube.	A
Partial Thromboplastin Time 50/50 mix		Haematology	2 Light Blue top tubes BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Order PTT on same specimen	A
Parvovirus (B19) Serology (Fifth's Disease)		• Microbiology • Refer within Province	Gold top tube BD #367986	IgG (immune status) or IgM (acute infection) – specify	D
Paternity Testing	For Paternity Testing for personal or legal reasons contact: **Riverview Blood Collection Clinic in Moncton** • 506-383-4620 (AM) • 506-384-4272 (PM) For Paternity Testing that is for clinical purposes, contact: **Dr. Doha Itani, Molecular Pathologist at Doha.Itani@HorizonNB.ca**				
PBG	**Refer to Porphobilinogen**				
PCA	**Refer to Cytoplasmic Antibodies Screen**				
Pentaspan	**Refer to Plasma Volume Expanders**				
PG	**Refer to Phosphatidylglycerol**				
pH: Body fluids	06/28/16	Biochemistry	Collect anaerobically in a heparinized syringe SPD# 0014868	• Requires 2-3 mL of fluid • Deliver immediately to laboratory on ice	A
pH by Electrode: random urine	06/28/16	Biochemistry	Sterile specimen container	• Deliver to laboratory within 30 min of collection • 10 mL required • See specimen collection guide- section 12	A

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pH: Fetal Scalp	07/24/15	Biochemistry	Heparinized Capillary tube found in NuSurgix Fetal Scalp Blood Sampling Kit	• Call Ext 7185 to notify laboratory prior to collection • Collect as per instruction in NuSurgix Fetal Scalp Blood Sampling Kit • Fill capillary tube completely with no air bubbles • Clot catcher and capillary sample are to be placed in sealed bag with appropriate patient barcode label. One sample per bag only • Sample will be rejected if patient barcode label does not accompany sample • Send sample to lab immediately via Labor & Delivery technician or porter	A
pH: Stool		Biochemistry	Random, liquid stool in plain container	• Ambient: send to lab within 30 minutes of collection • Refrigerated: send to lab within 24 hours of collection • Call to notify lab prior to collection 506-648-7185	D
Phenobarbital	06/28/16	Biochemistry	Plain red top tube BD #367815	• Collect trough specimen (just before next dose) • Specimen must be received in the lab within 2 hrs. of collection	A
Phenylalanine, quantitative	06/25/16	• Biochemistry • Referred out of province for testing	Light green (Li Heparin) BD367962		D
Phenylketonuria screen	**Refer to Newborn Screening**				
Phenytoin	06/28/16	Biochemistry	Plain Red top tube BD #367815	• Collect trough specimen (just before next dose) • Specimen must be received in the lab within 2 hrs. of collection	A
Phosphate	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Phosphate: 24 h urine	06/06/12	Biochemistry	24 hr. urine container (plain or HCl)	See specimen collection guide-section 12	A
Phosphatidylglycerol (PG)	**Refer to Fetal Lung Maturation**				
Phospholipase A2 Receptor Antibodies (PA2RI)	07/27/21	• Biochemistry • Referred out of province for testing	Gold top tube BD #367986 or Plain Red top tube BD #367815	• Alias: Anti-PLA2R	D

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Phospholipid Antibody	**Refer to Cardiolipin Antibodies**				
PKU Screen	**Refer to Newborn screening**				
Plasminogen Activator Inhibitor Antigen (PAI-1)	12/17/19	Haematology	2 Light Blue top tubes BD #363083	Fasting morning specimen, avoid anticoagulants. Rush to lab on ice	D
Platelet	**Refer to Complete Blood Count**				
Platelet Aggregation		Haematology	4 Light Blue top tubes BD#363083	• Tube must be filled to the etched fill indicator line on the tube. • Telephone Haematology at 506-648-6876 • **By appointment only**	Thursday only
Platelet Antibody – NAT (Neonatal Alloimmune Thrombocytopenia)		• Transfusion Medicine • Referred out of province for testing to CBS, NPIRL	**Mother** -One 10 ml SST tube -Three X 5ml Lavender top tubes BD# 367863 **Father** Five X 5ml Lavender top tubes BD# 367863 **Neonatal:** -One lavender top tube BD# 367861	• Specimens must remain at room temperature and sent to Transfusion Medicine I immediately • Referred to CBS, Winnipeg, National Platelet Immunology Lab (NPIRL) • Reports are sent to TM for reporting and filing • Requisitions are obtained from link to CBS website: https://www.blood.ca/en/requisitions-and-forms Each sample type requires separate requisition	2 weeks D
Platelet Function Screen	**See Closure Time Test**				
PML-RAR [t (15;17)]		• Molecular Diagnostics • Referred out of province for testing: QEII hospital in Halifax, NS	Two Lavender top tubes BD #367861	• Fill out Molecular Diagnostics requisition with all required information and send to laboratory with specimen • Samples will be accepted Monday through Thursday with the exception of Statutory Holidays • Samples will not be accepted on Statutory Holidays • Samples must be received in the Laboratory on the day of collection prior to 1400 hrs.	Mon – Thurs
Pneumococcal Antibodies	**Testing N/A – No Accredited Lab**				
Pneumocystis carinii smear	**Refer to Microbiology Specimens by Source – Respiratory**				C

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
PNH Paroxysmal Nocturnal Hemoglobinuria	Sept 2020	Haematology	1 Lavender top tube BD #367861	• By appointment only 506-648-6875, Monday – Thursday AM • Minimum volume 2 ml • Specimen must be in lab by 11am • SJRH – maintain specimen at room temperature 18-22ºC • Specimen must be labeled with date and time of collection • Clinical history must accompany External facility: • If collection is at a facility other than SJRH, send cold on ice pack. DO NOT FREEZE • If possible, ship directly to referral lab call 506-648-6875 for information	D
Polyoma Virus	**Refer to BK Virus**				
Porphobilinogen Deaminase	06/25/16	• Biochemistry • Referred out of province for testing	2x 4 mL sodium heparin green top tube BD #367871 **and** 1x Lavender top tube BD #367861 (for hematocrit)	• Gel- separator tube not acceptable. • Reference laboratory requires 7 mL of whole blood. • Provide hematocrit • Do not freeze	D
Porphobilinogen (PBG/ALA) Screen: Random urine	11/26/14	**Refer to Porphyrin Precursors**			
Porphobilinogen (PBG/ALA) Screen. 24 hr. urine	11/26/14	**Refer to Porphyrin Precursors**			
Porphyrin, plasma	11/26/14	**Test NOT routinely available – consult Biochemist 648-7805**			D
Porphyrin Precursors: 24hr Urine (ALA & PBG)	10/15/19	• Biochemistry • Referred out of province for testing	Amber 24 hr. urine container	• Protect from light during collection. • Analysis includes Porphobilinogen (PBG) and Delta Aminolevulinic Acid (ALA) • See specimen collection guide- section 12	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Porphyrin Precursors: Random Urine (ALA & PBG)	10/15/19	• Biochemistry • Referred out of province for testing	Sterile specimen container (wrapped to protect from light)	• Protect from light during collection. • Specimen must be labeled inside and outside the light-protecting wrap. • Analysis includes Porphobilinogen (PBG) and Delta Aminolevulinic Acid (ALA) • See specimen collection guide- section 12	D
Porphyrins Fractionated, Serum/Plasma	3/22/2023	• Biochemistry • Referred out of province for testing	Serum (Red Top) Plasma (EDTA/NaHeparin)	• Wrap in foil to protect from light. • Specimen must be labeled inside and outside light-protecting wrap.	D
Porphyrins: Screen: Random urine	06/25/16	• Biochemistry • Referred out of province for testing	Sterile specimen container	• Random first morning preferred • Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Deliver to Lab immediately • 20 mL required • See specimen collection guide- section 12 • Quantitation will be performed when screen is positive • A random urine sample is sufficient for diagnosis. Sample should be collected when patient is symptomatic	D
Porphyrins: Whole Blood	12/17/19	• Biochemistry • Referred out of province for testing	2 Lavender top tubes BD#367861	• Wrap in foil to protect from light. • Must be labeled inside and outside light protecting wrap. • Hematocrit must be provided.	D
Porphyrins: Screen: 24 hr. urine	06/25/16	• Biochemistry • Referred out of province for testing	24 hr. amber urine container with 5 g sodium carbonate	• Obtain container from SPD at the SJRH • This specimen cannot be used for Porphyrin precursors • See specimen collection guide- section 12 • Quantitation will be performed when screen is positive • A random urine sample is sufficient for diagnosis.	D

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Porphyrins: Screen: stool	06/25/16		Random stool collected in plain stool container	• Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Minimum 50g • Quantitation will be performed when screen is positive	D
Post-Partum Workup		Transfusion Medicine	Lavender top tube BD #367863 from mother	• Post-delivery specimen	<24 hours A
Potassium	**Refer to Electrolytes**				
Prealbumin	07/23/18	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection and refrigerated if being sent same day or next day. If specimen is arriving at SJRH more than 1 day after collection, please send frozen serum/plasma.	B
Pregnancy Test (hCG): random urine	10/15/19	Biochemistry	Sterile specimen container	• First morning void preferred • See specimen collection guide- section 12	A
Prekallikrein Deficiency (Fletcher Factor)		• Haematology • Referred out of province for testing	Light Blue top tube BD #363083	Tube must be filled to the etched fill indicator line on the tube. • Contact Haematology prior to collection at 506-648-6876	D
Prenatal Screen	05/25/16	Microbiology	Gold top tube (2) BD #367986	The following tests are performed: • Rubella IgG • Syphilis • HbsAg • HIV Ag/Ab	B
Prenatal Transfusion Medicine		Transfusion Medicine	Lavender top tube BD #367863	Include expected date of delivery	<72 hours B
Primidone (Mysoline)	12/17/19	• Biochemistry • Referred within province for testing	Red top BD #367815 or Lt. Green top BD#367962	• Therapeutic monitoring- Collect trough specimen prior to dose.	D
Procainamide and N-acetyl procainamide (NAPA)	04/20/16	**Test not Routinely available**			
Progesterone	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B

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Prolactin	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Keep patient calm and unstressed prior to collection • Outside laboratories, send frozen	B
Prostate Specific Antigen Total PSA	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Repeat testing will not be permitted within 4 weeks. • Test not available when patient is >75 years old.	A
Prostate Specific Antigen Free PSA (includes Total PSA, Free PSA and F/T ratio)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Prosthetic Device	03/01/23	**Refer to "Microbiology Specimen by Source"**			A
Protein C	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Protein S	8/16/18	Haematology	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Protein & Glucose: CSF	**Refer to CSF: Glucose and Protein**				
Protein Electrophoresis: CSF	**Refer to CSF: Oligoclonal Banding**				
Protein Electrophoresis: serum	06/28/16	Biochemistry	Gold top tube BD #367986	• General screen for Gammopathies • Detection of discrete band(s) will automatically lead to Immunoelectrophoresis using the same specimen • Time required between requests is 3 weeks	C

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Protein Electrophoresis: Random Urine (Bence Jones)	10/16/19	Biochemistry	Sterile specimen container	• 50 mL required • First morning specimen is preferred • Time required between requests is 3 weeks • See specimen collection guide – section 12	C
Protein Electrophoresis: 24 hr. urine (Bence Jones)	10/16/19	Biochemistry	24 hr. urine container (plain)	• Time required between requests is 3 weeks • See specimen collection guide section 12	C
Protein: Fluid		Biochemistry	Plain Red top tube BD #367815		A
Protein: 24 hr. urine	10/16/19	Biochemistry	24 hr. urine container (plain)	See specimen collection guide-section 12	A
Protein: random urine	10/16/19	Biochemistry	Sterile specimen container	See specimen collection guide-section 12	A
Prothrombin 50/50 mix		Haematology	2 Light Blue top tubes BD #363083	• Tube must be filled to the etched fill indicator line on the tube. Order PT on same specimen	A
Prothrombin Time (PT)		Haematology	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube.	A
Prothrombin variant	01/27/23	• Molecular Diagnostics	One Lavender top tube BD #367861	• Fill out Molecular Diagnostics requisition with all required information and send to laboratory with specimen • Send specimen to laboratory within 48 hours of collection	C
Protoporphyrins	**Refer to Porphyrins WB**				
PSA	**Refer to Prostatic Specific Antigen (PSA)**				
Pseudocholinesterase, Total	12/17/20	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815	• Used for monitoring exposure to organophosphorus insecticides • Preoperative screening for patients with a family history of prolonged paralysis and apnea after the use of anaesthetic	D
Psittacosis Serology		Microbiology	Gold top tube BD #367986	• Case history required • Deliver immediately to Microbiology • Convalescent paired sera to be collected 21 days after the acute phase	D
PT	**Refer to Prothrombin Time**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
PTH, Intact Molecule	**Refer to Parathyroid Hormone Intact (PTH)**				
PTH, Related Peptide	**Refer to Parathyroid Hormone-Related Peptide (PTH)**				
PTT Activated (APTT)	**Refer to Partial Thromboplastin Time – Activated**				
PTT 50/50 mix	**Refer to Partial Thromboplastin Time 50/50 mix**				
Pyruvate	06/12/13	**Test not available as of May 2013**			
Pyruvate Kinase Screen		• Haematology • Referred out of province for testing	One Lavender top tube BD #367861	Keep specimen at 4°C	D
Q Fever Serology (Coxiella burnetti)		• Microbiology • Refer out of Province	Gold top tube BD #367986		D
Quinidine	04/20/16	**Test not routinely available**			
Rabies Serology		Microbiology	Gold top tube BD #367986		D
RAST Test (Radioallergosorbent Test)	**Refer to Allergy Testing**				
RBC Folate	**Refer to ERC Folate**				
RBC Enzyme Screen	**Refer to Pyruvate Kinase Screen**				
Red Rash Screen	05/25/16	Microbiology	Gold top tube BD #367986 (2)	• Includes measles, rubella, parvovirus, IgG (immune status) and IgM (recent infection) • Case history required • Send to lab ASAP	D
Reducing Substances	**Refer to Sugar Chromatography**				
Regulatory T Cells	09/02/21	Flow Cytometry	Lavender tube BD #367861	• Collect M-W am only. Send Stat must be in lab referral before noon with completed Calgary Requisition, ensure CBC gets collected at same time. • Patient Prep: None • Specimen Type: Adults: EDTA. Also accepted: ACD-A, Sodium Citrate • Specimen Volume: 1 x 4 ml • Minimum Required Volume: 0.5 ml • Specimen stability: <48 hours if kept at room temp • Ship at room temp	D

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Renin Activity	11/04/21	• Biochemistry • Referred out of province for testing	Lavender tube BD #367861 Pre-chilled (10 minutes on ice)	• Patient must be in a seated position during collection • Collect in chilled lavender stoppered tube. **Rush to lab on ice.** • If possible, patient should discontinue Spironolactone 4-6 weeks prior to collection as it increases renin activity • Simultaneous collection of aldosterone and renin activity should be done to aid with interpretation • ACE inhibitors can falsely elevate renin, thereby affecting the aldosterone-renin ratio	D
Reptilase	8/28/19	Haematology	Light Blue top tube BD #363083	Patient should not be on anticoagulant therapy	D
Resistance to Activated Protein C	**Test no longer performed**				n/a
Respiratory Syncytial Virus (RSV) PCR	**See Microbiology Specimen by Source – Respiratory**				
Reticulin antibodies (ARA**)**	**Refer to Cytoplasmic Antibodies Screen**				
Reticulocytes		Haematology	Lavender top tube BD #367856		A
Retinol	**See Vitamin A**				
Reverse, T3	**Refer to Tri-iodothyronine, Reverse**				
Rheumatoid Factor	10/16/19	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986		B
Rhinovirus		• Microbiology • Refer within Province	Plain container or Viral swab (UTM)	• Part of Respiratory Viral panel • Respiratory specimens such as sputum, bronchial washes, NP swab, NPA.	
Rhythmodan	**Refer to Disopyramide**				
Riboflavin	**See Vitamin B_2**				
Rickettsiae Serology		• Microbiology • Referred out of Province	Gold top tube BD #367986	• Special case history required • Specify which: R. prowazekii R. rickettsiae R. typhi	D
Ro/La Antibody (Referred)	**Refer to Extractable Nuclear Antigens**				
Rocky Mountain Spotted Fever	**Refer to Rickettsiae Serology**				
Roseola Serology (see HHV6 for PCR)		• Microbiology • Referred out of Province	Gold top tube BD #367986	IgG and IgM tested must have special case history	D
Rotavirus	**Refer to Microbiology Specimen by Source – Stool – Viral Testing**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
RPR	**Refer to Syphilis**				
RSV	**Refer to Respiratory Syncytial Virus**				
RT3	**Refer to Tri-iodothyronine, Reverse**				
Rubella PCR		• Microbiology • Refer within Province	Plain sterile container or Viral transport container	Send on ice ASAP	D
Rubella Serology		Microbiology	Gold top tube BD #367986	IgG – Immune Status	B
		• Microbiology • Refer within Province	Gold top tube BD #367986	IgM – Acute Infection	D
Salicylates Included in "Toxic Screen"	06/28/16	Biochemistry	Plain Red top tube BD #367815	Specimen must be received in the lab within 2 hrs. of collection	A
Salivary Cortisol	**See Cortisol, Salivary**				
Sapovirus		• Microbiology • Refer within Province	Stool	Part of Viral Testing Stool panel	D
Scalp pH (Fetal)	**Refer to pH: Fetal Scalp**				
Sedimentation Rate	**Refer to Erythrocyte Sedimentation Rate (ESR)**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Semen for Fertility Analysis **WEDNESDAY MORNING ONLY at SJRH** (Sperm morphology assessment referred out for testing)	05/18/2021	Transfusion Medicine	Sterile container No fixative Semen Request form (SPD # 34689)	Follow Patient Guide for Collection Instructions (SPD #34648). For Skyline link: https://skyline.rha-rrs.ca/Search/Pages/Search_Tools_Forms_Results.aspx?k=34648 Bring specimen within 1 hour of collection to Laboratory Receiving, Level 2 at SJRH between 0800h & 1130h. Patient must label container with first and last name, plus Medicare number or date of birth. Document on Semen Request: semen analysis test, date & time of collection, plus all patient identification requirements.	<8 hours Wednesday Only C
Semen for Post Vasectomy Sperm Detection **Only WEDNESDAY MORNING at SJRH, CCH, SHC**	05/18/2021	Transfusion Medicine	Sterile container No fixative Semen Request form (SPD # 34689)	Follow Patient Guide for Collection Instructions (SPD #34648). For Skyline link: https://skyline.rha-rrs.ca/Search/Pages/Search_Tools_Forms_Results.aspx?k=34648 Specimen must be received within one hour of collection. SJRH: Bring specimen to Laboratory Receiving, Level 2 between 0800h-11300 h. CCH/SHC: Bring specimen to lab before 10AM. Patient must label container with first and last name, plus Medicare number or date of birth. Document on Semen Request form: post vasectomy test required, date & time of collection, plus all patient identification requirements	<8 hours Wednesday Only C
Serotonin	06/25/16	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD#367815	For 48 h prior to collection, patient must abstain from avocadoes, bananas, coffee, plums, pineapples, Tomatoes, walnuts, hickory nuts, and mollusks **and** medications such as aspirin, corticotrophins, MAO inhibitors, phenacetin, catecholamine's, resperine and nicotine.	D
Serum Allergy Testing	**Refer to Allergy Testing**				
SGOT	**Refer to Aspartate Aminotransferase**				
Sickle Cell Screen (Pre-OR)		Haematology	Lavender top tube BD #367861	Note: Emergency basis only (i.e.: patient going to surgery). Refer to Hgb Electrophoresis for non-stat test.	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Sirolimus	06/25/16	• Biochemistry • Referred within province for testing	Lavender top BD #367861	Do not spin or separate.	D
SMA	**Refer to Cytoplasmic Antibodies Screen**				
Smooth Muscle antibodies (SMA)	**Refer to Cytoplasmic Antibodies Screen**				
SM RNP antibodies	**Refer to Extractable Nuclear Antigens**				
Snowshoe Hare Virus Serology	3/14/18	• Microbiology • Refer outside province	Serum Gold top BD #367986		D
Sodium	**Refer to Electrolytes**				
Somatomedin-C	**Refer to Insulin-like Growth Factor 1, IGF-1**				R
Somatostatin	07/29/19	• Biochemistry • Referred out of province for testing	MML T125 tube	Special tube containing GI preservative available in SJRH Central Receiving. Call 506-648-6575 option 5 to arrange.	D
Specific Gravity: random urine	**Refer to Urinalysis**				
Stone Analysis (Calculi)	06/25/16	• Biochemistry • Referred within province for testing	Stone collected in sterile specimen container		D
Suboxone, Random Urine	**Refer to Buprenorphine**				
Sweat Chloride	06/28/16	Biochemistry	Collected at SJRH 4AS Pediatric Clinic only	• Indicate collection site on container, left or right arm • Notify lab when collecting 648-6587 • Refer to *LAB-2S-CH-05060 Sweat Stimulation and Collection* procedure for complete collection instructions	B
Syphilis Screen (Treponemal specific)	05/25/16	Microbiology	Gold top tube BD #367986	Tests for both IgG and IgM antibodies	B
Tacrolimus		Biochemistry	Lavender top tube BD #367861	Collect trough specimen prior to morning dose	C
T3, Reverse	**Refer to Tri-iodothyronine, Reverse**				
T3, Free	**Refer to Tri-iodothyronine, Free**				
T_4, Free	**Refer to Thyroxine, Free**				
TB Culture	**Refer to Microbiology Specimen by Source**				
TB Culture (AFB)	**Refer to Microbiology Specimen by Source – Section 11**				
Testosterone	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	B
Tetanus Antibodies	3/14/18	**Testing no longer available**			

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Theophylline	06/28/16	Biochemistry	Plain red top tube BD #367815	• Collect trough specimen (just before next dose) • Specimen must be received in the lab within 2 hrs. of collection	A
Thiamine	**See Vitamin B_1**				
Thiocyanate	06/12/13	Biochemistry	**Test not available as of May 2013**		
Thiopurine Metabolites	06/25/16	• Biochemistry • Referred out of province for testing	Lavender top tube BD#367861	Send immediately to lab	D
TPMT (Thiopurine Methyltransferase Genotype)	12/14/20	• Molecular Diagnostics	One Lavender top tube BD#367861	Stable at room temp for 24 hours	C
Thrombin Time		Haematology Referred within province for testing	Light Blue top tube BD #363083	• Tube must be filled to the etched fill indicator line on the tube. • Transport at room temperature • Delivery to laboratory within 60 minutes from time of collection	D
Thyroglobulin	06/25/16	Biochemistry Referred within province for testing	Gold top tube BD #367986	If referred from outside Saint John, send **2 aliquots** frozen serum	D
Thyroglobulin Antibody (Anti-TG)	06/25/16	Biochemistry Referred within province for testing	Gold top BD#367986 or Lt. Green (Lithium Heparin) BD#367962	Freeze serum or plasma if not sent to SJRH within 3D of collection (Friday, weekend, or holidays)	D
Thyroid Antibody	See Thyroid Peroxidase Antibody (Anti TPO)				
Thyroid Peroxidase Antibody (Anti-TPO)	06/25/16	• Biochemistry • Referred within province for testing	Gold top BD#367986 or Lt. Green (Li Heparin) BD#367962	Freeze serum or plasma if not sent to SJRH within 3D of collection (Friday, weekend, or holidays)	D
Thyroid Stimulating Hormone (TSH)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Time required between requests is 3 weeks	A
Thyroxine, free (Free T4)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Time required between requests is 3 weeks	A
Ticks	**Refer to Microbiology Specimen by Source – Stool/GI Tract (Other)**				D
Tissue Transglutaminase	**Refer to T-Transglutaminase – AB**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Tobramycin Level	06/01/22	Biochemistry	Plain Red top tube BD #367815	• Trough (Pre-Dose) Level: Sample to be drawn just prior to giving antibiotic • Peak (Post-Dose) Level: For IV – Collect sample 30 min after infusion of antibiotic is completed For IM – Collect sample 1h after injection • Must be **separated within 2 hours** of collection • Shipment to SJRH lab same day, send refrigerated. • Not shipped same day as collected must be sent to SJRH lab frozen.	A
Tocopherol	**See Vitamin E**				
T.O.R.C.H.		• Microbiology Refer within Province	Gold top tube BD #367986 (2)	Includes: Toxo, Rubella, CMV, Herpes – IgG/IgM. On site: toxo G + M, Rub G, CMV G + M. Of site: Rub M, Herpes G + M.	B/D
Total Protein	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Toxic Screen – Serum – Ethanol – Acetaminophen – Salicylate – Osmolality – Osmolal Gap – Sodium – Urea – Glucose	02/22/17	Biochemistry	Plain Red top tube BD #367815	• Collect at time of suspected overdose • Do not use alcohol or other volatile disinfectants at the site of venipuncture. • Deliver to laboratory within 2 hours • **COMPONENTS MAY BE ORDERED INDIVIDUALLY**	A
Toxoplasmosis (IgG, IgM)		Microbiology	Gold top tube BD #367986		C
TPA	**Refer to Tissue Plasminogen Activator**				
Transferrin	10/16/19	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986		B
Transfusion Reaction Investigation		Transfusion Medicine	Two Lavender top tubes BD #367863	• Draw from opposite arm • Send blood product unit from "donor" to Transfusion Medicine (SJRH)	**PRELIMINARY:** <4h **FINAL:** <10 days A
T-Transglutaminase AB (tTG Ab)		Biochemistry	Gold top tube BD #367986	If referred from outside Saint John, send frozen serum. Lipemic or 225emolysed specimens will not be processed.	C

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Tricyclic Antidepressant Screen	**Test not available as of February 2017**				
Triglycerides	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • 9-12 hr fast required	A
Tri-iodothyronine, Reverse (T3, Reverse)	06/25/16	• Biochemistry • Referred out of province for testing	Plain Red top tube BD# 367815 or gold top tube BD #367986		D
Triiodothyronine, Free (Free T3)	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasm should be separated within 2h of collection • Time required between requests is 3 weeks	A
Troponin T	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serial sampling recommends: 0, 3, 6 hr • Serum or plasma should be separated within 2h of collection	A
Tryptase	06/25/16	• Biochemistry • Referred out of province for testing	Serum (Red or Gold) Plasma (EDTA, Lithium Heparin or Sodium Heparin)	• Separate serum ASAP (best -within 30 minutes) • To assess anaphylaxis, collect specimen between 15-180 minutes after suspected anaphylactic event. • To assess Systemic Mastocytosis or Mast Cell Activation Syndrome the specimen may be collected at any time.	D
TSH	**Refer to Thyroid Stimulating Hormone**				
Tuberculosis	**Refer to TB Culture**				
Tularemia Serology (Francisella tularensis)		• Microbiology • Refer out of Province	Gold top tube BD #367986	Case history helpful	D
Tyrosine	**Refer to Amino Acids- plasma**				D
Urate	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Urate: 24 hr. urine	10/16/19	Biochemistry	24 hr. urine container (plain or HCl)	See specimen collection guide-section 12	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Urate: fluid		Biochemistry	Pleural fluid collected in plain red top tube BD #367815		A
Urea	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Serum or plasma should be separated within 2h of collection	A
Urea: 24 hr. urine	10/16/19	Biochemistry	24 hr. urine container (plain)	See specimen collection guide- section 12	A
Urea Breath Test	12/29/16	• Biochemistry • Referred out of province for testing	Helikit collection containers	**Restricted order for GI Specialists only**. Other orders must be discussed with the Medical Microbiologist or Clinical Chemist prior to ordering. See H. pylori stool antigen – Microbiology specimens by source.	D
Urinalysis - pH - Leukocytes - Specific gravity - Glucose - Protein - Nitrate - Ketones - Occult blood urine - Colour/clarity	10/16/19	Biochemistry	Sterile specimen container	• Fresh specimen, midstream • Minimum 5 mL required, 1 mL for pediatric patients • Deliver to lab as soon as possible. Refrigerate if delay >4 hrs. • A microscopic examination will be performed wwhenever the chemical test for occult blood, leukocytes and/or protein screens positive. • See specimen collection guide- section 12	A
Urine Culture	**Refer to Microbiology Specimen by Source**				
Uroporphyrinogen-1-synthetase	**Refer to Porphobilinogen Deaminase**				
Uroporphyrins	**Refer to Porphyrins**				
Valium	**Refer to Diazepam**				
Valproic Acid		Biochemistry	Plain Red top tube BD #367815	• Collect trough specimen (just before next dose) • Specimen must be received in lab within 2 hrs. of collection	A
Vancomycin Level		Biochemistry	Plain Red top tube BD #367815	• Collect trough specimen just before next dose • Collect peak specimen 2 h after completion of 1 h infusion • Specimen must be received in lab within 2 hrs. of collection	A
Vanillylmandelic acid (VMA): 24 hr. urine	**Refer to Metanephrines**				

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Varicella Zoster PCR	05/25/16	• Microbiology • Refer within Province	Viral Swab Transport Media	Send ASAP on ice	D
Varicella Zoster Serology	05/25/16	• Microbiology • Refer within Province	Gold top tube BD #367986	IgG – Immune Status, IgM – Active Infection, Please specify	D
Vasoactive Intestinal Polypeptide	10/15/19	Biochemistry Referred out of province for testing	Lavender top tube BD #367863	• Patient must fast for 8 hours. • Not to be ordered on patients who have recently received radioactive material • Send to lab **ASAP**.	D
VDRL CSF		Microbiology	Plain sterile container	• Order only if patient's serum is Syphilis confirmed • Case history required	D
Very Long Chain Fatty Acids	**See Fatty Acids, Long Chain**				
Viral Testing	**Refer to Microbiology Specimen by Source**				
Viral Respiratory Panel (extended panel)	3/20/18	• Microbiology Refer within Province	Viral Transport Media (available from Microbiology) or Plain sterile container SPD #0010803/ 0250348	Various respiratory specimens Testing Includes: Influenza A+B, RSV, Rhinovirus, Coronavirus, Bocavirus, Parechovirus, Adenovirus, Enterovirus, Parainfluenza 1, 2, 3, and Mycoplasma pneumoniae (non-viral pathogen) • Send to Microbiology ASAP Refrigerated. If delayed 24 hours, must be frozen.	D
Viscosity Test	**Test not available as of May 2019**				
Vitamin A	06/25/16	• Referred out of province for tests.	Plain red top tube BD #367815 (Gold **NOT** Acceptable)	• Avoid Hemolysis. • Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Send sample to lab immediately.	D
Vitamin B1	06/25/16	• Biochemistry • Referred out of province	Lavender top tube BD #367863	• Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Send sample to lab immediately.	D
Vitamin B12	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	• Serum or plasma should be separated within 2h of collection • Repeat testing will not be permitted within 12 weeks of previous collection	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
Vitamin B2	06/25/16	• Biochemistry • Referred out of province	Lavender top tube BD #367863	• 12-14hr fast prior to collection. • Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Send sample to lab immediately.	D
Vitamin B3 (Niacin)	04/12/2023	• Biochemistry • Referred out of province	Lavender top tube BD #367863	• 4-8 hour fasting sample preferred • Plasma should be separated within 2h of collection Send sample to lab immediately.	D
Vitamin C	06/25/16	• Biochemistry • Referred out of province	Plain red top tube BD# 367815	• Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Send sample to lab immediately.	D
Vitamin D (nutritional) 25 hydroxy Vitamin D	01/17/20	Biochemistry	Lime green top tube BD Barricor #365049 or Gold top tube BD #367986	Time required between requests is 1 year Serum or plasma should be separated within 2h of collection	B
Vitamin D 1,25 dihydroxy Vitamin D	06/25/16	• Biochemistry • Referred out of province for testing	Gold top BD #367986 or Red top BD #367815	Send sample to lab ASAP.	D
Vitamin E	06/25/16	• Biochemistry • Referred out of province for tests.	Lime green top tube BD Barricor #365049 Plain red top tube BD #367815	• Avoid Hemolysis. • Protect from light (Foil) • Specimen must be labeled inside and outside the light-protecting wrap. • Send sample to lab immediately.	D
Vitamin K1	11/17/20	• Biochemistry • Referred out of province for tests.	Plain red top tube BD #367815 or Gold top BD #367986	• Fasting overnight (12-14 hrs.) infants draw right before next feeding	D
VMA, 24 h urine (Referred)	**Refer to Metanephrines**				
Volatile Screen (includes quantitation of Methanol, Ethanol, Isopropanol, Acetone)	06/23/16	Biochemistry	Grey top tube BD #367922	• Do not use alcohol or other volatile disinfectants at the site of venipuncture. • Call Chemistry at 506-648-7185 for consult.	A

TEST	REVISION DATE mm/dd/yy	LABORATORY	CONTAINER	COLLECTION INSTRUCTIONS AND COMMENTS	Average Expected Turn-Around-Time **TESTING PERFORMED** A: Daily B: Daily Mon-Fri C: Batched In-House D: Referred Out
von Willebrand Investigation	8/16/18	Haematology	5 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature. • Tube must be filled to the etched fill indicator line on the tube.	D
von Willebrand Multimers		• Haematology • Referred out of province for testing	2 Light Blue top tubes BD #363083	• Specimen must be received in SJRH Lab within 2 hours of collection. • Transport at room temperature • Tube must be filled to the etched fill indicator line on the tube.	D
Voriconazole	11/29/17	Biochemistry	Red top tube BD # 367815	• Trough specimen- immediately before next dose • Must be separated within 2 hours of collection.	D
vWF: Ag	**Refer to von Willebrand Investigation**				D
vWF: FVIII	**Refer to von Willebrand Investigation**				D
vWF: RcoF	**Refer to von Willebrand Investigation**				D
West Nile Virus Serology		• Microbiology • Refer within Province	Gold top tube BD #367986		D
Worms	**Refer to Microbiology Specimen by Source – Stool/GI Tract (Other)**				
Xylose Absorption Test	**Test no longer available without prior consultation with Biochemist as of January 2019**				D
Yersinia Antibody Titre		Microbiology	Gold top tube BD #367986		D
Zika virus		• Microbiology • Referred out of Province	Gold top tube BD #367986	Only will do testing if: • Pregnant with or without symptoms <u>and</u> travel history • Non-pregnant females and males with travel history <u>and</u> symptoms	D
Zinc, plasma	04/09/18	• Biochemistry • Referred out of province for testing	Royal Blue top BD #368381	Deliver to lab immediately. Specimen must be separated from cells within 30 minutes of collection.	D
Zinc: 24 hr. urine	06/25/16	• Biochemistry • Referred out of province for testing	24 hr. urine container (plain)	• Avoid mineral supplements for 5 days. • Collect in a clean metal free collection basin • See Specimen Collection Instructions (Section 12)	D

Section 14: Summary of changes in LUM (since last published version

VERSION 21.0 Updates

Section	Subject	Details of change & initials
2	Services provided at Sat Sites.	Added carboxyhemaglobin and methemaglobin to services provided at SHC and CCH as they will be validated on the ABL 90s-replacing the epocs.
11	Quick Guide Urine Containers	Citrate can be collected in plain or HCl jug – AS Sep 11/23
13	Alphabetical Listing of Laboratory Tests	24 hour citrate and oxalate to be done in house, batched (removed referred out). -AS Sep 11/23
13	Paraneoplastic Antibody Panel	Added to Lab User Manual
13	Glucose Tolerance	In comments changed: when patient is unable to handle the glucose drink call 'Chemistry at 7185' to 'Specimen Collection Supervisor at 7798' and added a comment – In consultation with Erin Hache.
13	Glutamyltransferase, gamma (GGT)	-Test listed twice. Removed the duplication and added note that test available only for Clinical Trials, Transplant Patients and if requested by 'exception'- 10/11/23 JAS for JC
1	Utilization Management	Changed Cytology utilization rules to remove restrictions for frequency – added Reflex HPV rules
3	Requisition Requirements	Updated Cytology requirements to remove references to glass slides
6	Cytology	Updated collection instructions for new LBC method of pap testing. Included Hologic collection quick reference sheet and lubricant compatibility list.
13	Maternal Serum Screening	Updated name from MSAFP. Added note regarding change of location for testing from IWK to North York. 1/18/24 TL
13	Vitamin E	Updated container type-2/8/24 JAS
1	Contact Directory	Modified contact information. Removed many direct contact numbers/names. SB