



**Department of Laboratory Medicine
Moncton Area
135 MacBeath
Moncton NB
E1C 6Z8**

Laboratory User Manual

Version 17

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Laboratory Telephone Pager Directory

Laboratory Administration	Laboratory Medical Director- Dr. C. Ellis Lab Administrative Director - A. Fenton Lab Administrative Assistant-L. Mullin Fax	857-5324 857-5307 857-5307 857-5325
Central Receiving	Test Inquiries and Results Dispatch Referred Out Test Manager-Charlene Collins/ Mathieu Lagace Supervisor – Amy, Wilson Fax	857-5318 860-2173 857-5302 857-5633 857-5325
Chemistry	General Inquiries Technical Inquiries Manager – Charlene Collins/Mathieu Lagace Medical Biochemist - Dr. L-J. Cartier Pager	857-5318 857-5303 857-5302 860-2242 MBMD communication
Cytology	Test Inquiries and Results FNA Bookings Manager – Natalie Savoie Medical Head - Dr. Swati Technologists	857-5311 857-5311 870-2562 857-5308 870-2561
Haematology	General Inquiries Technical Inquiries Flow Cytometry Manager – Sasha Wright Haematopathologist- Dr. Muhammad Rasul Fax Pager	857-5318 857-5305 860-2163 857-5746 857-5321 857-5312 MBMD communication
Histology	Tissue Room Main Room Manager-James Dixon Medical Head Dr.Maicas Fax	860-2158 860-2156 860-2157 857-5322 857-5632
LIS Coordinator	Tammy Smith	857-5316
Microbiology	General Inquiries Main Room Manager- Tammie Wilcox-Carrier Medical Microbiologist- Dr Chelsey Ellis Dr. Farhan Khan Fax	857-5318 857-5309 857-5747 857-5324 877-7287 870-2579
Morgue	Attendant	857-5313
Pathology Office	Pathology Inquiries and Results Dr. Emmanuel Maicas Dr. Ismatun Swati Dr. Kevin Zavieh Dr. Muhammad Rasul Dr. Sergey Pozdnyakov Haematopathologist-Dr. Musadak Hagag Fax Dr. Jorge Escobar	857-5300 857-5322 857-5308 857-5966 857-5321 857-5843 857-5306 857-5632 857-5317

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Phlebotomy	Phlebotomy Room (In Patient) Manager- Tina Holt Clinic F Blood Collection Clinic F Appointment Booking Fax Pagers	860-2377 860-2376 870-2690 857-5271 870-2889 See Chart Below
Jones Lake Blood Collection	General Inquiries	870-2485
Point of Care (POC) Coordinator	Melissa King Fax	857-5315 857-5325
Quality, Safety & Process Management (QSPM) Coordinator	Shirley MacDonald	857-5307 or 623-3246
Transfusion Medicine	Test Inquiries and Results Manager – Nicole Caldwell Haematopathologist-Dr. Musadak Hagag Fax Pager	857-5304 /860-2161 857-5320 857-5306 870-2947 MBMD communication
Sackville Laboratory	Test Inquiries and Results Manager-Nicole Caldwell Supervisor-Joanne Smith After hours (Switchboard) Fax	364-4119 /364-4450 857-5320 364-4220 364-4100 384-4148

Phlebotomy Pager Directory

Units	Weekdays	Weekends
1600 2600 SCN L&D Discharge Clinic Breastfeeding Clinic Emergency Department Surgery Admission Unit PACU DOSA OR	MBMD Secure communication Phlebotomy Floors 1,2,3 Hyperlink to Secure Communications page https://skyline.rhars.ca/DepartmentsPrograms/SecCom/Pages/default.aspx	MBMD Secure communication Phlebotomy Floors 1,2,3
Clinics A, B, C, D, E	Phone Clinic F: 870-2690	N/A
3100 3200 3600 3700	MBMD Secure communication Phlebotomy Floors 1,2,3	MBMD Secure communication Phlebotomy Floors 1,2,3
3400 CCU	MBMD Secure communication Phlebotomy Floors 1,2,3	MBMD Secure communication Phlebotomy Floors 1,2,3
4200	MBMD Secure communication Phlebotomy Floors 1,2,3- From 06:00-11:00 MBMD Secure communication Phlebotomy Floors 4,5,6- All other times	MBMD Secure communication Phlebotomy Floors 4,5,6
4100 4400 4600	MBMD Secure communication Phlebotomy Floors 4,5,6	MBMD Secure communication Phlebotomy Floors 4,5,6
5100 5200 5600	MBMD Secure communication Phlebotomy Floors 4,5,6	MBMD Secure communication Phlebotomy Floors 4,5,6
6600	MBMD Secure communication Phlebotomy Floors 4,5,6	MBMD Secure communication Phlebotomy Floors 4,5,6

Hours of Service

Chemistry, Haematology, Transfusion Medicine	Monday - Friday	0730 - 1630	Full service
	Monday - Friday	1630 - 2400 2400 - 0730	Stat requests only
	Weekends and Holidays	24 hours	Stat requests only
Phlebotomy- Clinic F Jones Lake Clinic	Monday-Friday Monday-Friday	0700-1600 0800-1600	Full service
Phlebotomy- In-patient /IER	Monday-Friday	24 hours	Full service Stat/Urgent requests only
	Weekends & Holidays	24 hours	Stat/Urgent requests only
Cytology, Histology	Monday - Friday	0800 - 1600	Full service
Central Receiving	Monday-Friday	0630 - 2230	Deliver all specimens except Blood Gases to Central Receiving (During breaks and lunches, there may be a note requesting specimens be delivered directly to departments).
	Weekends & Holidays	0700 - 2230	
	Monday-Friday	2230 - 0630	Deliver all specimens directly to departments. Notify technologist of specimen arrival, either verbally or by page.
	Weekends & Holidays	2230 - 0700	
Microbiology	Monday - Friday	0800 – 2200	Full service
	Monday - Friday	2200 – 0800	Technologist on-call
	Weekends and Holidays	0800 – 1600	Processing of ongoing cultures. New tests – STAT or Urgent only
	Weekends and Holidays	1600 – 0800	Technologist on-call
Sackville Laboratory SMH	Monday - Friday	0700-1600	Full service
	Monday - Friday	1600-1900 1900-0700	Stat/Urgent request only Technologist on-call
	Weekends and Holidays	24 hours	Stat/Urgent requests only

Specimen Receiving	All specimens entering the laboratory with the exception of Blood Gases are to be taken to Central Receiving for processing and distribution. Blood gas specimens are delivered directly to the Automated Chemistry Laboratory.
Laboratory Access	The laboratory doors are locked for security purposes. Card access is required.

Provision of Service

- A. Requisition of Laboratory Tests
- B. Verbal Requests for Laboratory Tests
- C. Recurring Tests
- D. Laboratory Orders
- E. Distribution of Reports
- F. Laboratory STAT List
- G. Laboratory Pandemic Plan

Laboratory Medicine Program in the Moncton Area is under the direction of the Clinical Laboratory Director and or designate. The Laboratory will perform tests and examine specimens at the request of Authorized Healthcare Providers which include:

- Physicians that are registered in the College of Physicians and Surgeons in one of the Atlantic provinces. Note: If there is not a responsible physician listed on the requisition specimens cannot be processed.
- All other ordering providers that have been granted privileges with Horizon/Vitalité Regional Health Authorities.
 - Nurse Practitioners who have been approved by Horizon's Chief Nursing Officer and are listed on the Horizon [Nurse Practitioner-Contact List](#)
 - Pharmacists that have been approved by the Regional Health Authority and are active in Meditech and/or Allscripts.
 - Midwives employed by Horizon Health Network
 - Dentists with special licenses as approved by the Medical Staff Office
 - NB Health Link (only if they are listed as Primary Care Provider on Requisition)
 - eVisitNB

The laboratory reports results only to authorized persons including:

- (a) Physicians licensed by the College of Physicians and Surgeons in any of the Atlantic provinces and /or physicians who have been granted privileges by the Regional Health Authorities (RHAs); and
- (b) Dental practitioners and oral and maxillofacial surgeons who have been granted privileges by the RHAs; and
- (c) Nurse practitioners designated by the RHAs; and
- (d) Nurses or other healthcare professionals (ie. pharmacists) in the circle of care of the patient; and
- (e) Other persons designated by the RHAs; and
- (f) Public health: Medical Health Officer or a person designated by the Minister; and
- (g) Patient or legal guardian with appropriate authorization by the RHAs; and
- (h) Agencies as permitted by law.
- (i) Naturopaths – only if indicated as copy to on the requisition by the ordering provider

“Outside laboratory results” or tests not requested and dispatched specifically through our Laboratory will **not** be reported through our primary reporting system

A. Requisitioning of Laboratory Tests

Laboratory Requisitions are available by contacting the Moncton Hospital Print Shop

Phone: (506) 857-5735 or available on SKYLINE under Departments & Programs then Laboratory Services- See under quick links, Laboratory Requisitions and Forms Moncton Area.

Note: External sites visit www.horizonnb.ca/lab-resources, then go to the Clinical Resources tab.

A properly completed requisition or computer order must accompany labeled specimens. The following information must appear on the request form:

- a) Patient's first and last name
- b) Date of birth or age
- c) Sex
- d) Healthcare number or other unique ID
- e) Location of patient (If outpatient – patient's address)
- f) Ordering Provider* (full name) and contact information
- g) Other Provider (full name) to receive a copy of results
- h) Mnemonic of person who drew the blood specimen (preferably), initials or signature will be accepted when applicable
- i) Date and time of specimen collection when applicable
- j) All pertinent information as requested by laboratory
- k) Diagnosis
- l) Test requested
- m) Specimen type (blood, urine etc.)

The following additional information is required on:

- 1. **Request forms from inpatient areas, ER and in-house clinics, Extra-Mural Driscoll Unit, Addiction Services:**
 - a) Active Account number
- 2. **Histology request forms:**
 - a) Type of tissue
 - b) Source of tissue
 - c) Patient's history
 - d) Operative findings
- 3. **Microbiology request forms:**
 - a) Source of specimen
 - b) Currently used antibiotics
 - c) Clinical data pertinent to appropriate processing of specimen
- 4. **Cytology Gynaecological request forms (Pap smears, hormonal evaluation slides):**
 - a) Date of last menstrual period
 - b) Pertinent history (previous Ca or abnormal cytology, post-menopausal bleeding, etc.)
 - c) Clinical findings (suspicious-looking cervix, palpable mass, etc.)
- 5. **Cytology non-Gynaecological request forms (sputum, FNA, fluids, etc.):**
 - a) Pertinent history (previous Ca, x-ray findings, medication, etc.)
 - b) Clinical findings (haemoptysis, effusion, gastric ulcer, etc.)
- 6. **Transfusion Medicine:**
 - a) Transplant history
 - b) Transfusion history
 - c) Obstetrical history

7. **Flowcytometry :**

- a) Diagnosis
- b) Clinical data pertinent to appropriate processing of specimen.

B. Verbal requests for laboratory tests

All verbal requests for tests require that the tests ordered be read back to confirm the entire order. In addition, all verbal requests require written confirmation. Form **LAB-1-ADM-05-F00017** will be sent to the ordering Provider with information including the patient's information and tests ordered requiring a signature of confirmation of his/her orders (Form found in Laboratory Administration Manual).

C. Recurring tests

Laboratory policy for recurring tests requires that the Provider must update orders for recurring tests on a yearly basis.

Recurring Tests	RECURRING TESTS
	Doctor:
Ordering Dr. Expiry Date	

Initial Order

- When patient presents laboratory requisition with “recurring tests” checked off, clerk will complete a “Recurring Test” label and attach to back of patient’s Medicare card.
- Expiry date of T+365 must be indicated on label.
- Desired tests must be indicated on label.
- Ordering Provider Mnemonic must be indicated on label.
- When clerk notices an order getting near expiry date, patient will be advised to see physician to get new order.
- If this is the last time the order can be placed, clerk will put an X in the back of the card and advise the patient that this is the last time their blood work will be done prior to a new order.

After One Year

- Clerk will not order expired blood work.
- Patient will be advised he should schedule a visit to his/her Provider to obtain updated orders. New orders will be required prior to the next visit for blood collection.

D. Laboratory Orders

	STAT	URGENT	ROUTINE	TIMED
Definition	Indicates the results are needed immediately because of a medical emergency	Not a medical emergency, but indicates results are required as soon as possible	Indicates routine processing	Specific time of collection required – use priority of Urgent or Routine
Time of Collection	Enter N for current time	Unless a specific time is required, leave blank	Unless a specific time is required, leave blank	Enter time of collection, e.g. 1600
Labels	Enter Collected By Care Area = Y. Labels will print on unit	To print on unit, enter Collected by Care Area = Y. Enter N if printed by Phlebotomy	Printed by Phlebotomy	Printed by Phlebotomy
Paging	STAT Orders- Contact Phlebotomy using MBMD Secure Communications	If labels printed on Unit and Phlebotomy is required - Contact using MBMD	Do not page Phlebotomy	If entered at least 1 hour before collection time, no need to page Phlebotomy
Collected	Immediately	As soon as possible	Next routine sweep	Usually within 30 minutes of requested time
Transport of Specimens	Phlebotomy will tube, page porter STAT, or in an extreme case, ward aide will transport specimen	Porter will pick up specimen within 60 minutes	Porter will pick up specimen within 60 minutes	Porter will pick up specimen within 60 minutes
Lab Analysis	STATS processed first	Urgent processed ahead of Routine	Processed in routine manner	Processed based on Urgent or Routine priority
Reporting	Report printed to unit as complete	Report printed to unit as soon as complete	Report printed to unit at defined print time	Reported based on Urgent or Routine priority

E. Distribution of Reports

Results are available electronically through, EHR, EMR or a paper or faxed report may be forwarded to the ordering provider/location. In certain instances, reports may be distributed to the clinic or institution rather than the ordering provider named. Only the Providers whose names appears on the requisition will receive copies of the report.

For further inquiries please contact the laboratory.

Patients should be directed to view their results on [MyHealthNB](#).

F. Laboratory Emergency Procedures (STAT) List

The tests listed are provided on a 24 hour a day, 7 day a week basis by The Moncton Hospital Regional Laboratory. Tests not performed at The Sackville Memorial Hospital can be sent STAT to Moncton for testing if required.

Haematology	• Complete Blood Count - includes smear examination and morphological comments • Coagulation Screen ○ Prothrombin Time-includes INR ○ Partial Thromboplastin Time ○ Fibrinogen levels (not performed at SMH) ○ D Dimer Test ○ Factor Assays order by Hematologist (not performed at SMH) • ESR – IF SUSPECT Temporal Arteritis • Screening for Malaria Parasites • ROTEM Testing
Cerebrospinal Fluid/Body Fluid Examination	• Cell count and differential count (not performed at SMH) • Chemistry - CSF, glucose and protein only (not performed at SMH) • Culture and gram smear examination (not performed at SMH)
Transfusion Medicine	• Typing and crossmatching of blood and preparation of blood products. (Will not be done on a “STAT” basis for patients who have been in the hospital for more than 24 hours and are booked for surgery. The physicians must order blood in advance for such patients when the blood is required for surgery). • Direct Antiglobulin Test • Blood type of infants (new-born) and work-up as required for hemolytic disease of the new-born
Microbiology	• Gram smear on CSF and other sterile body fluids (urine excepted). • Specimens collected during surgery, i.e. biopsy specimen for gram stain and culture, and viral culture. • RSV – hospitalization only • Other specimens where delay in processing may significantly affect the results. • NEEDLESTICK Injury/ Blood or Body fluid exposure – most serology testing can be done with routine work – if required urgently <u>must contact</u> Microbiology with the reason for the stat testing
Chemistry (con't next page)	• Albumin • Ammonia (not performed at SMH) • Bilirubin (new-born only) • Blood gases • Calcium • Carboxyhemoglobin (not performed at SMH) • Cardiac Markers (CK, Troponin I) • Creatinine • Glucose • Ionized Calcium (not performed at SMH) • Iron (in children) • Lipase

- Liver Panel
- Magnesium
- Osmolality (not performed at SMH)
- Phosphorus
- Serum Electrolytes - Sodium, Potassium, Chloride, Bicarbonate
- Therapeutic drugs and Toxicology: (not performed at SMH)
 - Acetaminophen
 - Alcohol (analyzed for clinical use only)
 - Carbamazepine
 - Digoxin
 - Gentamicin
 - Lithium
 - Phenobarb
 - Phenytoin
 - Primidone
 - Salicylates
 - Valproic Acid
 - Vancomycin
- Total Protein
- Urea
- Urinalysis
- Urine drug screen
- Urine Pregnancy test (for threatened abortion, prior to emergency surgery, etc.)

ONLY the above tests will be done on a "STAT" order basis. The Presumptive Clinical Diagnosis should be stated on all "STAT" (Emergency) tests ordered.

Tests not on the STAT list may be performed on evenings, nights, weekends or statutory holidays on condition that the Provider has consulted a laboratory physician and received approval for the test to be performed and reported.

G. Laboratory Pandemic Plan

In the event of a pandemic event the laboratory will provide testing as per the STAT list above. Tests on this list will be carried out or reported on evenings, nights, weekends or statutory holidays. Tests not on this list may be performed in cases where the Provider has consulted a laboratory physician and received approval for the test to be carried out and reported. Other processes will be followed as per the Hospital Pandemic Plan.

Definitions

- Provider - Health Care Provider, physician, nurse practitioner, pharmacist within hospital. Copies of reports can be provided to naturopaths and pharmacists.

Related Documents

- **LAB-1-ADM-05-F00017** Confirmation of Oral Requests

References:

- Regional Health Authorities Act, SNB 2002, c R-5.05, General Regulation, NB Reg. 2002-27.
- Public Health Act, SNB 1998, c P-22.4, Reporting and Diseases Regulation, NB Reg. 2009-136.
- An Act respecting the Nurses Association of New Brunswick, 1984. Amended in 2002, Schedule for ordering, rev. 2010. Available from: www.nanb.nb.ca/index.php/practice/np.

Specimen Handling

[A. Specimen Identification](#)

[B. Submission of Coded Patient Samples](#)

[C. Transportation of Specimens](#)

[D. Rejection of Specimens](#)

[E. Guideline for Minimal Volume Draws for Neonatal Specimens](#)

PURPOSE: To provide clear direction the importance and requirements of the laboratory to receive only properly labelled and transported laboratory specimens.

A. Specimen Identification

Each specimen must be labelled with a single label at the time and point of collection and in the presence of the patient. All identifiers must match those on the requisition.

Specimens label **must** contain:

- Patient's full name (First and last name) or see below for anonymous patient samples
- Unique patient identifier (Provincial Medicare Number and/or Hospital Number or other excepted unique identifiers as listed in the [Regional Phlebotomy Manual](#), page 10 for list of accepted unique Identifiers and listed below in **Appendix A**
- the date of collection
- the time of collection
- Collector's ID

Note: Collector's ID when drawing Blood Bank samples. See Transfusion Medicine section below for further details.

NOTE: Date of birth and address will not be accepted as a unique patient identifier

In cases where no healthcare number is available, the full address including postal code is required on the [requisition](#).

Specimens that are not adequately identified will not be processed. In all cases a request will be made to recollect the specimen in question.

Appendix A:

Acceptable Unique Numbers:

- 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 (PPRN) / Chart
- RCMP
- Military
- Correctional Institute
- IFHP – Interim Federal Health Program
- 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 completed.

In the event of an improperly labeled irreplaceable specimen the ordering Provider must issue an order to proceed as per laboratory policy. Reports will contain a disclaimer that the laboratory will not accept responsibility that the results belong to this patient. The laboratory will request an [Authorization to Proceed with Testing Form LAB-1-ADM-02-F00020](#) (provided by the laboratory) be completed by the ordering provider before results are released.

B. Submission of Coded Patient Samples (Anonymous Patient Samples)

To provide direction for standardizing the coding of patient specimens to protect the anonymity of the patient but at the same time to allow retrieval of information and comparison with previous results in the computer system.

To comply with Department of Health guidelines to prevent non-nominal patients from appearing in the provincial Electronic Health Record the *Last name* must be prefaced with ZZZZ.

Code Format

1. The first part of the code name must be:

ZZZZCODE,

2. The second part of the code following the comma is created as followed:

- First letter of the last name
- First letter of the first name
- Date of birth (day/month/year – numbers ONLY, no dashes)
- M or F (male or female)

Example: Last name, First name *Becomes* ➔ ZZZZCODE,LF011184M
 Male DOB: 01/11/84

Exception: If there are twins with the same initials and DOB, the letters A and B will be added after the M or F.

Request Form and Specimen Label for coded

To comply with the identification policy for laboratory specimens both the requisition and the specimen label must contain two identifiers:

- the code
- the patient's date of birth

The name of the ordering Provider and contact information must be clearly indicated on the requisition - this is essential so that reports may be communicated to the correct Provider/department.

C. Transportation of Specimens

All specimens should be delivered to the laboratory as soon after collection as possible. In order to provide for the safety of the various people or businesses delivering specimens to our laboratory, and to protect our own staff receiving them, all specimen transported must be in compliance with Transport of Dangerous Goods regulations.

The Transportation of Dangerous Goods (TDG) Act is a federal law created for the protection of humans, animals and the environment. Included under this law is the shipment of diagnostic laboratory samples such as blood, urine, etc. either across the country or a few blocks up the street. All diagnostic samples including those collected in clinics, doctor's offices, etc. must be packaged and transported in accordance with this law. As the receiving laboratory we have a responsibility to accept only properly packaged samples and to inform individuals who do not comply with this law. Failure to improve the situation will result in a formal report to a Federal Inspector, who can impose significant fines.

The following information has been abstracted from the TDG Act and is provided as a guide to assist you in complying with this law.

Materials Required

Primary container	▪ This is the actual sample container – blood tube, urine container, swab, etc. ▪ Always make sure the container lid/cap is properly closed. ▪ With the exception of Vacutainer type tubes where the seal remains intact or screw top aliquot tubes that have been demonstrated not to leak, all other tubes containing a liquid sample and/or transport fluid must have the cap/lid sealed (Parafilm ® is ideal for this). ▪ Non-liquid samples, e.g. routine culture swabs, do not require sealing.
Secondary container	▪ This can be a large plastic (e.g. garbage) bag ▪ Place around the primary container(s) inside the outer container
Absorbent material	▪ Used to absorb fluids if the primary container should accidentally break ▪ Suggested materials include diapers, absorbent pad (e.g. Depends, etc.) ▪ Place inside the secondary container
Cushioning	▪ Used to separate each test tube and/or container (containers <u>should not touch</u> one another – this is especially important for liquid samples) ▪ Large collection areas may use a test tube rack to separate blood tubes and Plexiglas dividers for urine samples ▪ For small shipments paper towels may be used as cushioning between sample tubes ▪ Samples may be placed into individual zip-lock plastic bags
Outer container	▪ All outer containers must be clearly identified as containing biohazardous material ▪ A rigid container such as an insulated box – A “Cooler” is ideal for routine diagnostic specimens ▪ For transportation of a small number of specimens, a soft-sided outer container is acceptable providing it closes completely and securely, as to prevent the loss of contents under normal conditions of transport.
Packing Procedure:	1. Ensure all caps are secure. Use parafilm on all liquid containing specimens except vacutainer-type tubes or aliquots with a screw top. 2. Place a large plastic (e.g. garbage) bag in cooler. 3. Place diaper or absorbent pad inside the garbage bag. 4. Stand test tube racks and Plexiglas divider for urine samples on the absorbent pad. 5. Stand the specimen tubes or urine containers in the appropriate rack/divider. Note: For small shipments paper towels may be used as cushioning between sample tubes. 6. Close the secondary container (a twist tie is okay if garbage bag used). 7. Place all the requisitions in a separate plastic bag on top of closed secondary container. 8. Close the cover on the outer container (cooler).

Requisitions

- Do not wrap around specimens.
- Place in their own plastic bag together with other requisitions for the same discipline.
- May be rolled loosely (if this assists packaging) but not around the specimens. Avoid folding.

Cytology

Pap smears may be sent fixed in a cardboard folder, each slide must be labeled with pencil- *not* pen or marker, no zip-lock bag is required. It is permitted for requisitions to be wrapped around the folders and secured with an elastic band.

Contamination

Avoid contaminating the outside of the container. Clean with a disinfectant, such as alcohol, if contamination occurs.

D. Rejection of Specimens

It is the policy of the Laboratory Service to reject laboratory test specimens on the basis of improper identification, unusual biological hazard, or specific technical criteria. These criteria are set out in the following protocol:

SPECIMEN IDENTIFICATION	All specimens must be adequately identified by having attached to the specimen the patient's full name and unique patient ID number or healthcare number. All identifiers must match those on the requisition. Specimens which cannot be adequately identified will not be processed. In all cases a request will be made to recollect the specimen in question. In the event of an improperly labeled irreplaceable specimen an attempt will be made to contact the ordering Provider to issue an order to proceed with testing. Reports will contain a disclaimer that the laboratory will not accept responsibility that the results belong to this patient.
BIOLOGICAL SAFETY CRITERIA	All specimens received in the laboratory must be received in a biologically safe condition. Specimen containers and/or requisitions that have become contaminated through leakage of the biological fluid will be discarded and will not be processed. It is the responsibility of the individual packaging the specimen to ensure that leak-proof containers are being used and to package specimens in such a manner that damage does not occur during transport. Requisitions and paper must be packaged separately under protective plastic to prevent contamination if a biological specimen does leak or spill.
TECHNICAL CRITERIA	All specimens must be technically suitable for the purpose of testing. Specimens that are received in a condition that is deemed to be unsuitable for testing will be disposed of without being tested. Conditions identified as making a specimen unsuitable for testing include: - Insufficient quantity of specimen - Hemolyzed specimen (depends on test required) - Incorrect type of specimen or specimen container - Whole blood specimens that are clotted - Specimens that are too old - Specimens that did not receive specialized storage. - Microbiology specimens in non-sterile container NOTE: See individual test SOP for specific technical criteria requiring specimen rejection.

E. Guideline for Minimal Volume Draws for Neonatal Specimens

	MINIMUM VOLUME	TUBE	EXTRA INFO
CBC	500 uL (0.5 mL)	EDTA (Lavender) microtainer(500ul)	
PT/PTT	1.0 mL	Sodium Citrate (Blue) microtainer 1 ml	MUST be FULL- venous draw.
TSH(inc FT3&FT4)	750 uL (0.750 mL)	SST (Yellow)	*
DIGOXIN	500 uL (0.5 mL)	SST (Yellow)	*
VANCOMYCIN	500 uL (0.5 mL)	SST (Yellow)	*
PHENOBARB	500 uL (0.5 mL)	SST (Yellow)	*
GENTAMICIN	500 uL (0.5 mL)	SST (Yellow)	*
CORTISOL	500 uL (0.5 mL)	SST (Yellow)	*
AMMONIA	500 uL (0.5 mL)	EDTA (Lavendar)	Must be on ice – venous draw preferred
KETONES	500 uL (0.5 mL)	SST (Yellow)	*
BLOOD GASES	Filled blood gas collection tube OR 0.3 mL in syringe on ice if ordered with Lactate	Capillary glass tube	Capillary glass tube MUST be FULL with no bubbles.
LACTATE	300 uL (0.3 mL)	Syringe on ICE	Must be on ICE – must be venous draw
REFERRED TESTS			
INSULIN	500 uL (0.5 mL)	SST (Yellow)	*
GROWTH HORMONE	500 uL (0.5 mL)	SST (Yellow)	*
Chromosomal Karyotype- KARYBLD	Newborns <1 Month 2 mL	Sodium Heparin (Green)	IWK Molecular requisition
Microarray-GENANA	Newborns <1 Month 2 mL	EDTA (Lavender)	IWK Molecular requisition
HIV PCR (Call Microbiology if requested)	2 mL	EDTA (Lavender)	** Collect Mon -Wed (must be received in Microbiology before 12pm)
Hepatitis C Viral Load	1 mL of Serum or Plasma	SST (Yellow) or EDTA (Lavender)	

NOTE: Please call the laboratory 857-5318 for complex orders or where numerous vials are to be collected.

Microbiology specimens call 857-5309

Chemistry specimens call 857-5303

Hematology specimens call 857-5305

Transfusion Medicine specimens call 857-5304

*Volumes may be less if ordered with other Chemistry tests.

** National Microbiology Laboratory will accept less volume but will only perform some of the testing and not all that is requested.

These are only ESTIMATE volumes. Many factors affect how much sample is needed e.g. high hemoglobin and combination of tests ordered.

Pneumatic Tube System

A. PURPOSE / PRINCIPLE:

To provide direction when transporting laboratory specimens through the pneumatic tube system

B. DIRECTLY AFFECTED:

All Laboratory Staff

C. PROCESS:

Specimen Type(s):

- **STAT** specimens ONLY will be sent through the pneumatic tube system to the laboratory from the appropriate areas of the hospital
EXCEPTION: Oncology Clinic, Medical/Surgical Intensive Care (MSICU), Neuro Intensive care (NICU), and Emergency department can send all specimens except for those on the list below.

The following **MUST NOT** be transported in the pneumatic tube system:

- Venous blood gases
 - CSF Specimens
 - Body Fluids- ascites, pleural, synovial
 - Platelet Function Tests:
 - Platelet Aggregation and
 - Closure Time (PFA)
 - Platelet Associated IgG
 - Tissues for culture
 - Histology Specimens
 - Cytology Specimens
 - Empty blood bags
 - **ROTEM** samples may be transported via the pneumatic tube system
 - **Samples on ice** may be send in the tube system as long as the ice is sealed in a plastic bag.
- Note for transport of blood components**
- Transfusion Medicine will send Emergency issued blood to Trauma room in the Emergency Department and MISCU when required.
 - Selected blood products will be transported to Oncology, Clinic C and Medical/Surgical Intensive Care (MSICU) via tube system
 - Green pouches will be used to transport blood products and must NOT be used for transport of specimens.

Procedure:

Packing a pneumatic tube:

1. Place specimens in plastic bag or box (one patient per bag/box)
2. Pack red /green pouch with bag/box, add absorbent strip (reusable until soiled) to pouch.
3. Zipper red pouch completely, place in carrier, check carrier, ensuring pouch is entirely inside the carrier. If anything is sticking out of the carrier the tube system can become blocked or jammed shutting the entire system down.
4. Select station number and push send. Confirm request is accepted before walking away.

Note:

- Plastic bags(5 lb.) are available in house.
- Absorbent strips ESBE Scientific STP150 34832 500 per box
- Infinite Plastic divider(carrier box)- Market Lab #8850.Purchase order
- Red pouch – TC Upholstery 506-859-0707 Purchase order

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Irreplaceable Specimens

A. PURPOSE / PRINCIPLE:

To describe the process in place for dealing with improperly labelled irreplaceable specimens received in the laboratory at Horizon Health Network, Moncton Area. Any replaceable specimen received improperly labelled will be rejected and a new specimen requested.

B. DIRECTLY AFFECTED:

All Laboratory staff of Moncton Area Laboratory Medicine Program

The Section Supervisor shall:

Ensure incident reports are completed on all improperly labelled specimens processed.

Give completed Authorization to Proceed with Testing form to the Quality/Safety Coordinator.

Investigate trends and initiate quality improvement activity to address problem areas.

The Medical Head of the department or designate shall:

Oversees the process and consults with ordering provider if required

The Quality/Safety Coordinator or designee shall:

Oversee the monitoring of incidents and bring results to Quality and Safety Improvement Committee

C. PROCESS

Improperly labelled irreplaceable specimens may be processed. A report will not be released until a signed [Authorization to Proceed with Testing Form LAB-1-ADM-02-F00020](#) is received in the laboratory. (The forms will be provided by the laboratory).

Incident reports will be filed each time an improperly labelled, irreplaceable specimen is processed.

If the Authorization to Proceed With Testing form is not received within 2 weeks, no results will be reported.

Results will be retained internally in the LIS.

Quality Assurance/Quality Control: The following will be reported to the laboratory on a monthly basis by the Risk Management department to the Quality and Safety Coordinator

- Number of improperly labelled, irreplaceable specimens processed

Procedure:

Laboratory staff receiving specimen(s) shall:

Deliver the specimen(s) to a technologist or designate in the appropriate department, with an explanation of the labelling problem

Deliver all specimens to one department, when multiple samples are involved

The technologist receiving the specimen(s) shall:

- Telephone the patient care area and explain the labelling problem
- Determine whether or not the specimen is irreplaceable by discussion with the appropriate health care professional and in consultation with the ordering physician
- Advise that the specimen was received improperly labelled and the **Authorization to Proceed** form must be completed prior to release of results
- Fax the **Authorization to Proceed** form to the physician or unit
- Ensure orders exist in Meditech or enter the appropriate tests orders

- Document the processing of the irreplaceable specimen in Meditech using the canned
 - comments: **IRREPLACE-** Improper Label- irreplaceable
or/
IRREPLACEN –Improper Label- Not reported
- Deliver specimens to other sections according to the requested test and provide explanation of the situation to receiving technologist
- Process the specimen, but do not verify result(s) until the signed Authorization to Proceed form is received.
- Give all information to Supervisor to create an Incident Report.

DEFINITIONS/ABBREVIATIONS:

Irreplaceable specimen: A specimen is deemed irreplaceable if, in the judgment of the ordering Provider in consultation with the laboratory personnel, NOT processing it could result in the loss of information that will significantly affect the treatment of the patient.

RELATED DOCUMENTS:

- [LAB-1-ADM-02-F00020 Authorization to Proceed with Testing Form](#)

REFERENCES:

- Clinical Laboratory and Standards Institute GP33-A Accuracy in Patient and Sample Identification; Approved Guideline

Transmission of Laboratory Critical Values

A. PURPOSE:

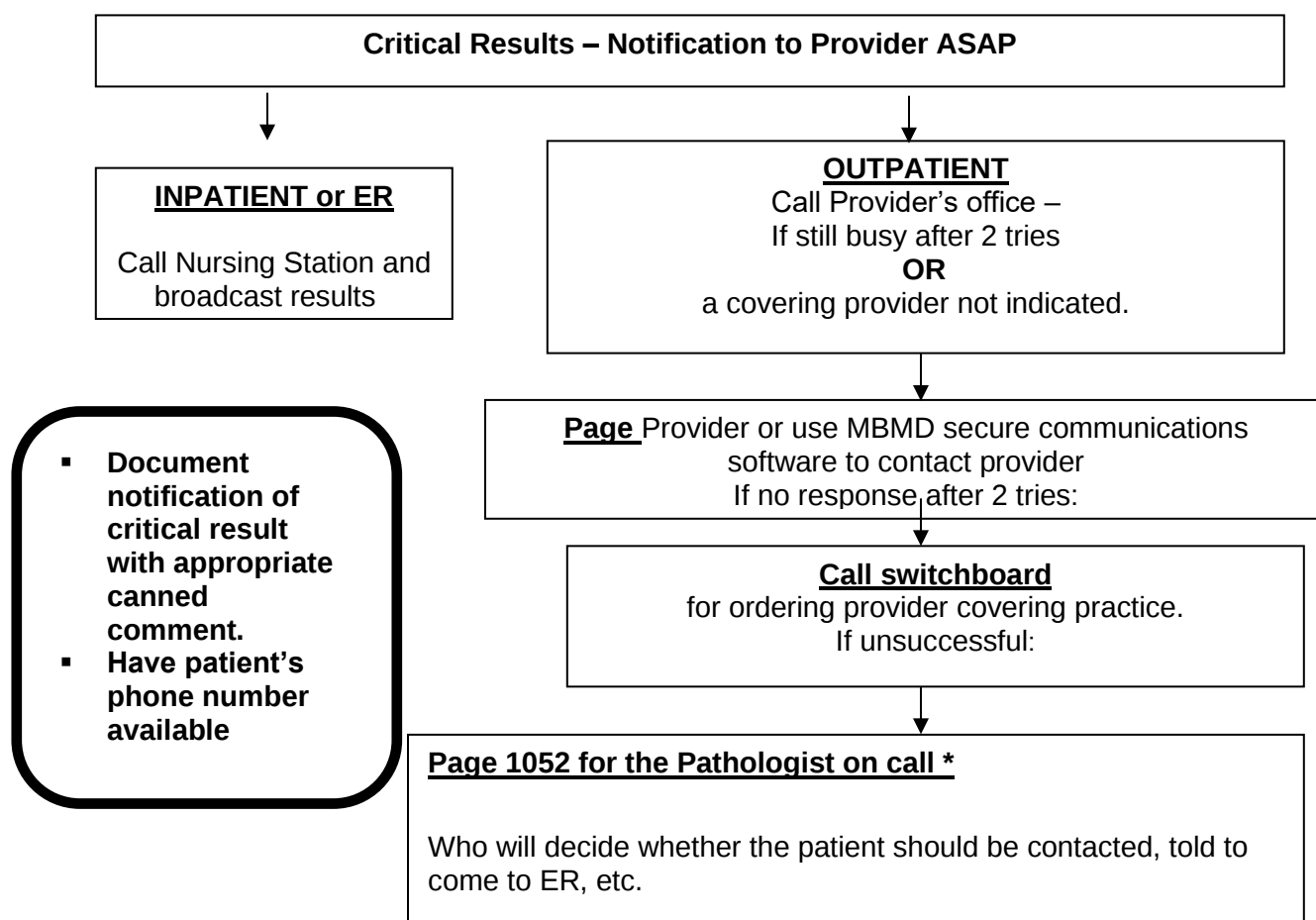
The medical laboratory technologist performing a test, the result of which is a critical value as defined and listed below, is responsible for ensuring that this information is communicated to the appropriate Provider and/or unit in a timely (ASAP) and accurate manner. The technologist must also document all information regarding this communication in the computer with the critical result(s) report.

B. DIRECTLY AFFECTED:

Staff of the laboratory Medicine program Moncton Area

C PROCESS:

Calling of Critical Value Flowchart



Procedure:

NOTE: Sackville staff Must call TMH Switchboard (857-5111) and have the Operator Page the Pathologist on Call; Remember to give the Operator the number you can be reached at for the Pathologist

If calling the Haematopathologist, dial directly and use the area code.

Critical values from other facilities are to be called to the referring laboratory with direction to proceed as per their notification policy.

General Notes – Critical Results

- Critical results/test values have been identified in consultation with appropriate medical staff as per **Appendix A**
- Critical results are entered and verified in the computer system as soon as they are available, thus they may be viewed in the EMR or printed for the patient's chart
- Using a variety of standard texts, the full name and location of the person receiving the information, date, time, etc., is documented in the computer by the technologist
- Verbal reports are not to be offered initially. Advise the person taking the report that a paper copy – (broadcast or fax) will be sent ASAP. When it is necessary to communicate a critical result verbally or by phone the technologist will request that the person accepting the report repeats the information back to them thus ensuring it has been correctly communicated. This policy also applies to receiving verbal results.

In-Patients

- Critical results are phoned to the appropriate nursing unit, the information shall be given to the nurse looking after the patient or the Clinical Resource Nurse who will take responsibility to communicate the information to the appropriate physician in a timely and accurate manner
- Routine In-patients' critical values are to be manually Broadcasted (Stat and Urgent in-patient results get automatically Broadcasted).

Emergency Department

- When the laboratory specimen request is ordered by an Emergency room Provider working in the Emergency department the technologist is responsible to:
 - a) Call the Emergency department,
 - b) Ask for the nurse in charge of the patient. If the nurse is not available, the LPN, charge nurse, physician or team lead may take the call. Inform them the critical results are being transmitted to the printer.
 - c) Document the date, time and person (full name and location) notified in the computer and manually print the external specimen inquiry report.
- If the Emergency Room Provider who ordered the request is not present, the Emergency Room Provider currently working will accept this result and be responsible to take reasonable and prudent measures to contact the patient.
- If the Provider listed on the requisition is NOT an Emergency Room Provider, then the report must be communicated directly to that physician or his designate

Out-Patients

During the regular working day the result is called to the Provider's office. If the Provider's office has a fax machine, the office is called and informed that a critical value report is being transmitted by fax. Verbal reports should preferably be given to office nurse or physician.

- If the ordering Provider's office is closed, the information on that telephone's answering machine/voice mail will be followed to contact the Provider or a physician to whom the report may be given.
- The ordering Provider or his/her designate on call will accept this result.
- If the answering machine/voice mail does not specify an on call physician, ask the switchboard "0" if they have a phone number contact for the Provider.
- The technologist will continue to try to report this critical result until they reach the Provider or a physician who will accept this result.
- The technologist will report this result verbally, along with the patient's telephone number (found on the external report), to the Provider and document in the computer the date, time called and the full name of

the Provider who accepted the result.

Note: The Provider is responsible for follow-up with the patient.

- If the technologist cannot reach the Provider or an appropriate physician who will agree to accept the critical value result, the technologist will page 1052 for the pathologist on call who will decide how to proceed (whether the patient should be contacted, or told to come to ER)
- The technologist will document in the computer any issues that caused delays in reporting the critical result as an internal comment.

Extramural Services

- Contact the ordering provider and follow the same procedure as for Out-Patients (above).
- Broadcast results to Extramural Driscoll and Tantramar.
- Fax results to all other Extramural units.

NB Health Link

- **For NB Health Link patients, contact them at 1-833-927-0388 and fax the report.**

Department of Health (Public Health) Notification (as per NB PH Act 2009 – O.C. 2009 -455)

- In accordance with the Public Health Act the laboratory provides details of patients (including the name of the submitting Provider) with laboratory evidence of certain diseases a list of which is provided to all physicians. Current list from DOH last updated in 2010.
- Some etiological agents are considered critical from a Public Health standpoint and are reported immediately by phone and fax as the results become available. The urgency of reporting is based on the etiological agent and its potential threat to the community.
- Microbiology laboratory follows Notifiable Diseases and Reportable events list supplied by DOH.
- The list is displayed in the microbiology laboratory.

Appendix A

Critical Results List – Department of Laboratories

TEST	LOW	Possible Effect	HIGH	Possible Effect
Biochemistry				
Acetaminophen 4 hrs post			> 992	
Bicarbonate	<10 mmol/L		> 40 mmol/L	
Bilirubin Total <15 days			>284 umol/L	Brain damage
Bilirubin Total >=15 days	None		> 257 umol/L	Brain damage
Calcium	< 1.50 mmol/L		> 3.25 mmol/L	
Calcium, ionized	< 0.75 mmol/L		> 1.60 mmol/L	
Carbamazepine			> 84.6 umol/L	
Serum Chloride	< 80 mmol/L	Complex interwoven patterns with acid/base and electrolyte balance	> 120 mmol/L	Complex interwoven patterns with acid/base and electrolyte balance
Creatinine <=14 years >14 years			>336 umol/L >442 umol/L	Patients on peritoneal diaysis will not have critical creatinine called.
Digoxin - <12 years			>3.5 nmol/L	
Digoxin - >=12 years			> 3.2 nmol/L	
Ethanol			> 65 mmol/L	
Free T4			>64.3 pmol/L	
Gentamicin – peak			> 10.0 mg/L	
Gentamicin – trough			> 2.0 mg/L	
Serum Glucose (< 1 month)	< 2.6 mmol/L	Brain damage	> 16.9 mmol/L	Diabetic coma
Serum Glucose (1 month to 17 yrs.)	< 2.7 mmol/L	Brain damage	> 21.9 mmol/L	Diabetic coma
Serum Glucose (>=18 yrs)	< 2.6 mmol/L	Brain damage	> 24.9 mmol/L	Diabetic coma
Lactate			>4.0 mmol/L	
Lithium			>2.0 mmol/L	
Magnesium	< 0.41 mmol/L		> 1.93 mmol/L	
Osmolality, Serum	< 250 mmol/Kg H2O		> 325 mmol/kg H2O	
Phenobarbital			> 258 umol/L	
Phenytoin			> 120 umol/L	

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TEST	LOW	Possible Effect	HIGH	Possible Effect
Serum Phosphate	< 0.32 mmol/L	Seizures & Coma	> 2.64 mmol/L	
Serum Potassium (≥ 18 yrs)	< 2.8 mmol/L	Muscle weakness, paralysis, cardiac arrhythmias	> 6.0 mmol/L	Cardiotoxicity with arrhythmias
Serum Potassium (1 – 17 yrs)	< 2.8 mmol/L	Muscle weakness, paralysis, cardiac arrhythmias	> 6.2 mmol/L	Cardiotoxicity with arrhythmias
Serum Potassium (1 month to 1 year)	< 2.8 mmol/L	Muscle weakness, paralysis, cardiac arrhythmias	> 6.5 mmol/L	Cardiotoxicity with arrhythmias
Serum Potassium (<1 month)	< 2.8 mmol/L	Muscle weakness, paralysis, cardiac arrhythmias	> 7.5 mmol/L	Cardiotoxicity with arrhythmias
Primidone			> 69 umol/L	
Serum Salicylate	None		> 2.17 mmol/L	Continuing untreated toxicity
Serum Sodium	< 120 mmol/L	Extremes of dehydration, vascular collapse, or edema, hypervolemia, hypervolemia, heart failure	> 160 mmol/L	Extremes of dehydration, vascular collapse or edema, hypervolemia, heart failure
Sirolimus			>20.0 ng/mL	
Valproic Acid			> 1386 umol/L	
Vancomycin – peak			> 80 mg/L	
Vancomycin – trough			> 20 mg/L	
Arterial or Capillary Blood pCO ₂	< 20 mmHg	Complex interwoven patterns of acidosis, alkalosis and anoxemia	> 70 mmHg	Complex interwoven patterns of acidosis, alkalosis and anoxemia
Arterial or Capillary Blood Ph (> 2 days)	< 7.20 units	Complex interwoven patterns of acidosis, alkalosis and anoxemia	> 7.60 units	Complex interwoven patterns of acidosis, alkalosis and anoxemia
Arterial Blood pO ₂ (> 2 days)	< 40 mmHg	Complex interwoven patterns of acidosis, alkalosis and anoxemia	None	

Haematology					
TEST	LOW RESULT	HIGH RESULT	MTP	Possible Effect	
				LOW	HIGH
WBC	$\leq 2.0 \times 10^9/L$ Non-oncology and new patients	$\geq 50.0 \times 10^9/L$ Non-oncology and new patients	None	Immuno-compromised	Septicemia
ANC (absolute neutrophil count)	$\leq 0.50 \times 10^9/L$	None	None	Immuno-compromised	
Hemoglobin	$\leq 70 \text{ g/L}$	$>15 \text{ days } \geq 200\text{g/L}$	$< 100 \text{ g/L}$	Heart failure and anoxemia	Venous stagnation, thrombosis and embolization
	Newborn up to 2 weeks of age $\leq 120 \text{ g/L}$				
Platelets	$\leq 30 \times 10^9/L$	$\geq 1000 \times 10^9/L$	$< 100 \times 10^9/L$	Hemorrhage	
	Newborn (0-7 days) $\leq 60 \times 10^9/L$				
	Oncologists only: $\leq 15 \times 10^9/L$				
PT (Prothrombin Time)	None	$\geq 5.0 \text{ INR}$	$\geq 1.5 \text{ INR}$		Hemorrhage
PTT (Partial Thromboplastin Time)	None	$\geq 100 \text{ sec}$	$\geq 40 \text{ sec}$		Hemorrhage
DDimer			$>1000 \text{ ng/mL FEU}$		DVT, PE, DIC
Fibrinogen	$\leq 1.0 \text{ g/L}$	None	$< 2.0 \text{ g/L}$	Hemorrhage	
Malaria Rapid Test	P.Falciparum positive			Life threatening	
Peripheral smear, bone marrow or flow results that indicate possible new acute leukemia					

Transfusion Medicine
A clinically significant antibody with a titre of 8 or greater on initial prenatal investigation.
A greater than 2 tube increase in the titre of a maternal antibody
Anti-K identified on initial prenatal investigation
Patients presenting with autoimmune haemolytic anemia of either cold or warm type
Patients suffering acute or delayed haemolytic transfusion reactions
Limited availability of blood, blood components or products required by specific patients
Pregnant women in Labour & Delivery with clinically significant antibodies, which have not been previously identified in the current pregnancy

Infectious Disease Serology urgency of reporting depends on individual and public health risk. The list below is representative of critical/urgent results but is not all inclusive.	
Positive Test	Action
Hepatitis B	Public Health and physician
Hepatitis A IgM	
Parvovirus IgM	If requested as a “Measles Screen” or the patient is pregnant – phone physician. Public Health are to be notified immediately about positive “Measles Screen” results
Rubella IgM	
Measles IgM or PCR	
Q. Fever IgM	Notify the physician and Public Health < 24 hours
West Nile IgM or PCR	

Microbiology		
Specimen	Tests	Comments
CSF	1. Gram, other smears 2. Cryptococcal Latex 3. Culture	1. Phone positive and negative smears ASAP 2. Phone positive results, broadcast negative reports 3. Phone when growth occurs
Blood Cultures	1. Gram smear 2. Preliminary results	Phone positive smear ASAP and any time additional information is available that may influence therapy
Sterile Body Fluids – joint, pericardial, etc.	1. Gram smear 2. Preliminary results	Phone positive smear ASAP and any time additional information is available that may influence therapy
Eye swabs	Significant culture or smears result	Neisseria meningitis; VZV and HSV always Pseudomonas aeruginosa if Dx corneal ulcer or corneal scrapings and/or sent by ophthalmologist
Swabs from neonates	Any potential pathogens, e.g. GBS, GAS, S. aureus, etc.	Phone as soon as information is available that may influence therapy.
Pathogen	Specimen Source	Comments
Rare and/or Unusual isolates	Any	Microbiologist will discuss with physician, infection control, etc., as appropriate.
Enteric pathogens	Any	- Inpatient – inform unit and Infection Control - Outpatient – inform family physician - All are reported to Department of Health
Pseudomonas	Ears	Only if significant risk factors e.g. malignant otitis externa
Group A Streptococcus	Non-respiratory sources	Phone to physician, invasive phone to PH < 24 hours
Plasmodium species	Blood	Call physician
AROs	Any	Isolation of multiply drug resistant organisms of individual clinical significance or potential outbreak is communicated to appropriate individual: MD, ICP, PH.
Situations	Specimen Source	Comments
Change of information	Any	Any new information that may affect patient treatment/care
Potential outbreaks	Any	Examples MRSA, VRE, enteric isolates, etc., from a nursing unit or home. Called to appropriate staff.

Specimen Integrity

A. Purpose:

To describe the procedures for packaging of blood samples for transport to other facilities, with the intent of preserving specimen integrity. This procedure is to be used in conjunction with Transport of Dangerous Goods guidelines when packaging samples for transport.

B. Scope:

To be used by staff involved in the packaging of laboratory samples to and/or from facilities within the Horizon Health Network, Moncton Area.

C. Process

Other procedures will cover transport of blood products for transfusion, transport of dangerous goods and dispatch procedures.

Equipment and Materials:

Gel packs
Light weight packing paper
Dry ice (for frozen samples)

Quality Assurance/Quality Control:

When the laboratory is notified or becomes aware of samples arriving in an unacceptable condition, the situation will be investigated and corrective action taken if indicated.

Cytogenetic samples will be monitored for specimen viability by Saint John Cytogenetics Laboratory and the Hematology department of The Moncton Hospital will be notified if the number of unacceptable samples increases over acceptable limits.

Procedure(s):

All samples will be packaged according to Transport of Dangerous Goods guidelines.

- Follow departmental and government policies regarding dispatch and packaging of samples for transport.
- Determine the shipping requirements of samples to be transported.
 - For samples that are to be kept frozen:
 - Add sufficient dry ice based on the size of the container. Container must allow for the escape of gases when dry ice evaporates. Dry ice is usually available in Shipping and Receiving on Tuesdays.
 - For samples that must be kept between 2 – 8°C:
 - Add frozen gel packs based on the size of the container. Ice packs should not come in direct contact with samples. Use paper or other packing material to separate gel packs from the samples.
 - For samples that **MUST** be kept at room temperature:

- Add gel packs based on the size of the container. Gel packs must have been at room temperature for at least 24 hours prior to use. Gel packs must surround samples top and bottom.

Limitations:

- Environmental conditions will affect the length of time temperature conditions within the shipping container can be maintained. Additional dry ice or gel packs may be required if outside temperatures are extreme.
- Shipment must be coordinated so that arrival and unpacking at destination will occur within a time frame that maintains the integrity of the samples. ie. – do not ship packages on Friday if delivery cannot be made until Monday for samples that cannot sit more than 24 hours.

Related Documents:

- Dispatch procedures within individual departments
- Transfusion Medicine transportation of blood products procedures

References:

- Transportation of Dangerous Goods Act -Transport <http://www.tc.gc.ca/eng/tdg/act-menu-130.htm>
- Canadian Blood Services directive: Packing configurations and shipping guidelines for platelets and red blood cells, D30220, Revision 2, 2011

Centrifugation of Specimens

A. PURPOSE:

To describe policies and procedures to be used when centrifuging laboratory specimens.

B. DIRECTLY AFFECTED:

This process applies to all employees who may be centrifuging specimens in Moncton Area laboratories.

C. PROCESS

Procedure:

1. Specimens should be centrifuged according to individual test requirements as defined in individual procedures, at the appropriate speed and duration. The speed (RPM) at which the centrifuge spins is determined by the diameter of the rotor. The speed for individual centrifuges must be determined according to the following calculation, or the attached nomogram (Appendix A):

$$RCF = 1.118 \times 10^{-5} \times r \times n^2$$

RCF is the relative centrifugal force

r is the radius in cm

n is the speed of the rotation (RPM)

Clinical engineering will determine the speed (RPM) required when inspecting the centrifuges within the Moncton Laboratory.

2. In most cases, for the proper separation of red cells from plasma or serum, it is recommended that samples be spun at 1000 – 1200 g for 10 to 15 minutes. Higher speed and/or shorter times must be confirmed as acceptable using comparison studies for individual centrifuges.
3. All personnel using a centrifuge must be trained in the safe operation of the centrifuge, and be aware of proper procedures to follow during biological spills.
 - a. Clinical Engineering will inspect all centrifuges in Moncton Area laboratories prior to installation, then yearly thereafter for rotors, speed and electrical cords. Outside clinics are responsible for maintenance of centrifuges.
 - b. Specimens must be loaded into the centrifuge so that opposing buckets are balanced. A spinning centrifuge that appears unbalanced (excessive shaking) must be stopped immediately and the load adjusted as needed.
 - c. Heads must be sealed during centrifugation if rotor heads are available
 - d. Braking should be avoided if possible.
 - e. Lids must not be opened until the rotor has stopped spinning. Auto-locking heads should be used whenever possible to prevent lids from being opened until the rotor is stopped.
4. Specimens must be allowed to clot for at least 30 minutes prior to centrifugation. This does not apply to plasma tubes.
5. Specimens for most chemistry tests must be spun within 2 hours of collection.
6. Coagulation specimens should not be centrifuged until just before processing.
7. Specimens that have been centrifuged in error cannot be remixed and processed. A repeat specimen must be obtained.

8. Specimens should not be re-centrifuged as some analytes may be falsely elevated, such as potassium.
9. Centrifuges must be maintained and cleaned according to laboratory policy. Centrifuges must be cleaned each day of use, and buckets cleaned regularly and recorded (Appendix B).
10. If a tube breaks within the centrifuge, follow the directions in the Laboratory Safety Manual:
 - a. Turn off centrifuge
 - b. Inform others working in the area of the potential danger from aerosols.
Ideally if the samples were in a non-sealed carriers, the area should be vacated for approximately 20 to 30 minutes to allow the aerosols to settle
 - c. If the centrifuge is equipped with a sealed bucket that can easily be removed from the instrument remove and place in a biological safety cabinet before proceeding.
 - d. First remove any unbroken specimens (these must have remained capped so there is no possibility of contamination) – Wipe the outside of these tubes with disinfectant (Accel).
 - e. As safely as possible, remove all broken tubes - identify the broken specimens so that if required appropriate notifications and additional samples can be obtained. Place all broken glass, discard material, etc., into a yellow bucket for disposal.
 - f. Place the centrifuge carriers, covers, etc., into disinfectant (Accel). Make sure all items are covered by the disinfectant and leave for 30 to 60 minutes before cleaning. Where there is a large volume of blood or serum the longer exposure time should be used. Alternatively these items may be autoclaved then cleaned.
 - g. Wash down the bowl of the centrifuge with disinfectant (Accel) – use sponges to lessen the possibility of cuts from pieces of broken glass. Leave the surface wet for 5 minutes then rewash with 70% alcohol then rinse with water and dry. All sponges, paper and cloths should be considered infectious and discarded into yellow buckets

References:

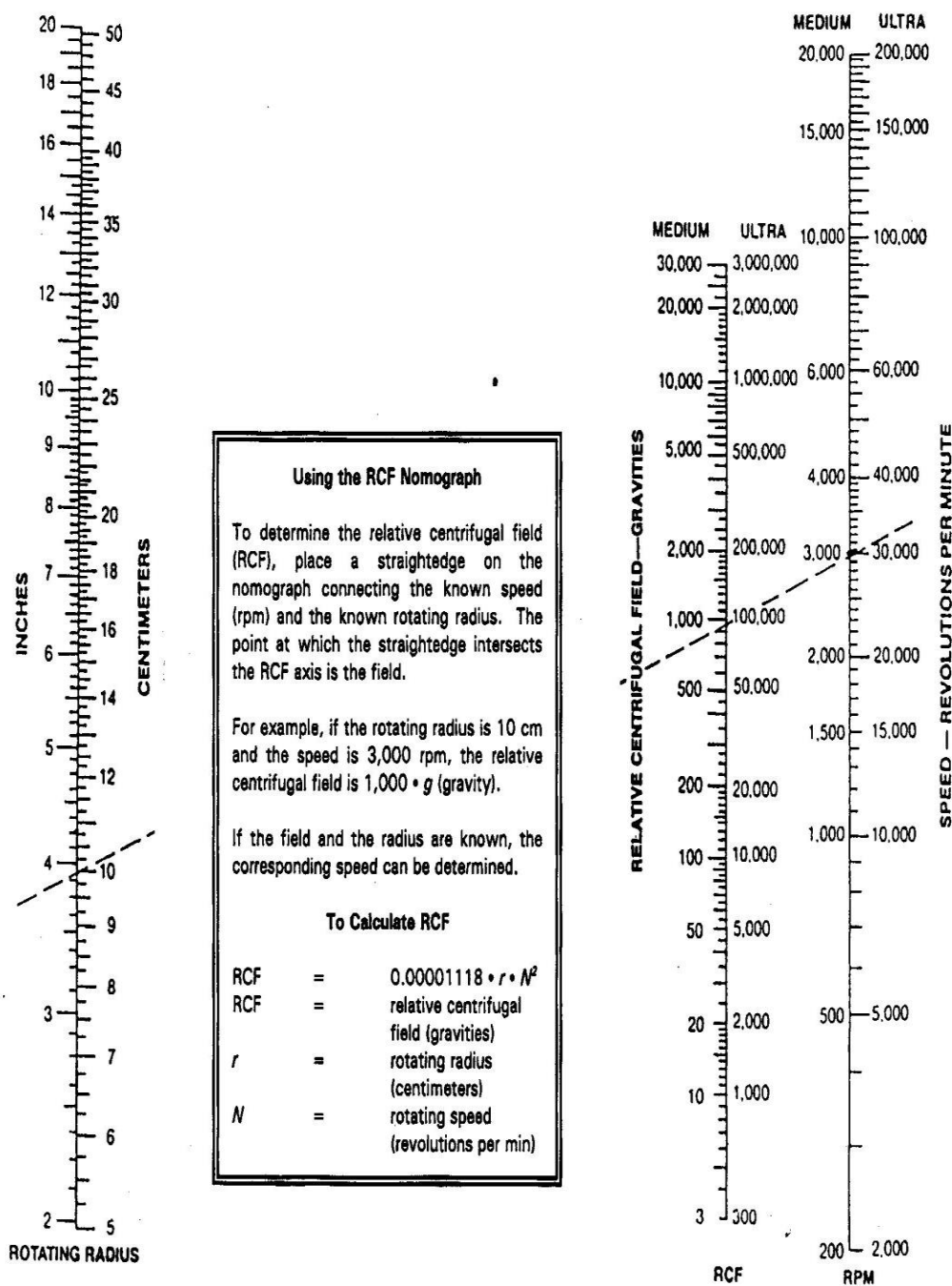
- Procedures for the Handling and Processing of Blood Specimens; Approved Guideline 3rd ed. CLSI H18-A3
- Clinical Laboratory Safety; Approved Guideline 2nd ed. CLSI GP17-A2
- Clinical Chemistry, Theory, Analysis, Correlation, 5th ed., 2010

Related Documents:

- Laboratory Safety Manual LAB-17-SAF-10070 Biological Spills

Appendix A

RCF Nomogram



Reprinted from Procedures for the Handling and Processing of Blood Specimens; Approved Guideline 3rd Ed. H18-A3

Appendix B

CENTRIFUGE MAINTENANCE

WHENEVER USED: Clean with 70% alcohol.

Any unusual noise should be investigated immediately and corrective action taken.

Day	Init	Day	Init	Day	Init	Day	Init
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	
8		16		24			

Comments:

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Model:	Serial Number:	Hosp Inventory #
Location:	Month:	Year:

Repeat Testing Restrictions

A1C	Not permitted within 80 days of last measurement.	A1CEXCEPT
APO B	Not permitted within 6 weeks of last measurement.	APOBEXCEPT
AST	Not permitted for routine orders.	ASTEXCEPT
B12	Not permitted within 12 weeks of last measurement.	B12EXCEPT
Bence Jones	Not permitted within 3 weeks of last measurement	BJPEXCEPT
BNP	Not permitted on ER and in-patients within 7 days of last measurement. Not permitted on out-patients within 6 weeks of last measurement.	BNPEXCEPT
CA125	Not permitted within 12 weeks of last measurement	CA125EXCEP
CA19-9	Not permitted within 12 weeks of last measurement.	CA199EXCEP
CEA	Not permitted within 12 weeks of last measurement.	CEAEXCEPT
Creatinine and Urea- Out Pts	Not performed together on outpatients. If both are ordered, creat only, will be performed.	UREAEXCEPT
ESR and CRP	Not performed together. If both ordered, CRP only will be performed	ESREXCEPT
Ferritin	Not permitted within 4 weeks of last measurement	FEREXCEPT
FT3 and FT4	Performed only based on reflex rules. • FT4 only when TSH is abnormal. • FT3 only when FT4 is normal or elevated.	FT3EXCEPT FT4EXCEPT
Folate	Not permitted within 12 weeks of last measurement.	FOLEXCEPT
GGT	Not permitted for routine orders	GGTEXCEPT
Iron	Not permitted within 4 weeks of last measurement	IRONEXCEPT
Protein Electrophoresis (serum and urine)	Not permitted within 3 weeks of last measurement	PESEXCEPT, PEUEXCEPT, IFEEXCEPT, IEFUEXCEPT
PSA	Not permitted within 4 weeks of last measurement. Also not permitted on men >75 years of age.	PSAEXCEPT
Free PSA	Not permitted within 12 weeks of last measurement. Also not permitted on men >75 years of age.	PSAFEXCEP
TSH	Not permitted within 6 weeks of last measurement.	TSHEXCEPT
Urea and Creatinine on out-patients	Not performed together on out-patients. If both are ordered, creat only, will be performed.	UREAEXCEPT
25-OH Vitamin D	Not permitted within 1 year of last measurement.	VITDEXCEPT

Laboratory Tests

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
11-Deoxycortisol	11DEOXY	LAB	Blood	Yellow	4 mL	Referred.
17-Hydroxycorticosteroids	17HCOR	LAB				Testing not available; suggest ordering DHEAS and/or Cortisol
17-Hydroxy progesterone	17OH	LAB	Blood	Yellow	4 mL	Referred
17-Ketosteroids	17KETO(SPECIAL)	LAB				Testing not available; suggest ordering DHEAS and/or Cortisol.
5-HIAA Quantitative	5HIAA24	LAB	Urine	24 hour jug with 20 mL of 6N HCl as preservative	24 hour specimen	<u>Specimen Diet.</u> Ingestion of avocados, bananas, eggplant, tomatoes, plums, pineapples, walnuts, hickory nuts and molluscs. Patient should be off all drugs for 3 days if possible. Restrict diet and drugs for 3 days prior to and during collection. Referred.
A/G Ratio						Test no longer available.
A1C	HBA1C	LAB	Blood	Lavender	4 mL	Not permitted within 80 days of last measurement
A-Glycoprotein Subunit	GLYSUB	LAB	Blood	Yellow	4 mL	Referred.
ABO Group & Rh	ABORH	BBK	Blood	Lavender	7 mL	
Abscess Culture - routine bacterial	CAB	MIC	Pus	Dry sterile or C&S swab	2-3 mL	May also require AFB/TB culture.
Acanthamoeba	ACANTH	MIC	Conjunctival scraping	Contact Microbiology Laboratory for special saline solution		Consult with Clinical Microbiologist before sending.
Acetaminophen (Tylenol)	ACETO	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	
Acetone/ Isopropanol	ISOSC	LAB	Blood	Grey	4 mL	Do not use alcohol swabs when collecting specimen. Dedicated tube. Referred
Acetylcholine receptor antibody	ACREAB	LAB	Blood	Yellow	6 ml	Referred.
Acetylcholine receptor antibody-UBC	ACREAB-UBC	LAB	Blood	Red	7 ml	Referred.
Acetylsalicylic Acid						See Salicylate
Acid Phosphatase Stain (TRAP)	BMTRAP	LAB	Bone Marrow	Slides		Collect CBC same day.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Acid Phosphatase Stain (TRAP)	PBTRAP	LAB	Blood	Lavender	4 mL	
ACTH (Adrenocorticotrophic Hormone)	ACTH	LAB	Blood	Lavender on ice – pre-chill the tube prior to collection	7 mL	Send to lab on ice ASAP. Centrifuge in a refrigerated centrifuge (if possible) immediately and send frozen. Must be frozen within 1 hour of collection. Referred
Actinomyces (indicate in comments Actinomyces suspected)	CMISCAN	MIC	- Pus - IUD	- Anaerobic transport medium - Dry sterile container		Sterile container can be used for pus if delivered immediately to Microbiology. If swab required, use Anaerobic transport container
Activated Partial Thromboplastin Time (A.P.T.T.)	PTT	LAB	Blood	Blue	2.7 mL	List anticoagulants. If on heparin therapy, deliver to Lab immediately.
Activated Protein C Resistance SCREEN	APCR	LAB	Blood	1 Blue and 2 Lavender	1x 4.5 mL full tube 2x 4 mL	Screen testing done and if reflexed will refer to SJ for molecular. Test is restricted to Specialists.
Activated Protein C Resistance	FVLPTMUT	LAB	Blood	Lavender	1 x 4 mL	Also referred to as FV Leiden(Referred molecular test & includes PT Mutation result .)
Adenovirus	ADVPCR	MIC	Throat, respiratory specimens, eye, urine, CSF	Dry sterile container or UTM	1.5 to 2 mL	Not required if ordering RESPVPCR, or VIRALGASTRO. Referred
Adrenal Antibodies	ADRAB	LAB	Blood	Yellow	4 mL	Referred.
AFB culture (Acid Fast Bacilli)	CMYCOB	MIC	Tissues, respiratory specimens, sputum, urine, etc.	Dry sterile container or Special bottle from Micro for Blood culture		Referred. AFB smear done routinely if sufficient sample
Albumin - Blood	ALB	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Albumin - Pericardial	ALBPC	LAB	Pericardial fluid	Red	7 ml	See Pericardial fluid for instructions.
Albumin - Peritoneal	ALBPT	LAB	Peritoneal fluid	Red	7 ml	See Peritoneal fluid for instructions.
Albumin - Pleural	ALBPL	LAB	Pleural fluid	Red	7 ml	See Pleural fluid for instructions
Albumin - Synovial	ALBSY	LAB	Synovial fluid	Red	7 ml	See Synovial fluid for instructions.
Albumin-Creatinine Ratio	ALB-CREA	LAB	Urine	Dry sterile container	10 mL	

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Alcohol - ethyl (Ethanol)	ETOH	LAB	Blood	Grey-fluoride	6 mL	Do not use alcohol swab. Measured for clinical purposes ONLY, legal cases (coroner) are referred.
Alcohol - methyl (Methanol)	METHANOL	LAB	Blood	Grey and Red	1 x 6 mL 1 x 7 mL	Do not use alcohol swab. Do not combine with other tests - requires dedicated tubes. Referred. Do not open grey tube.
Alcohol Urine screen	ETOHU	LAB	Urine	Dry sterile container	Random urine	
Aldolase	ALDO					Test no longer available; order CK instead.
Aldosterone	ALDS	LAB	Blood	Yellow	6 mL	Collect between 7 – 10 am. Patient must be ambulatory for 2 hours prior to collection. Collect patient in a seated position. Must include all drugs administered within the last 2 weeks. Centrifuge immediately and send frozen. Referred
Aldosterone/Renin Ratio	ALDRENRATI	LAB	None- calculation only			Referred. Only order when Aldosterone (ALDS) and Renin (RENr or RENST) are ordered together.
Aldosterone Urine	ALDU24	LAB	Urine	24 hour jug with no preservative.	24 hour specimen	Must include all drugs administered within the last 2 weeks. Centrifuge immediately and send frozen. Referred
Alkaline Phosphatase	ALK	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Alkaline Phosphatase: Bone Specific	ALKBONE	LAB	Blood	Red	6mL	Referred.
Alkaline Phosphatase Isoenzymes	APISO	LAB	Blood	Yellow	4 mL	Differentiates between total and bone isoenzyme. Available only when total activity greater than upper limit of normal. Referred. DO NOT FREEZE.

TEST	MNEMONIC	ORDER ENTRY CATEGO RY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Allergy Testing						
Almond	ALLERGF20					
Amoxicillin	ALLERGC6					
Apple	ALLERGF49					
Asparagus	ALLERGF261					
Aspergillus niger	ALLERGM20					
Avacado	7					
Banana	ALLERGF96					
Barley	ALLERGF92					
Beef	ALLERGF6					
Birch Pollen	ALLERGF27					
Blueberry	ALLERGT3					
Blue Mussel	ALLERGF288					
Brazil Nut	ALLERGF37					
Cabbage	ALLERGF18					
Carrot	ALLERGF216					
Casein	ALLERGF31					
Cashew	ALLERGF78					
Cat Epithelium	ALLERGF202					
Celery	ALLERGE1					
Cheddar Cheese	ALLERGF85					
Cherry	ALLERGF81					
Chick Pea	ALLERGF242					
Chicken	ALLERGF309					
Clam	ALLERGF83					
Cocoa	ALLERGF207					
Coconut	ALLERGF93					
Common Birch	ALLERGF36					
Corn	ALLERGT3	LAB	Blood	Yellow	6 ml	
Crab	ALLERGF8					
Derm. Farinae	ALLERGF23					
Derm. pterony.	ALLERGD2					
Dog Dander	ALLERGD1					
Egg White	ALLERGE5					
Egg Yolk	ALLERGF1					
Feather Mix	ALLERGF75					
Fish (Cod)	ALLERGeX71					
Garlic	ALLERGF3					
Gerbil	ALLERGF47					
Gluten	ALLERGE209					
Grape	ALLERGF79					
Grass Mix	ALLERGF259					
Guinea Pig Epith	ALLERGGx1					
Haddock	ALLERGE6					
Halibut	ALLERGF42					
Hamster	ALLERGF303					
Hazel Nut	ALLERGE84					
Herring	ALLERGF17					
Honey Bee	ALLERGF205					
Horse Dander	ALLERGi1					
Horsefly	ALLERGE3					
House Dust Mix	ALLERGi204					
Kiwi Fruit	ALLERGHx2					
Latex	ALLERGF84					
Lentils	ALLERGk82					
Lobster	ALLERGF235					
Macadamia Nuts	ALLERGF80					
	ALLERGF345					

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Mackerel	ALLERGF50					
Mango	ALLERGF91					
Melon	ALLERGF87					
Milk	ALLERGF2					
Mold Mix	ALLERGMx2					
Mosquito	ALLERGi71					
Mouse Epithelium	ALLERGe71					
Mushroom	ALLERGF212					
Mustard	ALLERGF89					
Nut Mix	ALLERGFx1					
Oat	ALLERGF7					
Onion	ALLERGF48					
Orange	ALLERGF33					
Oyster	ALLERGF290					
Paper Wasp	ALLERGi4					
Pea	ALLERGF12					
Peanut	ALLERGF13					
Peach	ALLERGF95					
Pear	ALLERGF94					
Pecan	ALLERGF201					
Penicillin G	ALLERGC1					
Penicillin V	ALLERGC2					
Pineapple	ALLERGF210					
Pine Nuts	ALLERGF253					
Pistachio	ALLERGF203					
Pollock	ALLERGF413					
Pork	ALLERGF26					
Potato	ALLERGF35					
Rabbit Epithelium	ALLERGe82					
Raspberry	ALLERGF343					
Rice	ALLERGF9					
Rye	ALLERGF5					
Salmon	ALLERGF41					
Scallop	ALLERGF338					
Seafood Mix	ALLERGFx2					
Sesame Seed	ALLERGF10					
Shrimp	ALLERGF24					
Sole	ALLERGF337					
Soya bean	ALLERGF14					
Squid	ALLERGF258					
Strawberry	ALLERGF44					
Sunflower Seed	ALLERGk84					
Tomato	ALLERGF25					
Tree Mix 4:	ALLERGTx4					
Tree Mix 6	ALLERGTx6					
Trout	ALLERGF204					
Tuna	ALLERGF40					
Turkey Meat	ALLERGF284					
Walnut	ALLERGF256					
Weeds Mix	ALLERGWx1					

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Wheat Whey (Cows) White bean White Face Hornet Yeast Yellow Hornet Yellow Jacket Miscellaneous Allergen Component rAra h1 Peanut Component rAra h2 Peanut Component rAra h3 Peanut Component rAra h8 PR-10 Peanut Component rAra h9 LTP Peanut Component nGal d1 Ovomucoid Egg Component nGal d2 Ovalbumin Egg Component nGal d3 Conalbumin Egg	ALLERGf4 ALLERGf236 ALLERGf15 ALLERGf2 ALLERGf45 ALLERGf5 ALLERGf3 ALLERGMIS C ALLERGf422 ALLERGf423 ALLERGf424 ALLERGf352 ALLERGf427 ALLERGf233 ALLERGf232 ALLERGf323					
Alpha Fetoprotein - Maternal						See Maternal Serum Screening (2 nd Trimester)
Alpha Fetoprotein (Tumour marker)	AFPT	LAB	Blood	Yellow	6 mL	
Alpha-1-Antitrypsin	A1A	LAB	Blood	Yellow	4 mL	Referred
Alpha-1-Antitrypsin, Feces	A1AF	LAB	Stool	Random	Random	Referred
Alpha-1-Antitrypsin Phenotyping	A1ATYPE	LAB	Blood	Yellow	4 mL	Referred
Alpha-2-Macroglobulin	A2MG	LAB	Blood	Yellow	4 mL	Referred
Alpha Sub Unit	ALPHASUBU	LAB	Blood	Yellow	6 mL	Referred.
ALT (SGPT) Alanine Amino Transferase	ALT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Aluminum	ALUMS	LAB	Blood	Navy EDTA	7 mL	Referred
Aluminum 24 hr Urine	ALUMU24	LAB	Urine	24 hour jug – no preservative	24 hour specimen	Diet and Drug restrictions. Avoid fruit juices and teas for 24 hrs prior to collection. Antacids containing aluminium can greatly elevate urine output. Referred.
Amikacin – Peak	AMIKP	LAB	Blood	Red	7 mL	Collect 15 minutes Post 1 Hour IV or 1 Hour Post IM. Referred.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Amikacin - Trough	AMIKT	LAB	Blood	Red	7 mL	Collect trough specimen within 30 minutes before dose is administered Referred.
Amino Acids Qualitative urine. Also called Metabolic Screen, Urine	AAU	LAB	Urine	Dry sterile container	5 ml random	Referred. Include patient's age and clinical diagnosis.
Amino Acids - Quantitative blood	AASQ	LAB	Blood	Yellow	Adult 4 mL Paeds 0.5 mL	Fasting preferred. Include patients age, special diet and clinical indicators for test Referred
Amino Acids - Quantitative urine,	AAUQ	LAB	Urine	Random	10 mls	Referred
Aminoglycoside						See individual antibiotics.
Aminophylline						See Theophylline.
Amiodarone	AMIO	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred
Amitriptyline (Elavil)	AMITRIP	LAB	Blood	Red	7 mL	Measures Amitriptyline and Nortriptyline. Collect prior to administration of next dose. Referred
Ammonia	AMM	LAB	Blood	Lavender on ice	Adult 7 mL Paed 1 mL	Send to lab on ice ASAP.
Amobarbital	AMOB	LAB	Blood	Yellow	4 ml	Referred.
Amoeba - Direct examination	OP	MIC	- Stool - Aspirated material from edge or base of abscess in liver, skin, bowel, etc.	- Parasite container (SAF fixative) - Dry sterile container (transport <u>immediately</u> to Microbiology)	to fill line O&P transport	Mix well to allow preservative to work.
Amoeba (Entamoeba) - Serology	AMOEBA	LAB	Blood	Red or Yellow	6 mL	Referred.
Amphetamines	AMPHU	LAB	Urine	Dry Sterile Container	25 mL	Usually ordered as part of DRUGU or METHADU but can be ordered by itself
Amylase						Test not available - except by special request
ANA (Antinuclear Antibody)	ANA	LAB	Blood	Red	7 mL	Referred

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Anaerobic Culture	CMISCAN or CBX	MIC	Order as appropriate for specimen type - includes aerobic and anaerobic culture	Sterile container or Anaerobic container	Optimum sample is an aspirate or pus	If delay in transit to lab place in anaerobic transport container (available from Microbiology).
ANCA	ANCA	LAB	Blood	Yellow	4 mL	Includes Anti MPO and Anti PR3 by immunoassay
ANCAIFA	ANCAIFA	LAB	Blood	Yellow	4 mL	Testing by Immunofluorescence for cytoplasmic patterns
Androstenedione	ANDROS	LAB	Blood	Yellow	4mL	Fasting no longer required. For women, collect one week before or after menstrual period. Referred.
Angiotensin Converting Enzyme	ACE	LAB	Blood	Yellow	4mL	8 hour fasting. Referred
Anti Adrenal Antibody	ADRAB	LAB	Blood	Yellow	4 mL	Referred
Anti Cardiolipin Antibodies	ACARDIO	LAB	Blood	Yellow	6 mL	Referred
Anti Cyclic Citrullinated Peptide Antibodies (CCP)	CCP	LAB	Blood	Red	7 mL	Referred.
Anti Diuretic Hormone	ADH	LAB	Blood	Lavender on ice	2 x 4 mL	Collect on ice. Use prechilled tube. Referred.
Anti ENA Antibodies	ENA	LAB	Blood	Yellow	4 mL	Referred
Anti Glomerular Basement Antibody	GBMAB	LAB	Blood	Yellow	4 mL	Referred
Anti Histone Antibody	AHAB	LAB	Blood	Red	7 mL	Done only when ANA is positive. Referred.
Anti Insulin Antibody	ANTIINS	LAB	Blood	Yellow	4 mL	Referred
Anti Intrinsic Factor	INFAC	LAB	Blood	Yellow	6 mL	Referred
Anti Liver-Kidney Microsome Antibody	LKMAB	Lab	Blood	Yellow	2x4 mL	Referred
Anti Lupus Anticoagulant	LUPUS	LAB	Blood	Blue	2 x 2.7 mL	Test should not be performed if patient receiving heparin or oral anticoagulant.
Anti Mitochondrial Antibody	IFA	LAB	Blood	Red	7 ml	Referred as part of IFA screen.
Anti Mouse Antibody	ANTIMOUSE	LAB	Blood	Red	7 mL	Referred.
Anti MPO	ANCA	LAB	Blood	Yellow	4 mL	Order ANCA
Anti Neutrophil Cytoplasmic Antibody	ANCA	LAB	Blood	Yellow	4 mL	Referred
Anti Nuclear Antibody	ANA	LAB	Blood	Red or Yellow	7 ml	Referred
Anti Pancreatic Islet Cell Antibody	PICAB	LAB	Blood	Red	7 ml	Referred

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Anti Parietal Cell Antibody	IFA	LAB	Blood	Red	7 ml	Referred as part of IFA screen.
Anti Phospholipid Antibody						See Anti Cardiolipin Antibodies
Anti Platelet Antibody or Platelet Associated IgG		BBK				Test not available
Anti PR3	ANCA	LAB	Blood	Yellow	4 mL	Order ANCA
Anti Reticulin Antibody	IFA	LAB	Blood	Red	7 ml	Referred as part of the IFA screen
Anti Saccharomyces cerevisiae Antibodies	ASCAB	LAB	BLOOD	Red	7ml	Referred.
Anti Skeletal Muscle Antibody	SKEAB	LAB	Blood	Yellow	4 mL	Referred
Anti Smooth Muscle Antibody	IFA	LAB				Referred as part of IFA screen.
Anti-Thyroglobulin Ab	ANTITHYRO	Lab	Blood	Yellow	6 mL	
Anti-Thyroid Peroxidase Antibody	ANTITPO	LAB	Blood	Yellow	6 mL	
Antibody Elution	ELU	BBK	Blood	Lavender	2 x 7 mL	
Antibody identification	ABID	BBK	Blood	Red Lavender	1 x 7 mL 1 x 7 mL	
Antibody Titration APIX	TITRE	BBK	Blood	Lavender	7 mL	
Antineuronal Nuclear Antibody Type 1 (Anti Hu)						See Paraneoplastic Antibody panel.
Antineuronal Nuclear Antibody Type 2 (Anti R1)						See Paraneoplastic Antibody panel.
Antineuronal Nuclear Antibody Type 3						See Paraneoplastic Auto Ab Lung/ Thymoma Panel
Anti thrombin III	AT	LAB	Blood	Blue	2.7 mL	Indicate if patient receiving chemotherapy, Heparin or Coumadin.
Apixaban (Eliquis Level)	APIX	LAB	Blood	Blue	2.7 mL	List anticoagulants and dosage
Apolipoprotein A1	APOA	LAB	Blood	Yellow	4 mL	Referred
Apolipoprotein B	APOB	LAB	Blood	Yellow	4 mL	Not permitted within 6 weeks of last measurement
Arbovirus serology Includes: SLE; West Nile, Powasson; Dengue; EEE; and WEE	ARBO	LAB	Blood	Red or Yellow	6 mL	Include clinical and travel history. Doctor to complete requisition supplied by reference laboratory Referred
Arsenic-Whole Blood	ARSEB	LAB	Blood	Navy EDTA	7 mL	Referred.
Arsenic	ARSU24	LAB	Urine	24 hour jug – no preservative	24 hour urine	Diet /Drug restrictions. Avoid seafood consumption 5 days prior to collection. Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Arylsulfatase	ARYL	LAB	Blood	Green	2 x 7 mL	Referred. Collect before noon on Mon, Tue or Wed.; not Stat Holiday. Also collect 2 control tubes from a normal patient.
Ascariasis	OP	MIC	- Stool - Worm	- SAF Fixative - Dry container	to fill line	Mix well to allow preservative to work.
Ascorbic Acid (Vitamin C)	VITC	LAB	Blood	Green	2 x 7 mL	Protect from light. Wrap in foil. Deliver to lab ASAP. Referred.
ASOT (Anti-Strep O Titre)	ASOT	LAB	Blood	Yellow	4 mL	
Aspergillus - Culture	CFUN	MIC	Sputum, bronchial washings, biopsy, bone marrow, etc.	Dry, sterile container		Indicate aspergillus suspected.
Aspergillus fumigatus IgE Antibody	ASPERIGE	LAB	Blood	Red	7 mL	Referred.
Aspergillus fumigatus IgG Antibody	ASPERIGG	LAB	Blood	Red	7 ml	Referred.
Aspergillus –Invasive (Galactomannan)	GALACTO	MIC	Blood BAL	Red	7 ml	Referred
Aspergillus Precipitans	ASPAB	LAB	Blood	Red	7 mL	Referred
AST(Aspartate Aminotransferase)	AST	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Not permitted for routine orders
Athlete's foot						See Dermatophytes.
Ativan (Lorazepam)	LORAZ	LAB	Blood	Red	7 mL	Referred. Draw before next dose.
Auto Absorption	AUTOABS	BBK	Blood	4 X 7 mL Lavender	4 x 7 mL	Tubes MUST be filled
Auto Absorption (Cold)	CAA	BBK	Blood	3 x Lavender 1 x Red	3 x 7 mL 1 x 7 mL	Tubes MUST be filled Specimen must be kept at 37°C and delivered directly to Blood Bank
Aventyl						See Nortriptyline
B12	B12	LAB	Blood	Yellow	4 mL	Not permitted within 12 weeks of last order
B12 Unsaturated Binding Capacity	B12BIND	LAB	Blood	Wrapped Yellow - on ice	6 mL	Referred. Protect from light. Send to lab on ice.
Bacterial Vaginosis	VS	MIC	Smear/swab of vaginal discharge	C&S swab or prepared smear of vaginal discharge		Physicians are encouraged to measure pH (usually > 4.5 in BV) and do KOH test (10% KOH - fishy odour). Gardnerella vaginalis cultures are not performed.
Barbital	BARBI	LAB	Blood	Yellow	6 mL	Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Barbiturate Screen	BARB	LAB	Blood	Red	7 mL	Referred. Detects Butabarbital, Butalbital, Pentobarbital, Amobarbital, Barbitol, Phenobarbital, and Secobarbital.
Bartonella henselae Serology (Cat Scratch)	BART	LAB	Blood	Red or Yellow	4 mL	Etiological agent of cat scratch disease. Referred.
BCR Mutation						See Gene Rearrangement
Bence-Jones Protein	IFEU or BJP or BJPU24	LAB	Urine	24 hour jug	24 hour specimen	Testing will include IFEU. Not permitted within 3 weeks of last measurement
Benzodiazepines screen	BENSSC	LAB	Blood	Yellow	4 mL	Referred
Benzodiazepines urine	BZOU	LAB	Urine	Dry sterile container	25 mL	Usually ordered as part of Drug Screen or METHADU but can be ordered by itself
Beta 2 Glycoprotein 1 Antibodies	B2GLYPRO	LAB	Blood	Yellow	6 mL	Referred
Beta 2 Microglobulin	B2MIC	LAB	Blood	Yellow	4 mL	
Beta 2 Microglobulin, Urine	B2U	LAB	Urine	Dry sterile container - special collection instructions.	10 mL	Referred. Ask patient to void and discard this urine. Patient must then drink a large glass of water and collect urine sample within one hour. Add NaOH to adjust pH to 5.5 – 8. Sample must be frozen within 1 hr from collection.
Beta Hydroxybutyrate (Ketone)	BHYDROXY	LAB	Blood	Plasma or Serum in gel separator tube	4 mL	
Beta HCG	BHCG	LAB	Blood	Plasma or Serum in gel separator tube	4 mL	
Beta HCG	BHCGU	LAB	Urine	Dry sterile container	Random urine	
Beta Strep - Throat (Group A culture)	CT	MIC	Throat swab	Throat swab (liquid transport medium)		Gp A antigen routinely done on patients ≤ 18yr. See below
Beta Strep - Throat (Group A direct antigen)	GASS	MIC	Throat swab - only one swab required for culture and antigen	Throat swab (liquid transport medium)		Routinely done on patients ≤ 18 if correct swab sent.
Beta Strep - Vaginal (Group B)	CGBS	MIC	Vaginal/rectal swab	C&S swab		Screening during pregnancy

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Beta Transferrin	BTRANS	LAB	Fluid (Indicate source)	Dry sterile container	2 mL	Referred. 2.0 mL of body fluid (nasal, otic, etc.). Direct collection may be done with a pipette, syringe, test tube or micro collection device.
Bicarbonate	HCO3					See carbon dioxide
Biotinidase	BIOT	LAB	Blood	Yellow	4 mL	Referred.
Bile Acids	BILEAC	LAB	Blood	Yellow	4 mL	Referred
Bili Scan Amniotic Fluid	BILIAMN	LAB	Amniotic Fluid	Dry sterile container		Protect from light. Centrifuge. Referred.
Bilirubin (Total) (Direct)	BILT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Bilirubin, Cord	BILC	LAB	Cord Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Biopsy Culture - Surgical/OR (includes aerobic and anaerobic culture)	CBX	MIC	Bone, lymph node, tissue, etc.	Dry sterile container. If delay in transit use anaerobic transport container.		May also request additional tests, i.e. AFB/TB culture.
Blastomycosis - Culture	CFUN	MIC	Skin scraping, lesion aspirates, bronchial washing, sputum, biopsy, bone marrow, CSF	Dry sterile container		MUST notify lab this is suspected.
Blastomycosis - Serology	BLASTO	LAB	Blood	Red or Yellow	4 mL	Referred.
Bleeding Time	BT	LAB	Blood			Discontinued See Closure Time
Blood Culture - routine aerobic and anaerobic	CB	MIC	Blood	Aerobic and Anaerobic bottles	8-10 mL per bottle	Bring to laboratory ASAP
Blood Culture - pediatric	CBP	MIC	Blood	Paediatric bottle	1-3 mL	Bring to laboratory ASAP
Blood Culture - if Dx endocarditis	CBE	MIC	Blood	Aerobic and Anaerobic bottles or Paediatric bottle	8-10 mL per bottle Peds: 1-3mL	Bring to laboratory ASAP
Blood Culture - if yeast suspected - if dimorphic fungi suspected *contact Microbiology	CBY or CBPY	MIC	Blood	Aerobic and Anaerobic bottles or Paediatric bottle	8-10 mL per bottle Peds:1-3mL	Bring to laboratory ASAP
Blood Culture - mycobacteria (TB)	CMYCOB	MIC	Blood	Special bottle available from Microbiology Laboratory.	8-10 mL	Bring to laboratory ASAP
Blood Gases (pH, pCO ₂ , pO ₂ , calculated HCO ₃ , %O ₂ sat., Base Excess)	ABG	LAB	Blood - arterial	Heparinized syringe on ice	2 ml	Deliver to Automation Chemistry on ice ASAP.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Blood Gases (pH, pCO ₂ , pO ₂ , calculated HCO ₃ , Base Excess)	ABGCORD	LAB	Blood - arterial Cord	Heparinized syringe on ice	2 ml	Deliver to Automation Chemistry on ice ASAP.
Blood Gases (pH, pCO ₂ , pO ₂ , calculated HCO ₃ , %O ₂ sat., Base Excess)	CBG	LAB	Blood - Capillary	Heparinized Capillary on ice	150 ul	Deliver to Automation Chemistry on ice ASAP. Do not send in pneumatic tube
Blood Gases (pH, pCO ₂ , calculated HCO ₃ , Base Excess),	VBG	LAB	Blood - venous	Green 3 mL on ice	2 ml	Deliver to Automation Chemistry on ice ASAP. Do not send in pneumatic tube
Blood Gases (pH, pCO ₂ , pO ₂ , calculated HCO ₃ , Base Excess)	VBGCORD	LAB	Blood - venous Cord	Heparinized syringe on ice	2 ml	Deliver to Automation Chemistry on ice ASAP.
Blood Urea Nitrogen (BUN)	BUN	LAB	Blood			See urea
Body Fluid (excluding blood, CSF and urine) - Routine bacterial culture	CBF (or CBBF if inoculated directly into Blood Culture bottles)	MIC	Pericardial, Ascites, Joint/Synovial	Dry sterile container. If volume very small inoculate immediately into Peds blood culture bottle	As much as possible up to 20 mL	Other culture, eg. AFB/TB or viral are often required.
Bone Marrow Culture	BONEMARROW	MIC	Bone Marrow	Contact Microbiology for appropriate containers.	As much as possible	Protocol includes culture for TB and fungus.
Bone Marrow Exam	BM	LAB	Bone Marrow	Slides		A technologist is required to prepare slides. Notify Haematology (5305) when the physician is present and ready to perform the procedure.
Bordetella (Pertussis) PCR	BORDPCR	MIC	Nasopharyngeal swab	UTM		
Borrelia burgdorferi	LYME	LAB	Blood	Red or Yellow	4 mL	Referred.
BNP – B Type Natriuretic Peptide	BNP	LAB	Blood	Lavender	4 ml	Not permitted on ER and Inpatients within 7 days of last measurement Not permitted on outpatients within 6 weeks of last measurement
Bronchial Washing - Routine culture	CRESP	MIC	Respiratory aspirates, bronchial washings, etc.	Dry sterile container	1 to 2 ml minimum	AFB/TB, fungal or viral culture may also be required.
Bronchial Washing - Viral culture	RESPVPCR	MIC	Respiratory aspirates, bronchial washings, etc.	Dry sterile container	1 to 2ml minimum	AFB/TB and fungal culture may also be required.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Bronchial Alveolar Lavage Differential	BALDIFF	LAB	Bronchial lavage	Dry sterile container		
Brucella - Culture	CB	MIC	Blood	Aerobic blood culture bottle	8-10 mL	Contact Micro Lab that Brucella suspected so additional precautions and procedures may be followed.
Brucella - Serology	BRUCAB	LAB	Blood	Red or Yellow	4 mL	Not a substitute for isolation and identification of the organism. Vaccine history should be noted. Acute and convalescent sera testing can be performed. Referred.
Bug (tick, louse, etc.)	BUGID	MIC	Bug	Dry sterile container		Try not to squash insect.
Burn Culture	CBURN	MIC	Skin/surface swabs from patients with burns	C&S swab and occasionally tissue biopsy		
Butabarbital	BUTB	LAB	Blood	Yellow	6 mL	Referred.
Butalbital	BUTL	LAB	Blood	Yellow	6 mL	Referred.
C282Y and H63D genetic mutations	HGENE			Lav4		See HGENE test. These are the two gene mutations that are tested in the HGENE test.
C Reactive Protein (CRP) High Sensitivity	CRPHS	LAB	Blood	Yellow	4 mL	ESR and CRP not performed together. If both ordered, CRP only will be measured
C1 Esterase Inhibitor	CEST	LAB	Blood	Yellow	4 mL	Referred
C1 Esterase Functional Assay	CESTF	LAB	Blood	Blue	2.7 mL	Centrifuge immediately and send frozen. Referred.
C3 and C4 Complement	C3C4	LAB	Blood	Yellow	4 mL	
C677T Mutation						See Methylenetetrahydrofolate Reductase
Ca 125	CA125	LAB	Blood	Yellow	6 mL	Not permitted within 12 weeks of last measurement
Ca 15-3	CA153	LAB	Blood	Yellow	6 mL	
Ca 19-9	CA199	LAB	Blood	Yellow	6 mL	Not permitted within 12 weeks of last measurement
Ca 19-9 on fluid	CA199FL	LAB	Body Fluid	Red	7 ml	
CADASIL (NOTCH3)	CADASIL	LAB	Blood	Lavender	7 mL x 3	Referred. Must send completed LHSC Molecular Diagnostics Lab requisition with specimen. Neurologists only.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Cadmium	CADBL	LAB	Blood	Navy EDTA	7 mL	Do not freeze. Referred.
Cadmium, Urine 24 hr	CADU24	LAB	Urine	24 hour jug –no preservative	24 hour specimen	Referred.
Cadmium, Urine Random	CADURAND OM	LAB	Urine	Random urine container –	Random urine	Referred.
Caffeine	CAF	LAB	Blood	Red microtainer-paeds	0.7 mL Paeds	Only order if patient < 180 days old. Referred.
Calcitonin	CTONIN	LAB	Blood	Yellow	4 mL	Fasting specimen. Send frozen. Referred
Calcium	CA	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Calcium Urine	CAU24 or CAU	LAB	Urine	24 hour jug with preservative Urine container	24 hour specimen Or 24 ml	20 mls of 6N HCl
Calcium ionized	CAIONW	LAB	Blood	SST4 or blood gas collection	3 mL	Send heparinised sample on ice. Send SST tube at room temperature.
Caliculi, Renal						See Stone analysis.
Campylobacter culture	CS	MIC	Stool	Carey Blair transport medium	Walnut sized piece	This test included in routine stool culture.
Candida						See Yeast.
Cannabinoid (Tetrahydrocannabinol/ THC						See Drug Screen
CAR (Cancer Associated Retinopathy Autoantibody)	CAR	LAB	Blood	Red	7 mL	Referred.
Carbamazepine (Tegretol)	CARB	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect prior to dose
Carbamazepine Epoxide	CARBEP	LAB	Blood	Yellow	6 mL	Referred.
Carbon Dioxide (HCO ₃ Bicarbonate)	HCO3	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Carbon Monoxide (Carboxyhemoglobin	COHGB	LAB	Blood	Green on ice	3 ml	Send on ice. Must be received in lab within 4 hours of collection
Carcinoembryonic Antigen (CEA)	CEA	LAB	Blood	Yellow	6 mL	Not permitted within 12 weeks of last measurement
Carcinoembryonic Antigen (CEA) on fluid	CEAFL	LAB	Body fluid	Red	7 mL	
Carnitine	CARNI	LAB	Blood	Red	7 mL	Referred. Send frozen.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Carotene	CARO	LAB	Blood	Yellow (wrapped)	3 x 4 mL	Unstable when exposed to light. Cover with aluminium foil or masking tape. Avoid hemolysis. Referred
Cat Scratch Disease (Bartonella) Serology	BART	LAB	Blood	Red or Yellow	4 mL	Clinical history required. Referred
Catecholamine - Resting	CATPLREST	LAB	Blood	Ice Lavender 7ml	2 X 7mL	No drugs 24 hr. pre-test. <u>MUST</u> use intravenous catheter into a forearm vein. Refer to <u>Nursing Procedure Copy of this procedure is Chemistry Section of this manual</u> . Collect post SUPINE 30 min. Deliver to lab on ice. Centrifuge immediately and send frozen. Referred.
Catecholamine - Standing	CATPLSTAND	LAB	Blood	Ice Lavender 7 ml	2 X 7mL	No drugs 24 hr. pre-test. <u>MUST</u> use intravenous catheter into a forearm vein. Refer to <u>Nursing Procedure Copy of this procedure is Chemistry Section of this manual</u> . Collect post STANDING (Sitting) 10 min. Deliver to lab on ice. Centrifuge immediately and send frozen. Referred.
Catecholamines Urine	CATE	LAB	Urine	24 hour jug with preservative-20 mls HCL May be done on random	24 hour specimen 25 ml	Collect in bottle containing 20mL of 6N HCl. Patient should be off caffeine, nicotine and alcohol up to 24 hours and particularly off Aldomet for 5 days prior. Referred. Random specimen must be acidified immediately to pH <4.0
Catheter Tip Culture - Actual Line tip	CCATH	MIC	Line tip	Dry sterile container	5-7 cm	Aseptically cut off 5 to 7 cm.
Catheter Tip Culture - Swab	CMISC	MIC	Swab of site	C&S swab		

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
CBC (Complete Blood Count)	CBC	LAB	Blood	Lavender	4 mL	Includes testing for: - Haemoglobin - Red Cell Count - Hematocrit – MCV, MCH, MCHC - White Cell Count, Platelet count - 5-Cell Diff Screen.
CBC ACD	CBCACD	LAB	Blood	Yellow ACD	8.5	CBC performed on an ACD tube to prevent platelet clumps. CBC needs to be ordered and collected at the same time
Cyclic Citrullinated Peptide Antibodies (CCP)	CCP	LAB	Blood	Red	7 mL	Referred.
Celiac Profile	CELIAC			Yellow		See Transglutaminase
Ceruloplasmin	CERULO	LAB	Blood	Yellow	4 mL	Referred
Cervix Swab						See Gonococcus and/or Chlamydia trachomatis
CH 50	CH50	LAB	Blood	Yellow	6 mL	Freeze ASAP(no longer collected on ice).Referred
Chicken Pox						See Varicella Zoster.
Chlamydia psittaci	RS- referred special	LAB	BAL, Throat swab, Nasopharyngeal aspirate, Sputum, CSF not ideal but will test	Swabs, NPA (<1ml) In UTM BAL,NPA (>1ml), sputum, CSF in dry sterile	1 mL min	Special request only – Requires detailed history and risk factors
Chlamydophila pneumoniae PCR	CHLAMPNPCR	MIC	Nasopharyngeal & throat swabs,NPA, BAL, Lung, biopsy/tissue, CSF, Sputum	Swabs in UTM Fluids/tissue dry sterile		Test referred, done by nucleic acid amplification
Chlamydia trachomatis - Culture	CCHLAM for swabs, RS for tissue/fluids	MIC	Throat, pharyngeal, vaginal, urethral swabs,conjunctival scraping/swabs, transtracheal/NP aspirates. SANE order set	Swabs in UTM Tissue/fluids in dry sterile	1.0 ml min	Special request ONLY – Call Microbiology. Send to Microbiology Laboratory ASAP.
Chlamydia/GC DNA	All orders begin with CHLAM/GC-choose appropriate source	LAB	Most common are vaginal, endocervical or urine.	Alinity M multi-Collect Specimen Collection Kit for both female swab and urine. Or Sterile container for urine.	20-30 mL first void urine or swab	This is the most common request for Chlamydia. A single swab or urine may be sent for both CHLAM and GCDNA.
Chloramphenicol – Post	CHLPOST	LAB	Blood	Yellow	4mL	Collect 60 to 90 minutes after dose. Send frozen. Referred.
Chloramphenicol – Pre	CHLPRE	LAB	Blood	Yellow	4mL	Collect before next dose administered. Send frozen. Referred.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Chlordiazepoxide (Librium)	CHLORDIA	LAB	Blood	Red	7 mL	Draw before next dose is administered. Referred.
Chloride						See Electrolytes.
Chloride Urine	CLU or CLU24	LAB	Urine	Dry sterile container or 24 hour jug	Random or 24 hour specimen	
Cholesterol	CHOL	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Cholesterol Fractionation						See HDL Cholesterol
Cholinesterase Phenotyping	CHEPHE	LAB	Blood	Yellow	4 mL	Collect 24 hours after surgery. Referred.
Cholinesterase Total	CHETOT	LAB	Blood	Yellow	4 mL	Referred.
Chorionic-Gonadotropin						See Beta HCG
Chromium	CHROMIUM	LAB	Blood	Navy EDTA	7 mL	Deliver to lab ASAP. Referred.
Chromogranin A	CHROMOGRAN	LAB	Blood	Lavender	7mL	Referred.
Chromosome - Blood	CHRBLD	LAB	Blood	Green Must be Sodium Heparin, not Lithium Heparin	4 mL	Referred Collect Mon-Thurs ONLY
Chromosome -Blood to IWK						See Karyotype, Blood
Chromosome - Bone Marrow	CHRBM	LAB	Bone Marrow	Green Must be Sodium Heparin, not Lithium Heparin	4 ml	Referred
Citric Acid	CITU24	LAB	Urine	24 hour jug no preservative preferred but will accept 20mL 6N HCl	24 hour specimen	Referred
CJD Creutzfeldt-Jakob Disease	CJD	MIC	CSF *other samples ONLY following discussion with the microbiologist	Sterile	0.5 – 1mL	MUST follow Infection Control Guidelines for transporting and notifying the LAB prior to sending
CK (CPK) Creatine Kinase	CK	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
CKMB (Creatine Kinase Isoenzymes)						Test not available
Clobazam (Frisium)	CLOB	LAB	Blood	Red	7 mL	Draw before next dose is administered. Referred
Clomipramine (+ Desclo)	CLOM	LAB	Blood	Red	7 mL	No additive. Collect prior to administration of next dose and one week after dose started. Referred
Clonazepam (Rivotril)	CLON	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Clostridium difficile (Toxin test)	CDIFF	MIC	Stool	Dry sterile container	Walnut sized piece	Formed stool will not be processed .
Closure Time	CLOSETIME	LAB	Blood	Blue	2.7 mL	Replaces Bleeding Time Test
Clozapine	CLOZ	LAB	Blood	EDTA	4 mL	Referred
CMV (Cytomegalovirus) - Immune Status	CMVG	LAB	Blood	Yellow	6 mL	
CMV (Cytomegalovirus) - Recent Infection	CMV	LAB	Blood	Yellow	6 mL	Both CMV IgG and IgM are done
CMV PCR (Cytomegalovirus) - Qualitative	CMVPCRQUAL	MIC	Urine, respiratory specimens, throat	Dry sterile container or swab in UTM		Send to Microbiology ASAP. Referred.
CMV PCR – Quantitative test (CMV Viral Load)	CMVPCRQUAN	LAB	Blood	Lavender	2 X 4mL	Send to Microbiology ASAP Referred. NOTE: only one sample processed per every 7 days. Contact Microbiology if additional tests indicated
Coagulation Screen						See specific coagulation tests.
Cobalt	COBALT	LAB	BLOOD	Navy EDTA	7 ml	Referred
Cocaine	COCU	LAB	Urine	Dry Sterile container	25 mL	Usually ordered as part of Drug Screen or METHADU but can be ordered by itself.
Coccidioidomycosis - Culture	CFUN	MIC	Respiratory specimens, lesions, etc.	Dry sterile container		Inform Microbiology this is suspected.
Coccidioidomycosis - Serology	COCID	LAB	Blood	Red or Yellow	4 mL	Referred.
Codeine						See Drug Screen.
Codeine, Urine Quantitative	CODEINEU	LAB	Urine	Dry sterile container	20 ml random	Referred.
COGM1 Antibody	COGM1	LAB	Blood	Red	7 mL	Referred. Only stable for 3 days. Special request available by consultation only. Contact Central Receiving at 5318. (includes CoGMI IgM ,IgG, IgA, CoG1B)
Cold Agglutinins	CAG	BBK	Blood	Red	7 mL	
Cold Agglutinin Titre	CAGTT	BBK	Blood	Red	7 mL	
Complement Measurement						See CH50
Concentration en Hemoglobine reticulocytaire (Retic HGB Concentration) Reticulated Hemoglobin Ret-He/CHr	RET	LAB	Blood	Lavender	4 mL	Part of Retic panel

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Concentration Tests						Order specific gravity and osmolality at specific time intervals.
Congenital Hypothyroidism						See TSH screen
Copper	COPS	LAB	Blood	Navy EDTA	7 mL	Deliver to Lab ASAP. Referred
Copper Urine	COPU24	LAB	Urine	24 hour jug – no preservative	24 hour specimen	Referred. Avoid mineral supplements for 5 days prior to collection
Copper Oxidase						See Ceruloplasmin.
Coproporphyrin Qualitative, Quantitative						See Porphyrins.
Cord Blood Testing (Group and Coombs)	CGPDAT	BBK	Cord Blood	Red Recommended	7 mL	Label tube with patient's name and unique number
Cortisol AM	CORAM	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	Recommended time 0800hr but can be collected between 700 – 1000 h.
Cortisol PM	CORPM	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	Recommended time 1600 hr but can be collected between 1500 – 1700 h
Cortisol Random	CORRANDOM	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	
Cortisol (Urinary free)	CORTU24	LAB	Urine	24 hour jug	24 hour specimen	Referred.
Coumadin						See Warfarin.
COVID-19	COVID-19	LAB	Throat/Nose or NP swab	UTM		
Coxiella burnetii - Q-Fever serology	QFEVER	LAB	Blood	Red or Yellow	4 mL	IgG and IgM tested Referred
Coxsackie virus						See Enterovirus
Coxsackie virus - serology						Not available.
C-peptide	PEP	LAB	Blood	Yellow	6 mL	10 hour fast recommended.
Creatine Kinase (CK, CPK)						See CK
Creatinine Drainage Fluid	CREAD	LAB	Drainage Fluid	Red	7 ml	
Creatinine	CREA	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Creatinine and Urea are not performed together on outpatients. If both are ordered, creatinine only will be measured
Creatinine Urine	CREAU or CREAU12 or CREAU24	LAB	Urine	Screw top container or 24 hour jug	Random or 12 or 24 hour specimen	Can be done on sample with preservative as well.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Creatinine Clearance	CRCL	LAB	Blood and Urine	Yellow and 24 hour jug	6 mL and 24 hour specimen	Also order CREA. Specify height (cm), weight (kg). See Chemistry section for details.
Crossmatch	RCC	BBK	Blood	Lavender	7 mL	Please fill tube
Crossmatch, Neonatal	RCC	BBK	Blood	Red top microtainer or Lavender	1 mL	
Cryofibrinogen	CRYOFIB	LAB	Blood	Lavender at 37°C. Use preheated tubes.	2 x 7 mL	Indicate clinical history. Done Monday - Thursday only. Keep specimen at 37°C, call Haematology.
Cryoglobulins	CRYO	LAB	Blood	Red at 37°C	3 x 7 mL	Place a hot wet towel on the arm over the vein from which the blood is to be drawn. Collect blood in pre-warmed (37°C) tubes, label and place tubes in 37°C water. Blood must be kept at 37°C for 2 hours to clot before centrifugation. Do not collect on weekends or holidays. 12-14 hour fast required. Referred.
Cryptococcus - Blood culture	CBY	MIC	Blood	Aerobic blood culture bottle	8-10 mL	Blood culture will also identify other pathogens and yeasts.
Cryptococcus - Other culture	CFUN	MIC	CSF, urine, etc.	Dry sterile container	1-3 mL	
Cryptococcus Direct antigen	CRYPL	MIC	CSF, Blood	Dry sterile container; For blood Red or Yellow	1-3 mL	
Cryptosporidia	OP	MIC	Stool	Parasite container (SAF fixative)	To fill line. Mix well with fixative.	Included in routine O&P.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
CSF - Cerebrospinal Fluid	See individual test for mnemonic	LAB and/or MIC	CSF	Dry sterile container Tube 1: Chemistry, Immunology Tube 2: Microbiology Tube 3: Haematology Tube 4: Cytology If only 3 tubes collected # 3 is shared with Cytology going to Haem first.		If for any reason the physician alters the sequence of labelling specimens, the requisition should have documentation that the protocol has been altered. Must be delivered to Laboratory Central Receiving within 20 minutes of collection.
CSF - Amino Acids	AACSF	LAB	CSF	Dry sterile container – Tube #2		Referred.
CSF - Gene Rearrangement	GERECFS	LAB	CSF	Dry sterile container		See CSF for instructions. Include clinical history. Referred
CSF - Glucose	GLUCSF	LAB	CSF	Dry sterile container – Tube # 1		See CSF for instructions
CSF - LDH	LDHCSF	LAB	CSF	Dry sterile container – Tube # 1		See CSF for instructions.
CSF - Oligoclonal Banding	OLIGO	LAB	CSF + Blood	Sterile tube-CSF Yellow- Blood	5 mL 4 mL	See CSF for instructions. Referred
CSF - Total Protein	TPCSF	LAB	CSF	Dry sterile container – Tube # 1		See CSF for instructions
CSF - Cell Count and Differential	CCCSF	LAB	CSF	Dry sterile container Tube #3		See CSF for instructions
CSF - Bacterial culture	CCSF	MIC	CSF	Dry sterile container Tube # 2	1-2 mL	In addition fungal culture, Cryptococcal antigen or AFB/TB culture may be required.
CSF - Fungal or yeast	CFUN	MIC	CSF	Dry sterile container Tube # 2	1-2 mL	
CSF - Cryptococcal-direct antigen	CRYPL	MIC	CSF (can also be done on blood)	Dry sterile container Tube # 2	1-2 mL	
CSF - Cytology		PATH	CSF	Dry sterile container Tube #4		See CSF for instructions
CSF - Immunoglobulins, quantitative(IgG, IgM, IgA)	IGCSF	LAB	CSF	Dry sterile container Tube #1		See Cerebrospinal fluid for instructions.
CSF - Syphilis	CSFVDRL	MIC	CSF	Dry sterile container	1-2 mL	Referred

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CSF- PCR for infectious agents						See individual Viral agents for ordering. Each agent must be ordered separately.
C-Telopeptide, Blood	TELOPTIDEC	LAB	Blood	Lavender	7 mL	Referred. 8 hr. fast recommended. MUST be morning collection.
CV2 Autoantibody	PARANEO	LAB	Blood	Red/Yellow	7mL	Referred. Special request available by consultation only. Contact Central Receiving at 5318.
Cyanide						See Thiocyanate
Cycloserine	CYCLOSER	LAB	Blood	Red	7 mL	Send to lab asap. Referred
Cyclosporin	CYCL	LAB	Blood	Lavender	4 mL	Collect prior to dose. Referred
Cyclosporin 2 hr post	CYCL2	LAB	Blood	Lavender	4 mL	Collect 2 hours post dose. Referred
Cystinuria Monitoring (formerly called Cystine,Urine Quantitative)	CYSUQ	LAB	Urine	Dry sterile container	5 mL random urine	For monitoring known cystinuria patients. For diagnosis and classification of cystinuria, order AAUQ. Referred
Cytomegalovirus						See CMV.
D Dimer Test	DD	LAB	Blood	Blue	2.7 mL	quantitative method suitable for DVT or PE exclusion
Dabigatran (Pradax level)	DAB	LAB	Blood	Blue	2.7 mL	Referred. List anticoagulants and dosage
Dantrolene (Dantrium)	DANT	LAB	Blood	Red-Protect from light	7 mL	Referred
Dehydroepiandrosterone (DHEAS)	DHEAS	LAB	Blood	Yellow	4 mL	
Delta Aminolevulinic Acid (D-ALA)	ALAU24	LAB	Urine	Brown 24 hour jug with preservative	24 hour specimen	Protect from light in brown bottle. Referred
11-Deoxycortisol	11DEOXY	LAB	Blood	Yellow	4 mL	Referred.
Depakene						See Valproic Acid.
Dermatophytes	CFUN	MIC	Skin scrapings, nail clippings, hair (root ends)	Small petri dish or dry sterile container		Direct microscopic examination done if sufficient specimen.
Desipramine Imipramine (Tofranil)	IMIPR	LAB	Blood	Red	7 mL	Collect prior to dose and then again one week after. Dose information required. Referred.
Diarrhea, antibiotic associated.	CDIFF	MIC	Stool	Dry sterile container	Walnut sized piece	Looking for Clostridium difficile toxin
Diazepam (Valium)	DIA	LAB	Blood	Red 7 ml	4 mL	Draw before next dose is administered. Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Differential-manual (microscopic White Cell Count)	MDIFF	LAB	Blood	Lavender	4 mL	Also request CBC. Automated differential included with CBC
Digoxin	DIG	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect specimen prior to next dose or at least 8 hours after last dose. Decreased sensitivity to Digoxin in hyperkalemia.
Dilantin (Phenytoin)	PHY	LAB	Blood	Plasma or Serum in Gel Separator tube	4 mL	Collect prior to dose.
Diphtheria culture	CTS	MIC	Usually throat	C&S swab		Discuss with Clinical Microbiologist prior to submission of specimens.
Diphtheria Serology	DIPHTH	LAB	Blood	Red or Yellow	3 – 4 mL	Test is to measure immune response. Referred
2,3-Diphosphoglycerate (2,3DPG)						Referred. Test no longer available at any known testing site.
Direct Antiglobulin Test						See Direct Coomb's Test.
Direct Coomb's Test	DAT	BBK	Blood	Lavender	7 mL	
Disopyramide	NORP	LAB	Blood	Green	3 mL	Collect prior to dose. Referred.
DNA	DNA	LAB	Blood	Red or yellow	7 mL	.
DNA Double Stranded (ds-DNA) Antibody	DSDNAAB			Red		See DNA
Donath Landsteiner Test	DONL	BBK	Blood	Red	2 x 7 mL	Schedule with Transfusion Medicine Tubes must be maintained at 37 C. Deliver specimens to Transfusion Medicine immediately after collection.
Doriden						See Glutethimide.
Double Maternal Prenatal Serum Screen						See "Maternal Prenatal Serum Screen-2 nd Trimester"
Doxepin	DOX	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred. Includes Amphetamines, Barbiturates, Benzodiazepines, PCP, THC, Opiates and Cocaine.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Drug Screen (includes Amphetamines, Benzodiazepine, Cannabinoids, Oxycodone, Opiates, Cocaine)	DRUGU	LAB	Urine	Dry sterile container	25 mL urine	Available only on urine. For methadone clinic drug panel order METHADU
Drug Confirmatory Testing	DRUGCONF	LAB	Urine	Dry sterile container	25 mL urine	Specify BROAD or Benzo testing
D-Xylose Tolerance	DXYLT	LAB	Blood (fasting + 1 hr. post xylose dose)	SST	6 mL	Referred.
Ear fluid, sinus swabs, antral washings	CENT	MIC	Ear fluid, antral washings, glands, etc.	C&S swab		See also Sinus culture.
Ear Swab - Routine bacteria	CEAR	MIC	Ear swab	C&S swab		
Ear Swab - Fungus	CFUN	MIC	Ear swab	C&S swab		
Ebola PCR	EBOLA	LAB	EDTA whole blood	EDTA	7 mL	Special PPE needed, **Call Microbiology
EBV Panel	EBVM EBVPANEL	LAB	Blood	Red or Yellow	4 mL	Includes IgG & IgM In-house
Echinococcosis - Direct examination	ZOP	MIC	Aspirate	Dry sterile container	1-10 mL	Bring to lab ASAP. Consult with Microbiologist before sending.
Echinococcosis - Serology (Hydatia Disease)	ECHINSER	LAB	Blood	Yellow	4 mL	Referred.
Echovirus - Culture						See Enterovirus Culture
Echovirus - serology						Not available.
Ehrlichia						No longer available. Discuss with Micro – will send special request for Anaplasma serology
Elastase-1 Feces	ELAST1	LAB	Stool	Dry sterile container	5 g	Referred
Electrolyte Stool						No longer available. Order Sodium, stool (NAST) or Potassium, Stool (KST)
Electrolytes (Na, K, Cl) - 24 hour specimen	LYTU24	LAB	Urine	24 hour jug	24 hour specimen	Values vary greatly with intake.
Electrolytes (Na, K, Cl)	LYT3	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Electrolytes (Na, K, Cl) - Random	LYTU	LAB	Urine	Dry sterile container	Random	Values vary greatly with intake.
Electrophoresis						See Protein Electrophoresis.
ENA	ENA	LAB	Blood	Yellow	6 mL	Referred
Endometrial swab or tissue culture	CGEN	MIC	Tissue or swab	C&S swab or dry sterile container		

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Endomysial Antibody						Not available. Order Celiac.
Endotracheal suction (ETT) - Routine Culture	CRESP	MIC	Suctioning from ETT tube (clean area before collecting)	Dry sterile container		
Endotracheal suction (ETT) - Viral PCR	RESPVPCR	MIC	Suctioning from ETT tube (clean area before collecting)	Dry sterile container		Referred.
Enterobiasis (pinworms)	PINWORM	MIC	Pinworm paddle applied to perianal region	Pinworm paddle		Pinworm paddles are available from Microbiology on request.
Enterovirus PCR (if positive, will be typed for specific, ie Coxsackie, Echo)	RESPVPCR or EVPCR See comments	MIC	Pleural/pericardial fluids, CSF, stool, throat ,nasal, rectal swabs, vesicle fluid	Dry sterile container UTM		Included in RESPVPCR panel. For other specimens order Enterovirus PCR (EVPCR). Referred.
Enterovirus - serology						Not available.
Eosinophils						Included with Diff result.
Eosinophils, miscellaneous	EOMISC	LAB				Enter the source in the comments
Eosinophils, nasal	EONAS	LAB	Nasal swab	C&S swab		
Eosinophils, stool	EOSTOOL	LAB	Stool	Dry Urine Container		
Episiotomy Culture	CGEN	MIC	Swab of incision	C&S swab		
Epstein-Barr Virus PCR(fluids)	EBVPCR	MIC	Usually CSF	Sterile	1-2 mL	Referred same day as collection
Epstein-Barr Virus PCR(blood)	EBVPCRQUAN	LAB	Blood	Lavender	4 ml	
Erythropoietin	ERY	LAB	Blood	Yellow	6 mL	Referred Morning specimen preferred. Centrifuge and freeze serum as soon as possible.
Escherichia coli 0157 culture	CS	MIC	Stool	Carey Blair transport medium	Walnut sized piece	Included in routine stool culture.
ESR	ESR	LAB	Blood	lavender	4 mL	ESR and CRP not performed together. If both ordered, CRP only will be measured
Estradiol, 17 Beta	EST	LAB	Blood	Yellow	6 mL	
Estrone	ESTRONE	LAB	Blood	Yellow	4 mL	Referred.
Ethosuximide (Zarontin)	ETHO	LAB	Blood	Red	7 mL	Collect prior to next dose. Referred.
Ethyl Alcohol						See Alcohol, Ethyl.
Eye - routine Culture	CEYE	MIC	Including aqueous humor, corneal scrapings/swab, eye lid, vitreous humor conjunctiva	C&S swab		For viruses see below. Note if GC is suspected.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Eye - viral PCR	CVEYE	MIC	Including aqueous humor, corneal scrapings/swab, eye lid, vitreous humor conjunctiva	UTM		Includes PCR for Adeno, Entero and Herpes viruses. Referred.
Extractable Nuclear Antibodies						See ENA
Factor II Assay	FII	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor II Mutation	FVLPTMUT	LAB	Blood	Lavender	1 x 4 mL	Referred. Also referred to as Prothrombin Mutation 20210AG (includes Factor V Leiden result)
Factor Inhibitor	FINH	LAB	Blood	Blue	2.7 mL	Indicate if any replacement therapy or bleeding. Factor Assay must be ordered with Factor Inhibitor
Factor IX Assay	FIX	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor V Assay	FV	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor V Leiden						See Activated Protein C Resistance SCREEN
Factor VII Assay	FVII	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor VIII Assay	FVIII	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor VIII Related Antigen						See Von Willebrand's Panel
Factor X Assay	FX	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Heparin Anti Xa	HEPXA	LAB	Blood	Blue	2.7 mL	Brand name of Heparin must be listed. Also referred to as Anti Xa Assay or Factor Xa assay
Factor XI Assay	FXI	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor XII Assay	FXII	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Factor XIII	FXIII	LAB	Blood	Blue	2.7 mL	Indicate if bleeding or thrombosis.
Farmer's lung						See Aspergillosis.
Fat, qualitative	FATST	LAB	Stool	Dry sterile container	Random 5 grams	
Fat, Urine, qualitative	FATU	LAB	Urine	Dry sterile container	25 mL	Referred
Fatty Acids, Free	FATACF	LAB	Blood	Yellow	6 mL	12 hour fast required. Referred
Fecal Fat, 72 hour	FF72	LAB	Stool	Obtain pre-weighed containers from lab	72 hour stool	Follow special 5 day diet. See Chemistry section. Referred.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Ferritin	FER	LAB	Blood	Plasma or Serum in Gel Separator tube	7 mL	Not permitted within 4 weeks of last measurement
Fetal Blood count	FETALCBC	LAB	Blood	Lavender	0.50 mL if collected into microtainer minimum 1.0 ml if collected into vacutainer	Indicate gestational age.
Fetal Fibronectin	FFN	LAB	swab			Follow directions from Adeza Biomedical Specimen Collection Kit.
Fetal Haemoglobin	FETALHGB	LAB	Blood	Lavender	4 mL	State clinical diagnosis. Referred.
Fetal Lung Maturity						No longer available – see Lamellar Body Count
Fibrinogen	FIB	LAB	Blood	Blue	2.7 mL	List thrombolytics and anticoagulants. If on thrombolytic therapy send specimen on ice.
F.I.S.H. (Fluorescent In Situ Hybridization) for CLL	FISHCLL	LAB	Blood or Bone Marrow	Green: MUST be Sodium Heparin, not Lithium Heparin	7 mL	Available Mon – Thurs only Referred to U of T
F.I.S.H. (Fluorescent In Situ Hybridization)	FISH-UT	LAB	Blood or Bone Marrow	Green- SODIUM Heparin	7.0 mL	Available Mon – Thurs only Referred to U of T.
F.I.S.H. (Fluorescent In Situ Hybridization) for Multiple Myeloma -Bone Marrow	FISHMM	LAB	Bone Marrow ONLY	Green: MUST be Sodium Heparin, not Lithium Heparin	4 mL	Referred. Available Mon – Thurs only
F.I.S.H. (Fluorescent In Situ Hybridization)	FISHPBIWK	LAB	Cord or Peripheral Blood	Green MUST be Sodium Heparin, not Lithium Heparin	7 mL 2 mL Minimum	Referred. Available Mon – Thurs only. Send completed IWK General Cytogenetics Requisition with specimen.
Fifth disease						See Parvovirus
Fitzgerald Factor	FITZ	LAB	Blood	Blue	2.7 mL	List thrombolytics and anticoagulants. Indicate if thrombosis or bleeding. Referred. aka High molecular weight Kininogen
FK 506	FK506	LAB	Blood	Lavender	4 mL	Referred For Paeds patient – 500 µL EDTA specimen.
Fletcher Factor	FLET	LAB	Blood	Blue	2.7mL	List thrombolytics and anticoagulants. Indicate if thrombosis or bleeding. Referred. aka Prekalikrein

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
FLT3 Mutation	FLT3	N/A	Blood or Bone Marrow	Lavender Lavender	3 x 7 mL 1-2 mL BM	See gene rearrangement.
Flucytosine (5FC) - Trough	FLUCYT	LAB	Blood	Yellow	4 mL	Collect prior to next dose. Referred.
Flucytosine (5FC) Peak	FLUCYP	LAB	Blood	Yellow	4 mL	Collect 1 – 2 hrs after oral dose or 30 min after IV dose. Referred.
Fluoride	FLU	LAB	Blood	NAVYEDTA	6 mL	Referred.
Fluoxetine (Prozac)	FLUOX	LAB	Blood	Red	6 mL	Collect prior to next dose. Referred.
Folic Acid (Folate)	FOL	LAB	Blood	Yellow	7 mL	8 hr. Fasting sample is preferred. Not permitted within 1 year of last measurement
Folic Acid, RBC	FOLR	LAB	Blood	Lavender	4 mL	No longer available. Contact laboratory if required
Follicle Stimulating Hormone (FSH)	FSH	LAB	Blood	Yellow	6 ml	
Fragile X	FRAX	LAB	Blood	Lavender	7 mL	Available Mon – Thursday noon only. Specimen MUST be in lab by Noon to meet courier deadline. MUST send completed history requisition and consent with specimen. Referred.
Francisella tularaemia						See Tularemia
Free PSA	PSAFREE	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	Only done if PSA falls within set parameters. Not permitted within 12 weeks of last measurement or on men >75 years Referred.
Free T3	FT3	LAB	Blood	Plasma or Serum in Gel Separator tube	4 mL	Performed only based on reflex rules
Free T4	FT4	LAB	Blood	Plasma or Serum in Gel Separator tube	4 mL	See Thyroid screening Performed only based on reflex rules
Free T4 by Dialysis, Serum	FREET4DIAL	N/A	Blood	Red	7mL	Referred. Only available upon consultation with Dr. L- J. Cartier, Biochemist local 860-2242.
Free Testosterone	TESTF	LAB				No longer available. Order TESTBIO instead.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Friedrich's Ataxia	FRIEDATAX	LAB	Blood	Lavender	2 x 7 mL	Referred. Special request available by consultation only. Contact Central Receiving at 5318. 48 hr. shipping limit.
Frisium						See Clobazam.
Fructosamine	FRUCTO	LAB	Blood	Red/Yellow	7mL	Referred.
Fungal Culture - Blood? YEAST	CBY	MIC	Blood	Aerobic and anaerobic bottles	8-10 mL per bottle	Bring to lab ASAP Includes routine culture
Fungal Culture - Throat	TY	MIC	Throat swab	Swab		
Fungal Culture - Gum, mouth, tongue	GS	MIC	Gum, mouth or tongue swab	Swab		
Fungal Culture - Stool	CSY	MIC	Stool	Dry sterile container	Walnut size	Includes routine culture
Fungal Culture - Urine	CUY	MIC	Urine	Dry sterile container	10-20 mL	Includes routine culture
G6PD	G6PD	LAB	Blood	Lavender	4 mL	Referred. Minimum volume: 0.5 mL.
Galactomannan						See Aspergillus – Invasive
Galop Autoantibody	GALOP	LAB	Blood	Red	1 x 7 mL	Referred. Contact Central Receiving at 5318.
Gamma Glutamyl Transferase (GGT, GGTP)	GGT	LAB	Blood	Plasma or Serum in Gel Separator tube	4 mL	Not permitted for routine orders
Ganciclovir - Trough (Cytovene)	GANT	LAB	Blood	Red	7 mL	Collect before next dose. Referred.
Ganciclovir - Peak (Cytovene)	GANP	LAB	Blood	Red	7 mL	Collect within 30 minutes after infusion. Referred.
Ganglioside Antibody GM1	GANGLIOSIDE	LAB	Blood	Red. Avoid gel-separator tubes.	7mL	Referred.
Gardnerella vaginalis						See Bacterial vaginosis.
Gastrin	GAS	LAB	Blood	Yellow	6 ml	14- hr. Fasting or prior to next feeding in infants Referred.
GC culture	CGC	MIC	Cervix, urethral, rectal, throat, conjunctiva, exudates, etc.	C&S swab - consider requesting PCR(below) if transport time >24 hours		Vaginal swabs are ONLY acceptable in prepubertal females (≤ 13 years).
GC - PCR testing						Both GC and Chlamydia testing are done on the one sample. See Chlamydia/GC DNA
Gene Rearrangement	GEREFLUID	LAB	Body Fluid	Lavender	4 mL	Indicate which markers requested in the comments box.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Gene Rearrangement – BCR Mutation	GEREPBBCRMUT	LAB	Blood	Lavender	2 x 4 mL	Referred. Available Mon to Thurs.
Gene Rearrangement	GEREBM	LAB	Bone Marrow	Lavender	4 mL	Referred. Indicate which markers requested in the comments box.
Gene Rearrangement	GEREFN	LAB	Fine Needle Biopsy	Dry sterile container		Indicate which markers requested in the comments box.
Gene Rearrangement	GERETISSUE	LAB	Tissue (Lymph Node)	Dry sterile container		Indicate which markers requested in the comments box.
Gene Rearrangement	GEREPB	LAB	Blood	Lavender	7 mL	Indicate which markers requested in the comments box. Order CBC. Referred
Gene Rearrangement (CSF)	GERECSF	LAB	CSF	Dry sterile container		Indicate which marker requested in comment box.
Genetic Analysis	GENANA	LAB	Blood	Lavender	2 x 7 mL	Referred
Genital swab – routine bacteria	CGEN	MIC	Swab, tissue or pus from: Bartholin, Episiotomy, endometrium, IUD, labia, lochia, penis, placenta, scrotum, seminal fluid, vulva, prepubertal vaginal, post-op vag vault, urethral	C&S swab or dry sterile for tissue and IUD		Includes Gram and culture for pathogenic bacteria. Note: Diagnosis especially important for culture interpretation.
Gentamicin - Trough	GENT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect trough specimen within 30 minutes of administering next dose
Gentamicin - Peak	GENP	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect post specimen 30 minutes after IV infusion or 1 hour after IM injection.
Gentamicin – Once Daily Dose	GENODD	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect 6 hours prior to next dose
GGT (Gamma Glutamyl Transferase)	GGT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Not permitted on routine orders
Giardia - Stool	OP	MIC	Stool	Parasite container (SAF fixative)	fill to line and mix well with fixative	Included in the routine O&P screen.
Giardia - Duodenal aspirate	OP	MIC	Duodenal aspirate	Dry sterile container		Bring to lab ASAP.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Gleevec Blood Monitoring	GLEEV	LAB	Blood	SODIUM Heparin (green top) tube	4 ml	Referred. Collect blood 24 hrs. after last GLEEVEC dose. ** Completed GLEEVEC Blood Monitoring history sheet must accompany specimen. Obtain sheet from Haematology or Central Receiving Dispatch.
Globulin						Order total protein and albumin or Protein Electrophoresis.
Glucagon	GLUCA	LAB	Blood	ICELAV7	7 mL	Fasting required. Once drawn, deliver to lab on ice ASAP. Referred
Glucose Tolerance Test - 2 hour GTT	GTT2	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect fasting and 2hr specimen following ingestion of 75 grams of glucose. Obtain glucose drink from Stores. 8 Hour fasting is required. Children require adjusted glucose load – contact laboratory. See directions under chemistry section.
Glucose Tolerance Test - 3 hour GGT						No longer available
Glucose Tolerance Test – 5hr GTT						No longer available
Glucose - 2 Hour PC						No longer available
Glucose - 50 gram	GLU50G	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect 1 hr. after 50 gram drink, non-fasting
Glucose - 75 gram or Pre-diabetic screen	GLU75G	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect 2 hrs. after 75 gram drink, non-fasting Children require adjusted glucose load – contact laboratory. See directions under chemistry section
Glucose - Fasting	GLUF	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	8 Hour fasting is required.
Glucose - Random	GLU	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Glycosylated Hemoglobin						See Hemoglobin A1C

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Gonococcus - culture	CGC	MIC	Cervix, urethral, rectal, throat, conjunctiva, exudates, etc.	C&S swab - consider requesting PCR test(below) if transport time >24 hours		Vaginal swabs are ONLY acceptable in prepubertal females ($\leq$ 13 years).
Gonococcus - PCR(DNA)						Both GC and Chlamydia testing are done on the one sample. See Chlamydia /GC DNA
Gram Smear	GS	MIC	Various	Smear made on glass slide or C&S swab		Generally not required to order. Automatically included with most routine cultures.
Group B Streptococcus Screen	CGBS	MIC	Vaginal/rectal swab	C&S swab		Screening done in pregnancy only
Growth Hormone	HGH	LAB	Blood	Yellow	6 mL	Referred Fasting required and 30 minute rest period prior to collection.
Gum swab - routinely look for yeast and Vincent's organisms	GS	MIC	Swab or scrapings	C&S swab		Gram smear only done.
Haloperidol (Haldol)	HAL	LAB	Blood	Red	7 mL	Collect before next dose is administered. Deliver to lab ASAP. Referred
Hand, foot and mouth disease						See Coxsackie virus infection.
Hanta Virus Serology	HANTAS	LAB	Blood	Red or Yellow	4 mL	Clinical history required. Referred.
Haptoglobin	HAPT	LAB	Blood	Yellow	4 mL	Referred
HCG Beta Subunit (BHCG)						See Beta HCG.
HDL Cholesterol	HDL	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Heavy Metals						See individual metals.
Heinz Bodies	HEINZ	LAB	Blood	Lavender	4 mL	Referred
Helicobacter pylori - antigen	HPYLAG	LAB	Stool	Dry sterile container	Walnut size	Transport/store at RT
Helicobacter pylori - culture						Not routinely available –call Microbiology
Hematocrit						Request CBC.
Hemochromatosis Gene Test	HGENE	LAB	Blood	Lavender	4 mL	Referred. MUST send completed "Saint John Molecular Diagnostics requisition with specimen. Obtain req. from Central Receiving (5318).
Hemoglobin						Request CBC.
Hemoglobin A1C						See A1C

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Hemoglobin Electrophoresis	HBELECTRO	LAB	Blood	Lavender	2 x 4 mL	Also order CBC, Retic Count. and Ferritin. Send ferritin to Chemistry. Send one tube to Haematology for CBC, Retic and stained blood smear. Refrigerate the second tube. Send REFRIGERATED lavender tube, stained smear and Haematology and Chemistry reports on Mondays. Specimens are stable at refrigerator temperature until dispatch. Referred.
Hemoglobin S Quantification	HGBSQUANT	LAB	Blood	Lavender	4 mL	Referred. Order 'Stat' HgB S Quantification for transfusion purposes. Indicate to fax report to Central Receiving lab at 1-506-857-5325.
Hemophilia A Mutation	HEMOMUTA	LAB	Blood	Lavender	7 mL	Referred. "National Program for Hemophilia Mutation Testing" requisition must accompany specimen. Obtain req from Hemophiliac Clinic or Lab Dispatch (local 5318)
Hemophilia B Mutation	HEMOMUTB	LAB	Blood	Lavender	7 mL	Referred. "National Program for Hemophilia Mutation Testing" requisition must accompany specimen. Obtain req. from Hemophiliac Clinic or Lab Dispatch (local 5318)
Hemosiderin	HEMOU	LAB	Urine	Screw top container	15 mL	Clinical history required.
Heparin Anti Xa						See Factor Xa assay
Heparin Co-factor II	COFAC	LAB	Blood	Blue	2.7 mL	Referred
Heparin induced thrombocytopenic antibody	HIT	LAB	Blood	Red AND Blue	2x 7 mL Red 1x 2.7 mL Blue -FULL tube	Must be in lab within 1 hour of collection. Referred - Serotonin Release Assay only sent if screening test positive.
Heparin, Standard	STDHEP	LAB	Blood	Blue	2.7mL	Referred.
Hepatitis A IgG - immune status	HAVG	LAB	Blood	Red or Yellow	2 –3 mL	Please indicate clinical information with request.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Hepatitis A - Acute Infection	HAV	LAB	Blood	Red or Yellow	2 – 3 mL	Please indicate clinical information with request Includes IgG and IgM
Hepatitis B - Antibody (Surface) immune status	HBAB	LAB	Blood	Red or Yellow	2 –3 mL	Please include clinical information with request.
Hepatitis B - Antigen (Surface)	HBAG	LAB	Blood	Red or Yellow	3 – 4 mL	Please include clinical information with request.
Hepatitis B - Core total	HBC	LAB	Blood	Red or Yellow	2 –3 mL	Please include clinical information with request.
Hepatitis B - Core IgM	HBCM	LAB	Blood	Red or Yellow	6 mL	Special request – sent if HBC reactive
Hepatitis B - Be Antigen (special request)	HBEAG	LAB	Blood	Red or Yellow	6 mL	Special request only. Follows initial testing.
Hepatitis C - Antibody	HCV	LAB	Blood	Red or Yellow	6 mL	Please include clinical information with request (i.e. risk factors). Order HCVLOAD for patients <18 months old.
Hepatitis C Viral Load	HCVLOAD	LAB	Blood	Yellow	4 mL x2	Referred. Also use for patients <18 months old instead of HCV Antibody screen.
Hepatitis C Genotyping	HCVGENO	LAB	Blood	Yellow	6 mL x2	Testing performed only once in a lifetime unless reinfection is suspected. Referred
Hepatitis D (Delta) (special request only)	HDVAB	LAB	Blood	Red or Yellow	6 mL	Special request only. Follows initial testing.
Hepatitis E Antibody (special request only)	HEV	LAB	Blood	Red or Yellow	4 mL	Referred
Hereditary Neuropathy (Pressure Palsies for CMT1A disease)	HNPP		Blood	Pale Yellow - ACD solution A	7 mL x 3	Referred. Special request available by consultation only. Contact Central Receiving at 5318.
Herpes simplex virus (HSV)- Serology	HERPES	LAB	Blood	Red or Yellow	2-4 mL	IgG ONLY IgM discontinued
Herpes virus PCR	HSVZVPCR	LAB	Vesicle fluid, skin lesions, conjunctival swab or scrapings, mouth, CSF, cervical, vaginal, urethral	UTM or dry sterile container for fluids		Also includes VZV PCR
Hexosaminidase						See Arylsulfatase
Hexose-1-Phosphate Uridyl Transferase						See Galactosemia Screening
High Molecular Weight Kininogen						Aka see Fitzgerald Factor

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Histamine, Plasma	HISTAM	LAB	Blood	Lavender	7 mL	Collect in pre-chilled EDTA tube. Deliver to lab on ice ASAP. Avoid hemolysis. Referred.
Histoplasmosis - Culture	CFUN	MIC	Blood, respiratory specimens, biopsy, etc.	Dry sterile container or aerobic blood culture bottle		Indicate Histoplasmosis suspected
Histoplasmosis - Serology	HISTOS	LAB	Blood	Red or Yellow	6 mL	Referred.
Histoplasma capsulatum Antigen Assay	HISTOS	MIC	Serum/plasma, CSF, Urine, BAL, or other body fluids	Red, SST, dry sterile	1.2mL serum 0.8mL CSF 0.5mL other	Referred Mira Vista Diagnostics
HIV antigen/antibody	HIV	LAB	Blood	Red or Yellow	6 mL	If screen test positive specimen is automatically referred for confirmation. Order HIV PCR for patients <18 months old.
HIV PCR (Call Microbiology)	HIVPCR	LAB	Blood	Lavender x 2	4 mL x 2	Special request. Also use for patients <18 months old instead of HIV. Collect Mon-Wed only. Must be received in Microbiology before 12pm. Referred.
HIV Viral Load	HIVVL	LAB	Blood	Lavender x 2	4 mL x 2	Performed on known HIV positive patients ONLY Referred
HIV Phenotyping	HIVGENO	LAB	Blood	Lavender x2	5 mL x2	Drug resistance testing
HIV Genotyping HLA-B 5701	HIVHLA	Lab	Blood	Lavender x1	Do not spin	Abacavir Hypersensitivity
HLA B27	HLAB	BBK	Blood	Lavender x 1 K3EDTA	1 X 4 mL	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Should be delivered by 1330 hours. Referred. If outside Moncton zone, ship directly to Saint John Regional Hospital

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
HLAB 27 confirm testing	HLABCONFIRM	BBK	Blood	Lavender x 2	2 X 4ML	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)
HLA Tissue Typing Referred. If outside Moncton zone, ship directly to Halifax	HLATYP	BBK	Blood	Lavender x 2	2 x 4 mL	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Should be delivered by 1330 hours. Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)
HLA Typing by DNA Referred. If outside Moncton zone, ship directly to Halifax	HLAD	BBK	Blood	Lavender x 2	2 x 4 mL	Book with Transfusion Medicine. Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
HLA DQB1-0201 Referred. If outside Moncton zone, ship directly to Halifax	HLADQ	BBK	Blood	Lavender x 2	2 x 4 mL	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Should be delivered by 1330 hours Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)
HLA DQ2 DQ8 Referred. If outside Moncton zone, ship directly to Halifax	HLADQ2DQ8	BBK	Blood	Lavender x 2	2 x 4 mL	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Should be delivered by 1330 hours Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)
HLA DR2 Referred. If outside Moncton zone, ship directly to Halifax	HLADR	BBK	Blood	Lavender x 2	2 x 4 mL	Not the day of or the day before a Statutory holiday. Schedule with Transfusion Medicine. Monday, Tuesday and Wednesday AM. Should be delivered by 1330 hours . Test request for tissue typing requisition from Nova Scotia Health authority must be completed and sent to Blood Bank with specimen. (Reqs. available in Blood Bank)

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Hold tube -Amniotic Fluid	AMNIOHOLD	LAB	Amniotic Fluid	Sterile container	20 mL	Referred. The physician will collect approx. 20 ml amniotic fluid in 2 containers to hold, frozen, in case additional testing required in future.
Homocysteine	HOMOP	LAB	Blood	Lavender on ice	7 mL	Fasting specimen. preferred(not mandatory). Deliver to Lab on ice immediately after collection.
Homogentisic Acid (Qualitative)	HOMOGU	LAB	Random urine	Screw top container.		Referred.
Homovanillic Acid	HVA	LAB	Urine	24 hour jug with preservative	24 hour specimen	Collect over 15 mL 6N HCl. Referred
Homovanillic Acid, Random Urine	HVAURAND OM	LAB	Urine	Screw top container	10 mL	Referred. Adjust to pH 1 – 5
Hookworm disease	OP	MIC				See ova and parasites.
Hu Antibody						See Paraneoplastic Antibody Panel
Human Chorionic Gonadotropin (HCG)						See Beta HCG.
Human Papilloma Virus (HPV) PCR/Genotyping	RS	MIC	Genital, anal, oral swabs, tissue	Swabs in UTM, tissue dry sterile		Sent to NML, Winnipeg
Human Placental Lactogen (HPL)						Test not available.
Human T-Cell Lymphotropic Viruses (HTLV I/II)	HTLV	LAB	Blood	Red or Yellow	3 – 4 mL	Referred
HVA Random Urine						See Homovanillic Acid, Random
Hydroxyproline						Test not available
Hypersensitivity Pneumonitis panel						See Aspergillus Precipitans
Hypoglycemic Agent Screen(Sulfonylurea Hypoglycemics)	HYPOGLY	LAB	Blood	Yellow	4 mL	Referred
IFA	IFA	LAB	Blood	Red	7 mL	Includes Anti-Smooth Muscle Ab, Anti-Mitochondrial Ab, Anti Parietal Cell Ab, Anti Reticulin Ab. Referred
IGE	IGE	LAB	Blood	Yellow	4 mL	
IgG (subclasses of)	SUBIGG	LAB	Blood	Red	7mL	Referred
IGRA- Interferon Gamma Release Assay	IGRA Mon-Thurs only	LAB	Blood collected in special tubes supplied by SJRH	Grey, green, yellow, purple	1 ml min, tubes are a slow draw	Latent TB infection

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
IGHV Hypermutation status	IGHVPB for PB IGHVBM for BM	LAB	Blood Bone Marrow	Lavender	4 mL 4mL	MUST be rec'd in lab Mon,Tues,Wed,Thurs before NOON. Authorization form required. Referred
Imipramine (Tofranil)	IMIPR	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred
Immunofixation -includes IgQuant	IFE	LAB	Blood	Yellow	4 mL	For the detection of monoclonal peaks
Immunoglobulin D	IGD	LAB	Blood	Red	7 mL	Referred.
Immunoglobulins, quantitative (IgG, IgM, IgA)	IGQUANT	LAB	Blood	Yellow	4 mL	No fasting required.
Immunoglobulins, quantitative (IgG, IgM, IgA,)	IGUQUANT	LAB	Urine			Test no longer available
Immunopheno Typing - Immunodeficiency (T cell subsets)	FICP	LAB	Blood	Lavender	4 mL	MUST be in lab by 12 noon MON-FRI. Fill out yellow requisition. Phone 860-2163.
Immunopheno Typing- TBNK	TBNK	LAB	Blood	Lavender	4 mL	MUST be in lab by 12 noon MON-FRI. Fill out yellow requisition. Phone 860-2163.
Immunopheno Typing - Bone Marrow (Leukemia or Lymphoma)	FBMLLP	LAB	Bone Marrow plus blood	Bone marrow plus Lavender	1 x 4 mL	Whole blood (lavender) must be obtained early A.M. All specimens must be in lab by 12 noon MON-FRI. Order CBC also.
Immunopheno Typing - Blood (Leukemia or Lymphoma)	FPBLLP	LAB	Blood	Lavender & Sodium Heparin (Green)	1 x 4 mL 1 x 7 ml	Whole blood (lavender and green) must be obtained early A.M. All specimens must be in lab by 12 noon MON-FRI. Fill out yellow requisition. Order CBC also.
Immunopheno Typing - Lymph Node (Leukemia or Lymphoma)	FLNLLP	LAB	Lymph Node	Sterile container + Saline	2 grams	Notify Flowcytometry Lab (860-2163). MUST be in lab by 12 noon. Fill out yellow requisition
Immunopheno Typing - Tissue	FTISLLP	LAB	Tissue	Sterile container + Saline	2 grams	Notify Flowcytometry Lab (860-2163). MUST be in lab by 12 noon. Fill out yellow requisition.
Immunopheno Typing - CSF Fluids	FCSFLLP	LAB	CSF	Sterile tube		Notify Flowcytometry Lab (860-2163). Fill out yellow requisition.
Immunopheno Typing - Body Fluids	FBFLLP	LAB	Body Fluid	Lavender	4 ml	Notify Flowcytometry Lab (860-2163). Fill out yellow requisition.
Immunopheno Typing - Bronchial Lavage	FBAL	LAB	Bronchial Alveolar Lavage	Sterile tube		Notify Flowcytometry Lab (860-2163). Fill out yellow requisition

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Inclusion Body's - HGB						Test not available – order hemoglobin electrophoresis
Indices (Red Cell)						Request CBC.
Infliximab (Remicade)	INFLIX	LAB	Blood	Yellow	4 ml	Referred
Influenza A & B PCR	INFLUSCR	LAB	Throat, respiratory specimen	UTM or sterile container		Referred.
Insulin	INSU	LAB	Blood	Yellow	4 mL	Patient should be fasting. Order glucose on specimen at same time. Avoid hemolysis.
Insulin Antibodies						Referred. See Anti-Insulin Antibody
Insulin Growth Like Factor Binding Protein 1 (IGF1)						See Somatomedin (SOM)
Insulin Growth Like Factor Binding Protein 3 (IGF3)	IGF3	LAB	Blood	Red	7 mL	Referred. Deliver to lab ASAP.
Iodine	IODINE	LAB	Blood	NAVYEDTA	7 mL	Referred
Iron and Iron Binding Capacity - Serum	IRON	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	8 Hour fasting specimen preferred. Panel includes Iron Saturation and UIBC and Ferritin. Not permitted within 4 weeks of last measurement.
Isopropyl Alcohol	ISOPRO	LAB	Blood	Grey – full tube needed	6 mL	Referred. Do not use alcohol swab. Dedicated Tube. Do not open tube.
IUD (Intra Uterine Device) - Culture	CGEN	MIC	IUD	Dry sterile container		Culture primarily for Actinomyces species
JAK2 V617F Mutation Peripheral Blood	JAK2PB	LAB	Blood	Lavender	7 mL	Referred.
JAK2 V617F Mutation Bone Marrow	JAK2BM	LAB	Bone Marrow	Lavender	4mL	Referred.
JAK2 Exon 12 Mutation, Peripheral Blood	JAK2EXON12	LAB	Blood	Lavender	4mL	Referred. Must have a negative JAK2V617 result.
Kappa - Quantitative						Test no longer available
Karyotype, amniotic fluid	KARYAMNIO	LAB	Amniotic fluid	2 x Sterile container	20 ml	Referred. Available Mon-Thurs. only.
Karyotype - Blood	KARYBLD	LAB	Blood	Green Must be Sodium Heparin, not Lithium Heparin	7 mL 2 mL Minimum	Referred. Available Mon – Thurs only. Send completed IWK General Cytogenetics Requisition with specimen.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Karyotype, chorionic villus sample	KARYVIRAL GASTRO	LAB	Chorionic villus sample (VIRALGASTRO)	VIRALGASTRO sample in media (obtain from Haematology Lab)		Referred. Available Mon-Wed only. Notify Central Receiving Lab.
Ketone						See Beta Hydroxybutyrate
Kleihauer-Betke Test	KB	BBK	Blood	Lavender	4 mL	Must be done post-partum if evaluating Rhlg dosing Can share lavender tube if CBC also requested. BBKAOT needs to be ordered in this case
Lacosamide	LACO	LAB	Blood	Red	7 ml	Referred
Lactate Dehydrogenase (LD) Isoenzymes	LDISO	LAB	Blood	Red/Yellow	7 mL	Avoid hemolysis. Referred
Lactate Dehydrogenase (LDH, LD)	LDH	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Lactic Acid/D	LACTATE-D	LAB	Blood	Yellow	4 mL	Send to lab ASAP. Centrifuge immediately and send frozen. Referred.
Lactic Acid/L	LACTATE	LAB	Blood	Green in ice	3 mL	Collect without tourniquet. Send to lab on ice ASAP.
Lactose Tolerance (LTT)	LTT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect fasting, 0.5, 1, 1.5 and 2 hour specimens. Obtain lactose drink from Pharmacy. No longer performed on children <16 yrs.
Lambda - Quantitative						Test no longer available
Lambert-Eaton Autoantibody	LESPANEL	LAB	Blood	Yellow	6 mL	Referred.
Lamellar Body Count	LBC	LAB	Amniotic Fluid	Sterile Container	15 mL	1 – 2 mL required. Ship within 24 hrs. Do not centrifuge or freeze
Lamotrigine (Lamictal)	LAMIC	LAB	Blood	Yellow	4 mL	Referred. Collect before next dose.
Lanoxin						See Digoxin.
Latex Fixation						See Rheumatoid Factor.
LDL Cholesterol						See LIPID.
Lead - Blood	LEAD	LAB	Blood	Navy EDTA	7 mL	Referred. Includes Lead + Zinc Protoporphyrin
Lead - Urine	LEADU24	LAB	Urine	24 hour jug – no preservative	24 hour specimen	Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Leflunomide	LEFLU	LAB	Blood	Red	7 ml	Referred Draw no sooner than 12 hours trough after last dose. SPIN within 2 hours.
Legionella - Culture	CLEGION	MIC	Sput, BAL,BW, ETT	Dry sterile container.		Referred
Legionella - Direct Antigen	LEGAG	LAB	Urine	Dry sterile	10-20 mL	In-house
Leiden, Factor V						See Activated Protein C Resistance
Levetiracetam (Keppra)	LEVET	LAB	Blood	Red	7mL	Collect prior to next dose. Referred
Librium						See Chlordiazepoxide.
Lidocaine (Xylocaine)	LIDO	LAB	Blood	Red	7 mL	Collect 30 minutes after drug is administered. Referred
Lipase	LIP	LAB	Blood	Plasma or Serum in Gel Separator tube	6 mL	
Lipid Panel (includes Cholesterol, Triglyceride, HDL, LDL, Chol Risk Ratio, Non HDL)	LIPID	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	10-14 hour fast
Lipid Non Fasting Panel(includes Chol, HDL, Risk, Non HDL)	LIPIDNF	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Lipoprotein A	LIPA	LAB	Blood	Yellow	4 mL	Collect after a 12 h fast. Deliver to lab ASAP. Referred.
Lipoprotein Electrophoresis						Test not available
Listeria - Culture	CB	MIC	Blood	blood culture bottles		Notify Microbiology Lab if ordering Listeria culture from source other than blood
Lithium	LITH	LAB	Blood	Yellow	6 mL	Collect prior to dose.
Liver Biopsy (infectious investigation)	LIVERBX	MIC	Liver tissue	Dry sterile container	as much as possible	Send STAT. Protocol includes culture for Herpes, Adenovirus, CMV and Enteroviruses.
Liver/Kidney Microsomes Antibody	LKMAB	LAB	Blood	Yellow	4 mL	Referred
Long Chain Fatty Acids	FATACLC	LAB	Blood	Yellow	6 mL	Fasting required. Send to lab ASAP. Referred.
Lorazepam (Ativan)	LORAZ	LAB	Blood	Red	7 mL	Draw before next dose is administered. Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Lung Biopsy (open lung) - includes viral, fungal and bacterial cultures	OPENLBX	MIC	Lung tissue	Dry sterile container	As much as possible	Send STAT. Protocol includes culture for aerobic and anaerobic bacteria, mycobacteria, Fungus, CMV and Respiratory viruses.
Lupus Anticoagulant	LUPUS	LAB	Blood	2 x Blue	2 x 2.7 mL	Test should not be performed if patient receiving heparin or oral anticoagulant.
Luteinizing Hormone (LH)	LH	LAB	Blood	Yellow	6 mL	
Lyme disease (Borrelia burgdorferi)	LYME	LAB	Blood	Red or Yellow	4 mL	Referred
Lysodren						See Mitotane
Lysozyme (Muramidase)	LYSO	LAB	Blood	Lavender	4 mL	Referred
Lysozyme (Muramidase)	LYSOU	LAB	Urine	24 hour jug	24 hour urine	Referred
MAC Culture						See Mycobacterial infections
Macroprolactin	MACROPROL	LAB	Blood	Yellow	4mL	Referred
MAG Antibody	MAGANTI	LAB	Blood	Yellow	4 mL	Referred
Magnesium	MG	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Magnesium	MGU24	LAB	Urine	24 hour jug with preservative	24 hour urine	Add 20 ml of 6N HCl to jug
Malarial Parasites	MAL	LAB	Blood	Lavender	4 mL	Include travel history. Deliver to Haematology Laboratory Immediately after collection.
Maprotiline	MAPRO	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred
Manganese, Plasma	MANG	LAB	Blood	Navy EDTA	7 mL	Collect and deliver to lab within 30 min. Referred
Manganese, RBC	MANGRBC	LAB	Blood	Navy EDTA	7 mL	Collect and deliver to lab within 30 min. Referred
Manganese, Urine	MANGU24	LAB	Urine	24 hour container, no preservative		Avoid mineral supplements for 5 days prior to collection. Referred.
MaTa Autoantibodies	MATA	LAB	Blood	Red	7 mL	Referred
Maternal Serum Screening (1st Trimester)	MATSCEARLY	LAB	Blood	Yellow	6 ml	Referred. Maternal screening data history sheet must be completed and sent with specimen. 10-13 wks. gestation

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Maternal Serum Screening (2 nd Trimester)	MATSCR	LAB	Blood	Yellow	6 ml	Referred. Maternal screening data history sheet must be completed and sent with specimen. 15-20 wks. gestation.
Measles, German						See Rubella.
Measles, Red-PCR	MEASLESPCR	LAB	Urine; NP swab	UTM or Dry sterile container	10-50 ml	Referred.
Measles, Red-IgG - Immune Status	MEASLESG	LAB	Blood	Red or Yellow	4 – 6 mL	Referred.
Measles, Red-IgM - Recent Infection	MEASLES	LAB	Blood	Red or Yellow	4 – 6 mL	Referred. Includes IgG and IgM
Meningoencephalitis Viral Panel- Biofire See also Arbovirus	ZME	MIC	CSF	Dry sterile	400 uL	In-house, includes: E.coli, Haemophilus, Listeria, Neisseria meningitidis, GBS, Strep pneumo, CMV, Enterovirus, Herpes Simplex 1&2, Human Herpes 6, Paraecho, VZV, Cryptococcus
Mercury	MERCB	LAB	Blood	Navy EDTA	7 mL	Do not freeze. Referred
Mercury	MERCU24	LAB	Urine	24 hour jug	24 hour specimen	Avoid seafood for 5 days prior to collection. Referred.
Metabolic Screen (Amino Acid Screen)						See Amino Acids Qualitative Urine.
Metanephrines	METU24	LAB	Urine	24 hour jug with preservative	24 hour specimen	Collect over 20mL 6N HC1. Restrict caffeine, nicotine and alcohol 24 hours prior to collection. Restrict all meds 36 h prior to collection, if possible Referred
Methadone, Serum	METHADS	LAB	Blood	Red	7 mL	Referred. Do NOT use gel-separator tubes. Deliver to lab ASAP; serum must be frozen within 2 hr. of collection.
Methadone Drug Screen, Urine	METHADU	LAB	Urine	Random	25 mL	Panel for Methadone Clinic; includes urine methadone metabolites, benzodiazapine, opiate,cocaine, amphetamines,oxycod one
Methadone Metabillite	METHMETU	LAB	Urine	Dry Sterile Container	25 mL	Included as part of the METHADU panel or can be ordered by itself.
Methanol						See Alcohol - methyl (Methanol)

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Methemoglobin	METHGB	LAB	Blood	Green Or Heparinized Capillary	3 mL	Send on ice ASAP. Specimen must be sent to the Lab on ice and tested within 2 hours of collection.
Methotrexate	METHO	LAB	Blood	Red	7 mL	Wrap tube to protect from light.
Methylenetetrahydrofolate Reductase	MTHFR	LAB	Blood	Lavender	7 mL	Referred
Methylmalonic Acid	MMA	LAB	Blood	Lavender	2 x 7 mL	Referred
Methylmalonic Acid,Ur	METHYLAC	LAB	Urine	Dry sterile container	Random Urine	Referred
Mexiletine	MEXI	LAB	Blood	Red	7 mL	Collect before next dose. Referred
Microarray	MICROARRAY	LAB	Blood	Lavender	4mL 1.0mLEDTA minimum for newborns	Referred. Collect Mon (not a holiday), Tues, Wed, by noon. MUST send completed IWK Molecular Diagnostic requisition with specimen.
Microalbumin						Test no longer available, order ALB-CREA ratio instead.
Middle Eastern Respiratory Syndrome Coronavirus PCR (MERS-CoV)	RS	MIC	1. BW, tracheal asp or pleural fluid 2. NPS, NP/Nose wash or aspirate 3. serum	Swabs in UTM, fluids dry sterile, SST	If not poss to send all 3, send lower resp samples	All 3 specimens need to be collected and sent together to GH
Miscellaneous Test	MISC		Variable	Variable	Variable	Referred. For laboratory use only; not available in OE module. Call lab at 857-5318 or 857-5633 for specific testing information and ordering.
Mitotane (Lysodren)	MITOTANE	LAB	Blood	Red	7 mL	Referred. Gel separator tube not acceptable.
Mixing Studies	MIXS	LAB	Blood	Blue	2.7 mL	List anticoagulants and thrombolytics. Indicate if bleeding or thrombosis.
Mogadon						See Nitrazepam.
Molybdenum	MOLY	LAB	Blood	Navy EDTA	7 mL	Referred.
Monilla						See Yeast.
MPox	MPOX	LAB	Lesion, exudate, throat,NPS	UTM		Referred to GDH
Mono Test	MONO	LAB	Blood	Lavender	4 mL	
MPL Exon10 mutation	MPL	LAB	Blood or Bone Marrow	Lavender	PB 3 ml BM -2 mml	Referred Enter tests required in comment

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
MRSA Screen - culture (Methicillin Resistant Staphylococci)	CMRSA	MIC	Perineum, rectal, wounds, etc.	Throat /MRSA swab (liquid transport medium)		If specimen not included in the look-up order routine culture and note MRSA suspected
Mucopoly-saccharides	MUCO	LAB	Urine	Dry sterile container	Random urine	Referred.
Multimers of Von Willebrand Factor	MULT	LAB	Blood	Blue	2.7 ml	Von-Willebrand factor multimers. Test is not referred if VW antigen and Ristocetin activity assay are normal
Mumps PCR	MUMPSPCR	LAB	Urine, Parotid gland/buccal or throat swab	Urine in dry sterile and/or swabs in UTM	10-50 mL	Referred
Mumps (Serology) - Immune Status	MUMPSG	LAB	Blood	Yellow	6 mL	IgG Referred.
Mumps (Serology) - Recent Infection IgM	MUMPS	LAB	Blood	Yellow	6 mL	Referred. Includes IgG and IgM
Muramidase						See Lysozyme.
MUSK Antibodies	MUSK	LAB	Blood	Red	7mL	Referred.
Mycobacteria - other names include AFB, Acid Fast Bacilli, TB	CMYCOB	MIC	Biopsy/tissue, CSF urine, body fluids, skin, respiratory specimens, gastric washings, blood or bone marrow	Dry sterile container. Special media required for blood or bone marrow - available from Microbiology.		Referred. Include AFB (ZN) smear
Culture Mycobacterium avium complex	CMAC	MIC	Stool	Dry sterile		Special request only, on HIV+ patients
Mycobacterium tuberculosis – Direct amplification (PCR)	MTBDIRECT	MIC	Sputum, bronchial washing, tissue CSF no longer available	Dry sterile container	2 mL min	Referred – special order only Discuss with Microbiologist or ID Physician
Mycoplasma Urogenital PCR and/or neonatal mycoplasma infections	UROMYCO PCR	MIC	Urethral, urogenital, vaginal, rectal swabs, urine	UTM Urine in dry sterile		Includes PCR panel for M. hominis, M. genitalium, U. urealyticum, U. parvum
Mycoplasma pneumoniae - PCR	RESPVPCR	MIC	Throat swab etc.	UTM		Part of respiratory panel
MYD88	MYD88PB MYD88BM	LAB	Blood Bone Marrow	Lavender	7 mL PB 4 mL BM	DO NOT collect on Thur or Friday. Referred
Myoglobin, Plasma	MYO	LAB	Blood	Green(Lithium Heparin)	3 mL	Referred.
Myoglobin	MYOU	LAB	Urine	Dry sterile container	Random	
Mysoline						See Primidone
N Acetyl Procainamide						See Pronestyl
(Natalizumab) Antibodies						See TYSABRI

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Neisseria gonorrhoeae DNA testing						Both GC and Chlamydia testing are done on the one sample. See Chlamydia/GC
Neonatal Group & Coombs	NEOGPDAT	BBK	Blood	Red top microtainer or Lavender	0.5 mL	
Neutrophil Oxidative Burst Index						See Oxidative Burst Index
Newborn Screening Program	NEWBORNS CR	LAB	Blood	Screening card		Air dry min. 4 hrs. Referred.
Next Generation Sequencing	NGSSJPB NGSSJBM	LAB	Blood or Bone Marrow	Lavender	5-10 mL for PB 4 mL for BM	Referred
Nickel	NIC	LAB	Blood	Navy EDTA	7 mL	Referred.
Nitrazepam (Mogadon)	NITRAZ	LAB	Blood	Red	7 mL	Draw before next dose is administered. Referred.
NMO-IgG	NMO	LAB	Blood	Yellow	4 mL	Referred. Can also be performed on 3.0 ml of CSF.
Nocardia	CFUN	MIC	Sputum, pleural fluid, purulent material from sinuses or abscesses, biopsies, urine	Dry sterile container		Indicate on the requisition that this organism is suspected - a special set-up is required in the laboratory.
Norpace (Disopyramide)	NORP	LAB	Blood	Green (Lithium Heparin)	3 mL	Collect prior to dose. Referred.
Nortriptyline (Aventyl)	NOR	LAB	Blood	Red	7 mL	Collect prior to dose or 10-12 hours post dose. Referred.
Norovirus Norwalk-agent, Norwalk-like viruses	NORPCR	MIC	Stool	Dry sterile container	Walnut size	Included in VIRALGASTRO panel Referred
Nose Culture	CN	MIC	Nose swab	C&S swab		Examined for carriage of Staphylococcus aureus only.
Occult Blood	OBST	LAB	Stool	Dry sterile container or collection card		Drug/Diet restrictions (see Clinical Chemistry)
Oligoclonal Banding						See CSF oligoclonal banding
Oligosaccharides	OLIGOSAC	LAB	Urine	Screw top container	10 ml	Avoid first morning collection. Referred.
Opiates	OPIU	LAB	Urine	Dry sterile container	25 mL urine	Usually ordered as DRUGU or METHADU but can be ordered by itself

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Organic Acids	ORGAC	LAB	Urine	Dry sterile container	10 mL random urine	Provide patient's age and clinical diagnosis. (The min. volume for organic acid depends on the specific gravity of the urine). Early morning specimen preferred. Referred
Orotic Acid	OROACU	LAB	Urine	Dry sterile container		Referred.
Osmolality	OSMS	LAB	Blood	Yellow	6 mL	
Osmolality	OSMU	LAB	Urine	Dry sterile container	Random 3 mL	
Osmolality	OSMST	LAB	Stool	Dry sterile container	5 mL	Referred. Must be naturally fluid stool.
Osmotic Fragility	OSFR	LAB	Blood	Lavender on ice. + CONTROL from a normal, unrelated person.	7 mL	Referred. Notify Haematology prior to test. Available Monday - Wednesday only.
Osteocalcin	OSTC	LAB	Blood	Yellow	4 mL	Referred.
Ova and Parasites	OP	MIC	Stool	Parasite container (SAF fixative)	To fill line and mix well with fixative.	2 to 3 samples collected on separate days is recommended. Provide history
Oxalate	OXU24	LAB	Urine	24 hour jug with preservative	24 hour specimen	Collect over 20 mL of 6N HC1. Referred
Oxazepam (Serax)	OXAZ	LAB	Blood	Red	7 mL	Draw before next dose is administered. Referred.
Oxidative Burst Index, Neutrophils	OXBURST	LAB	Blood	Green(Sodium Heparin) + CONTROL from a normal, unrelated person.	7 mL	Referred. Make arrangements with Central Receiving supervisor at local 5318. **Specimen + control MUST arrive at reference laboratory within 48 HRS of draw. *** Send sodium heparin whole blood (1.0 mL minimum) at ROOM TEMP. Also draw blood in a green-top sodium heparin tube and send 5 ml (minimum 1.0 ml) of fresh sodium heparin whole blood from a normal, unrelated person at the same time. Label clearly on outermost label NORMAL CONTROL. Collect as late as possible to meet courier deadline.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Oxycodone,	OXYU	LAB	Urine	Dry sterile container	25 ml random	Usually ordered with DRUGU or METHADU but can be ordered by itself
PAI-1,4G5G)						See Plasminogen Activator Inhibitor-1,4G5G Mutation
Pancreatic Polypeptide Level	PANPOLY	LAB	Blood	Lavender	7 ml	Fasting. Collect on ice and deliver to Lab ASAP. Referred.
Parainfluenza virus - Culture	RESPVPCR	MIC	Respiratory specimens	Dry sterile container or UTM		Included in the routine respiratory virus panel.
Paraneoplastic Antibody Panel	PARANEO	LAB	Blood	Yellow	6 mL	Referred.
Paraneoplastic Auto Antibody Lung/Thymoma Panel	PARANEOLUNG		Blood	Red	7 mL	Referred. Special request available by consultation only. Contact Central Receiving at 5318. Includes: ANNA-3
Parathyroid Hormone (PTH)	PTH	LAB	Blood	Lavender	7 mL	
Paroxetine (Paxil)	PAX	LAB	Blood	Red	7 mL	Referred
Paroxysmal Nocturnal Hemoglobinuria						See PNH
Parvovirus - Immune Status	PARVOG	LAB	Blood	Red or Yellow	3 – 4 mL	Referred.
Parvovirus - Recent infection	PARVO	LAB	Blood	Red or Yellow	3 – 4 mL	Referred. Includes IgG and IgM
Paternity Testing	-	-	-	-	-	Not available Please call 383-4620 Riverview Clinic
PCP (Phencyclidine)	PCPU	LAB	Urine	Dry sterile container	25 mL urine	
PDGFR	PDGFRPB PDGFRBM	LAB	Blood or Bone Marrow	Green Sodium Heparin	7-10 mL 4mL	Enter test ordered as a comment in meditech Referred
Pediculosis (lice)	BUGID	MIC	Adult louse, nymphs or eggs "nits", hair	Dry sterile container		For Periculus humanus, check seams of clothing.
Penis/Prostatic Secretions (Routine C&S)	CGEN	MIC	Penis swab or secretions	C&S Swab or dry sterile container		
Pentobarbital	PENTO	LAB	Blood	Yellow	6 mL	Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Pericardial Fluid	See individual tests for mnemonic listed below	LAB	Fluid	1. Red 2. Lavender 3. Green tube on Ice 4. Dry sterile container 5. Bottle with Cytology fixative	7 mL 4 mL 3 mL 5 – 10 ml 20 mL	1. Glucose, Protein, LDH, Amylase, cholesterol and Triglyceride. ALB, uric acid 2. Haematology cell count and diff 3. pH 4. Gram stain, acid fast bacilli stain, culture 5. Cytology examination Immediately deliver directly to Laboratory Central Receiving section.
Pericardial Fluid – Albumin	ALBPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions
Pericardial Fluid - Bacterial culture	CBF CBBF (blood culture bottle)	MIC	Pericardial fluid	Dry sterile container or blood culture bottles	2-10 mL	See Pericardial fluid for instructions.
Pericardial Fluid - Cell Count & Differential	CCPC	LAB	Pericardial fluid	Lavender	4 ml	See Pericardial fluid for instructions
Pericardial Fluid - Cholesterol	CHOLPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Pericardial Fluid - Glucose	GLUPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Pericardial Fluid - LDH	LDHPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Pericardial Fluid - Total Protein	TPPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Pericardial Fluid - Triglycerides	TRIGPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Pericardial Fluid - Uric Acid	URICPC	LAB	Pericardial fluid	Red	7 mL	See Pericardial fluid for instructions.
Periodic Acid-Schiff (P.A.S.)						Done on Pathologist's request.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Peritoneal Fluid	See individual tests for mnemonic listed below	LAB	Fluid	1. Red 2. Lavender vacutainer 3. Green tube on Ice 4. Dry sterile container 5. Bottle with Cytology fixative	7 mL 4 mL 3 mL 5 - 10 mL 20 mL	1. Glucose, Protein, LDH, Amylase, Albumin, Uric Acid, Specific Gravity, Cholesterol and Triglyceride 2. Haematology cell count and diff. 3. pH 4. Gram stain, acid fast bacilli stain, culture 5. Cytology examination Immediately deliver directly to Laboratory Central Receiving section.
Peritoneal Fluid – Albumin	ALBPT	LAB	Pericardial fluid	Red	7 mL	See Peritoneal fluid for instructions
Peritoneal Fluid - Amylase	AMYPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions
Peritoneal Fluid - Bacterial culture	CMISC	MIC	Peritoneal fluid	Dry sterile container or blood culture bottles	2-10 mL	See Peritoneal fluid for instructions
Peritoneal Fluid - Cell Count & Differential	CCPT	LAB	Peritoneal fluid	Lavender	4 ml	See Peritoneal fluid for instructions.
Peritoneal Fluid - Cholesterol	CHOLPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Peritoneal Fluid - Glucose	GLUPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Peritoneal Fluid - LDH	LDHPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Peritoneal Fluid - Total Protein	TPPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Peritoneal Fluid - Specific Gravity	SGPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Peritoneal Fluid - Triglycerides	TRIGPT	LAB	Peritoneal fluid	Red	7 mL	See Peritoneal fluid for instructions.
Pertussis (Bordetella pertussis)	BORDPCR	MIC	Nasopharyngeal swab	UTM		Testing done by PCR
Pertussis (Bordetella pertussis) - Serology	PERTAB	LAB	Blood	Red or Yellow	6 mL	Referred.
PG Amniotic Fluid						See Fetal Lung Maturity
pH, Stool	PHST	LAB	Stool	Dry sterile container	Random 5 grams	
Phenobarbital	PHB	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect prior to dose.
Phenothiazines	PHEU	LAB	Urine	Screw top container		Referred.
Phenylalanine	PKU	LAB	Blood	Green	3.0 mL	Referred.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Phenylalanine Screen	PKUSC	LAB	Blood	Blotter Card		Referred.
Phenylalanine Nutrition Follow Up	PKUSTUDY	LAB	Blood	Blotter Card		Referred. Also includes Tyrosine
Phenytoin (Dilantin)	PHY	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect prior to next dose. If patient is on fosphenytoin, collect sample for phenytoin 2 hours post IV or 4 hours post IM injection.
Phosphatidyl Glycerol (PG)						See LBC
Phosphorus - routine urine	PHOSU	LAB	Urine	Dry sterile container	Random	No preservative.
Phosphorus - 24 hour urine	PHOSU24	LAB	Urine	24 hour jug with preservative	24 hour urine	20 ml of 6N HCl added to jug.
Phosphorus - Phosphate	PHOS	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Phytanic Acid	PHYAC	LAB	Blood	Yellow	4mL	Referred.
Pinworms	PINWORM	MIC	Pinworm paddle applied to perianal region	Pinworm paddle		Paddle available from Microbiology.
PKU						See Phenylalanine
Placenta (routine C&S)	CGEN	MIC	Tissue or swab	Dry sterile container or C&S swab		
Plasma Haemoglobin	PLHGB	LAB	Blood	Green	3 mL	Referred.
Plasma Metanephrines	METANEPH L	LAB	Blood	Lavender	7 mL	
Plasminogen Activator Inhibitor-1,4G5G Mutation (PAI-1,4G5G)	PAI-1,4G5G	LAB	Blood	Lavender	7 mL	Referred. Collect before 1300 hrs. Monday or Tuesday only to meet shipping schedules.
Platelet Aggregation	PLTA	LAB	Blood	Blue	2.7 mL x 9	Test must be booked with Haematology Lab in advance. Deliver to laboratory immediately
Platelet Associated IgG						NO LONGER AVAILABLE.
Platelet Count						Request CBC.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Pleural Fluid	See individual test for mnemonic listed below		Fluid	1. Red 2. Lavender vacutainer 3. Green tube on ice 4. Dry sterile container 5. Bottle with Cytology fixative	7 mL 4 mL 3 mL 5 – 10 mL 20 mL	1. Glucose, Protein, LDH, Amylase, pH, Albumin, Uric Acid, Specific Gravity, cholesterol and Triglyceride. 2. Haematology cell count and diff. 3. pH 4. Gram stain, acid fast bacilli stain, culture 5. Cytology examination Immediately deliver directly to Laboratory Central Receiving section.
Pleural Fluid - Albumin	ALBPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions
Pleural Fluid - Amylase	AMYPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions
Pleural Fluid - Bacterial culture	CMISC or CBBF(blood culture bottles)	MIC	Pleural fluid	Dry sterile container or blood culture bottles	2 to 10 mL	See Pleural fluid for instructions
Pleural Fluid - Culture Mycobacteria	CMYCOB	MIC	Pleural Fluid	Dry Sterile container	5 to 10 mL	See Pleural fluid for instructions. Referred
Pleural Fluid - Cell Count & Differential	CCPL	LAB	Pleural fluid	Lavender vacutainer		See Pleural fluid for instructions.
Pleural Fluid - Cholesterol	CHOLPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pleural Fluid - Glucose	GLUPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pleural Fluid - LDH	LDHPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pleural fluid - pH	PHPL	LAB	Pleural fluid	Green Tube on ice	3 mL	See Pleural fluid for instructions.
Pleural Fluid - Specific Gravity	SGPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pleural Fluid - Total Protein	TPPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pleural Fluid - Triglycerides	TRIGPL	LAB	Pleural fluid	Red	7 mL	See Pleural fluid for instructions.
Pneumococcal Antibody-Serology	PNEUMO	LAB	Blood	Yellow	6 mL	Acute and convalescent sera required. Referred.
Pneumococcal Antigen Testing	PNEUMOAG	MIC	Urine or CSF	Dry sterile		Referred
Pneumocystis jiroveci (PCP)	PNEUM	MIC	Induced sputum, bronchial washings, biopsy or autopsy material (lung or other tissue)	Dry sterile container		Notify Microbiology Lab when ordered

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
PNH	PNH	LAB	Blood	Lavender	4 mL	MUST be in lab by 12 noon MON-FRI. Fill out yellow requisition. Phone 860-2163.
Polio PCR	RS- Referred special	MIC	Stool	Dry sterile	0.5ml or 1 gram	Polio is one of the Enteroviruses. Referred.
Porphyryns Plasma, Quantitation	PORPL	LAB	Blood	Green (wrapped) Plasma gel pale green-top tube NOT acceptable.	7 mL	Protect from light. Referred. List all medications patient is taking. Referred
Porphyryns Screen - Random Urine	PORPHU	LAB	Urine	Wrapped. Dry sterile container	Random	Protect specimen from light. Referred
Porphyryns Screen - 24 Hour Urine	PORPHU24	LAB	Urine	24 hour jug with preservative, brown bottle	24 hour specimen	Protect specimen from light. Collect over 5g NACO ₃ . Referred
Potassium - Blood						Order LYT3
Potassium -Stool	KST	LAB	Stool	Dry sterile container	Random	Submit 5 mL naturally fluid feces. Formed feces is not acceptable.
Potassium - Urine	KU24	LAB	Urine	24 hour jug	24 hour specimen	No preservative.
Prealbumin	PAB	LAB	Blood	Yellow	4 ml	
Prediabetic Screen (Glucose)						See Glucose 75g
Pregnancy Test (Human Chorionic Gonadotropin)						See Beta HCG (urine)
Prekallikrein						See Fletcher factor
Pre-Natal Screen (Opt - OUT) for infectious agents excluding HIV	PREN	LAB	Blood	Red or Yellow	6 mL	Includes Syphilis Screen (RPR), Hepatitis B Antigen, Rubella. NOT HIV
Prenatal Screen (Opt-IN) for infectious agents including HIV	PRENHIV	LAB	Blood	Red or Yellow	6 mL	Includes Syphilis Screen (RPR), Hepatitis B Antigen, Rubella and HIV
Pre-Natal Screen - Down's Syndrome						See Maternal Screen (2 nd Trimester).
Pre-Natal Testing (Blood Bank)	TS	BBK	Blood	Lavender	7 mL	
Primidone (Mysoline)	PRIM	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Therapeutic monitoring -Collect prior to dose; Suspected toxicity – collect 2-4 hours post dose.
Procainamide						See Pronestyl.
Progesterone	PROG	LAB	Blood	Yellow	4 mL	
Proinsulin	PROINS	LAB	Blood	Yellow	4 mL	Referred. Collect after 12 hour fast

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Prolactin	PROL	LAB	Blood	Yellow	6 mL	
Pronestyl (Procainamide)	PRONES	LAB	Blood	Yellow	4 mL	Includes N-Acetyl Procainamide. Referred.
Prostatic Specific Antigen(PSA)	PSA	LAB	Blood	Yellow	6 mL	Not permitted within 4 weeks of last measurement. Not permitted on men >75 years of age
Protamine-Sulphate Test (Para Coag)						Test not available
Protein						See Total Protein.
Protein C	PROTC	LAB	Blood	Blue	2.7 mL	
Protein-Creatinine Ratio	PROT-CREAU	LAB	Urine	Dry sterile container	10 mL	
Protein Electrophoresis	PES	LAB	Blood	Yellow	4 mL	Not permitted within 3 weeks of last measurement
Protein Electrophoresis, CSF	PECSF	LAB	CSF	CSF tube	5 mL	Referred
Protein Electrophoresis	PEU	LAB	Urine	24 hour jug	24 hour specimen	No preservative required. Not permitted within 3 weeks of last measurement.
Protein S	PROTS	LAB	Blood	Blue	2.7 mL	
Prothrombin Mutation 20210 AG Genotype						See Factor II mutation
Protriptyline	PROTRIP	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred
Psittacosis Serology (Chlamydia psittaci)	CHLPSIT	LAB	Blood	Red or yellow	6 mL	Test includes IgG, IgA, and IgM. History required Referred
PT(Prothrombin Time)	PT	LAB	Blood	Blue	2.7 mL	List anticoagulants.
PTT (Activated Partial Thromboplastin Time)	PTT	LAB	Blood	Blue	2.7 mL	List anticoagulants. If on heparin deliver to lab immediately.
PT and/or PTT Inhibitor						See mixing studies
PT Mutation						See Factor II mutation
Purkinje Cell Antibodies (Anti Yo)						See Paraneoplastic panel

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Pyruvate	PYRU	LAB	Blood	Syringe+ Special tube containing 2.5 mL 6% Perchloric acid. Obtain tube from Central Receiving. Call 5318.	7 mL	Draw enough blood from a fasting patient (at least 4 hours) directly into a syringe to add exactly 1.0 mL of blood to special collection tube. Once drawn, immediately transfer 1.0 ml of blood to special collection tube, shake vigorously to mix. Referred.
Pyruvate Kinase	PYRUKIN	LAB	Blood	ACD Solution B	7 mL	Referred.
Pyruvate Kinase Known	PKUSTUDY	LAB	Blood	Screening card		Referred.
Q Fever (Coxiella burnetii)	QFEVER	LAB	Blood	Red or Yellow	6 mL	Includes both IgG and IgM Referred.
Rapid Aneuploidy Detection (Amniotic fluid)	RAD	LAB	Amniotic Fluid	2 10 ml fluid (in sterile tubes)		Requires Prenatal genetic requisition-signed consent for RAD(IWK _ MDL) Dispatched Monday-Thursday
Rapid Aneuploidy Detection (Amniotic fluid) with Microarray	RADARRAY	LAB	Amniotic Fluid	3 10 ml fluid(in sterile tubes)		Requires Prenatal genetic requisition-signed consent for RAD(IWK _ MDL) Requires General Test Requisition(IWK MDL)-signed consent for MCC Dispatched Monday-Thursday
Rapid Aneuploidy Detection (Tissue or POC)	RADTISSUE	LAB	Tissue Products of conception(POC)	Tissue or POC in dry sterile container. Store in refrigerator Also include a EDTA blood from mother (MCC)		Requires Prenatal genetic requisition-signed consent for RAD(IWK _ MDL) Requires General Test Requisition(IWK MDL)-signed consent for MCC Dispatched Monday-Thursday
Maternal Cell Contamination	MCC	LAB	Blood	Lavender	4 ml	Requires IWK MDL general requisition. Dispatched Monday-Thursday
Quinidine	QUIN	LAB	Blood	Red	7mL	Collect prior to dose. Referred
R.D.W. (Red Cell Distribution Width)						Request CBC.
Rabies Serology	RABIES	LAB	Blood	Yellow	6 mL	History required. Referred
RAST Test						See Allergy Testing.
Red Blood Cell						Request CBC.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Reducing Substances						Test no longer available.
Renin	RENIN	LAB	Blood	ICE Lavender	1 x 7 mL	Collect between 7 – 10 am. Patient must be ambulatory for 2 hours prior to collection Collect with patient in a seated position. Avoid hemolysis. Collect in pre-chilled EDTA tube and place immediately on ice. Deliver to lab within 1 hr from collection. Referred.
Reptilase Time	REP	LAB	Blood	Blue	2.7 mL	Referred. List anticoagulants.
Respiratory Cultures - Routine Bacterial	CRESP	MIC	Sputum, Bronchial Wash, endotracheal suction, etc.	Dry sterile container		May also require Mycobacteria, Legionella, Pneumocystis, etc.
Respiratory PCR - Viral	RESPVPCR	MIC	Sputum, Bronchial Wash, endotracheal suction, NPS, etc.	Swabs in UTM Fluids in dry sterile container		Referred to GDH: Flu/Parainfluenzae 1/2/3/4, Rhino/Entero, Paraecho,Adeno,Boca Metapneumo, RSV, Coronaviruses NL63/OC43/229E/HK U1, Mycoplasma pneumoniae
Biofire Respiratory Viral Panel In house	ZRESPVPCR	MIC	NPS swabs only	UTM		Same as above but no Boca,or Paraecho. Includes Covid-19, Bordetella, Chlamydia pneumoniae
Respiratory Syncytial Virus (RSV) - PCR	RSVPCR	MIC	Nasopharyngeal swab	UTM		
Reticulin Antibodies						Referred. Part of IFA screen
Reticulocyte Count	RET	LAB	Blood	Lavender	4 mL	Includes CBC, Ret-He, IRF(Immature Reticulocyte Fraction)
Rh Genotyping referred out	BBGENRH	BBK	Blood	Lavender	7 ml	Must contact Transfusion Medicine prior to ordering
Rh Typing						See ABO Grouping.
Rheumatoid Factor (Latex Fixation)	RF	LAB	Blood	Yellow	4 mL	
Rheumatoid Factor Synovial Fluid	RFSY	LAB	Synovial Fluid	Dry sterile container	1 mL	Referred.
Ri Antibody						See Paraneoplastic Antibody Panel.
Rickettsial infections (other than Q fever)	RICK	LAB	Blood	Yellow	6 mL	Acute and convalescent sera required. Referred
Rivaroxaban (Xarelto Level)	RVXBN	LAB	Blood	Blue	2.7 mL	List anticoagulants and dosage

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Ristocetin Cofactor						See VonWillebrand panel
Ritalin (Methylphenidate)	RITU	LAB	Urine	Dry sterile container	10 mL	Referred.
Rocholimaesa						See Cat Scratch Disease.
Rotavirus	ROTA	MIC	Stool	Dry sterile container	Walnut sized piece	Do NOT order if VIRALGASTRO ordered as this is included with that order.
Rotem (Thromboelastometry Testing)	ROTEM	LAB	Blood	Blue	2.7 mL	Indicate if patient on Heparin. Two test panels available, one panel is specific for heparin patients
RPR Rapid Plasma Reagin	RPR-RX	LAB	Blood	Red or Yellow	3 – 4 mL	To be used for syphilis treatment follow up and patients <2 years old. For initial testing screening use SYPH
RSV						See Respiratory syncytial virus
Rubella - Immune Status IgG	RUBG	LAB	Blood	Red or Yellow	3 – 4 mL	
Rubella - Recent Infection	RUB	LAB	Blood	Yellow	3 – 4 mL	Referred. Includes IgG and IgM
Rubeola						See Measles.
Saccharomyces cerevisiae Antibodies	ASCAB	LAB	BLOOD	Red	7ml	Referred.
Salicylates	SAL	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Salmonella	CS	MIC	Stool	Enteric Transport Medium	Walnut sized piece	Included in the routine stool culture
Scabies	BUGID	MIC	Scraping of skin	Dry sterile container		
Schistosoma - Direct Examination	OP	MIC	Stool 24 hr urine or random midday collection	Parasite container (SAF fixative), dry sterile for urine	Fill line on container 10-20ml urine	Bring to lab ASAP
Schistosoma - Serology	SCHISTO	LAB	Blood	Red or Yellow	6 mL	Referred.
Scrotum Swab (Routine Culture)	CGEN	MIC	Swab	C&S swab		
Secobarbital	SECO	LAB	Blood	Yellow	4 mL	Referred.
Sedimentation Rate						See ESR.
Selenium	SELEN	LAB	Blood	Navy EDTA	7 mL	Referred.
Seminal Fluid (Routine Culture)	CGEN	MIC	Fluid	Dry sterile container		

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Serotonin	SERO	LAB	Blood	Yellow	4 mL	Deliver to Lab ASAP. 48 hours prior to collection, patient must abstain from avocados, bananas, coffee, tomatoes, plums, eggplant, hickory nuts, walnuts, pineapples and medications such as aspirin, corticotrophins, MAO inhibitors, phenacetin, catecholamines, reserpine and nicotine. Referred.
Serotonin	SEROU24	LAB	Urine	24 hour jug with preservative		20 mL 6N HCl preservative. Referred. See diet/drug restrictions above.
Serotonin Release Assay						See HIT
Sex Hormone Binding Globulin	SHBG	LAB	Blood	Yellow	4 mL	Referred.
SGOT						See AST
Shake Test	SHAKE	LAB	Amniotic fluid	Sterile container.		Referred.
Shigella	CS	MIC	Stool	Enteric Pathogen Transport Medium	Walnut sized piece	Included in routine stool culture.
Shingles, Zoster						See Varicella Zoster.
Sickle Cell, screen	SIC	LAB	Blood	Lavender	4 mL	Referred.
SIMPLIRED	SIMPLIRED	LAB				Discontinued . See D.Dimer
Sirolimus	SIRO	LAB	Blood	Lavender	4 ml	Referred
SLOS- Smith-Lemli-Opitz Syndrome	SLOS	LAB	Amniotic Fluid	Sterile container	20.0 mL	Referred.
Smear	SMEAR	LAB	Blood	Lavender	4 ml	Also request CBC. Include specific RBC morphology to investigate in comments
Sodium						Order LYT3.
Sodium -Stool	NAST	LAB	Stool	Dry sterile container	Random	Submit 5 mL naturally fluid feces. Formed feces is not acceptable.
Sodium - Random urine	NAU	LAB	Urine	Dry sterile container	Random	No preservative.
Sodium - 24 hour urine	NAU24	LAB	Urine	24 hour jug	24 hour specimen	No preservative.
Soluble Transferrin Receptor	SOLTRANS	LAB	Blood	Yellow	4ml	Referred
Somatomedin-C	SOM	LAB	Blood	Yellow	4 mL	Deliver to Lab ASAP. Referred.
Somatotropin						See Growth Hormone.
Specific Gravity	SGU	LAB	Urine	Dry sterile container	10 mL	

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Sputum - Routine culture	CRESP	MIC	Sputum, bronchial wash, etc.	Dry sterile container		See Respiratory cultures.
Sulfonylurea Hypoglycemics						Referred. See Hypoglycaemic Agent Screen.
Stone Analysis	STONE	LAB	Urinary Calculi	Dry sterile container		Referred. State origin of stone.
Stool - Routine Culture	CS	MIC	Stool or rectal swab	Enteric Transport Medium	Walnut sized piece	Includes culture for Salmonella, Shigella, Campylobacter, Yersinia and E. coli 0157.
Stool - Viral Culture	VIRALGASTRO	MIC	Stool	Dry sterile container	Walnut sized piece	Specimens are first screened for Rota then referred for VIRALGASTRO panel
Sucrose-Lysis Test						See PNH
Sudan Black			Bone Marrow or Whole Blood	B.M. slides Lavender	4 mL	Done on Pathologist's request.
Sulfatide Autoantibody	SULFATIDE	LAB	Blood	Red	7 mL	Referred. Special request available by consultation only. Contact Central Receiving at 5318. Serum must be received at testing site within 72 Hrs.
Sulfatides - Urine	SULFAU	LAB	Urine	URC	20 MI random urine	Referred
Sweat Chloride	CLS	LAB	Sweat : 22 ul Specimen is required.	Supplied with collection kit.	22 ul	<u>Outpatients:</u> Booked by Phlebotomy. <u>Inpatients:</u> Page phlebotomy to book.
Synovial Fluid	See individual test for mnemonic listed below		Fluid	1. Red 2. Lavender vacutainer 3. Lavender 4. Dry sterile container 5. Bottle with Cytology fixative	7 mL 4 mL 4 mL 1 – 5 mL 20 mL	1. Glucose, Total Protein, LDH, S.G. Amylase, Triglyceride, Uric Acid, 2. Haematology cell count and diff. 3. Crystals 4. Gram stain, culture 5. Cytology examination Deliver directly to Laboratory Central Receiving section. Immediately after collection.
Synovial Fluid - Bacterial culture	CBF or CBBF (if inoculated directly into blood culture bottles)	MIC	Synovial fluid	Dry sterile container or blood culture bottles.	1 – 5 mL	

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Synovial Fluid - Cell Count & Differential	CCSY	LAB	Synovial Fluid	Lavender vacutainer	4 ml	See Synovial fluid for instructions.
Synovial Fluid - Crystals	CRYSY		Synovial Fluid	Lavender	4 mL	Deliver specimen to lab within 30 minutes.
Synovial Fluid - Glucose	GLUSY	LAB	Synovial fluid	Red	7 mL	See Synovial Fluid for instructions.
Synovial Fluid - LDH	LDHSY		Synovial fluid	Red	7 mL	See Synovial fluid for instructions.
Synovial Fluid - Specific Gravity	SGSY	LAB	Synovial fluid	Red	7 mL	See Synovial fluid for instructions.
Synovial Fluid - Total Protein	TPSY	LAB	Synovial fluid	Red	7 mL	See Synovial fluid for instructions.
Synovial Fluid - Triglycerides	TRIGSY	LAB	Synovial fluid	Red	7 mL	See Synovial fluid for instructions.
Synovial Fluid - Uric Acid	URICSY	LAB	Synovial fluid	Red	7 mL	See Synovial fluid for instructions.
Syphilis - Serology screen	SYPH	LAB	Blood	Red or Yellow	3 – 4 mL	Patients <2 years old order RPR-RX
Taenia (Tape Worm) - Serology	TAESER	LAB	Blood	Red or Yellow	6 mL	Include clinical history, place of birth and travel history. Referred.
Taenia (Tape Worm) - Direct Examination	OP	MIC	Stool	Parasite container (SAF fixative)	Fill to line and mix well.	
Taenia (Tape Worm) - Direct Examination	OP	MIC	Tape worm segments	Cytology fixative		Identification may be made to species level if worm segments (proglottides) are sent.
TB Culture						See Mycobacteria.
T Cell Proliferation Studies to Mitogens (PHA, Pokeweed, Concanavalin A)	TCELLPROLI	LAB	Blood	Green(Sodium Heparin)	7 mL	Referred. Make arrangements with Central Receiving supervisor at local 5318. Collect as late as possible to meet courier deadline.
Tegretol						See Carbamazepine.
Telopeptide-C, Blood						See C-Telopeptide
Testosterone	TEST	LAB	Blood	Yellow	4 mL	
Testosterone - Free	TESTF	LAB	Blood	Yellow	4 mL	Referred.
Tetanus antibody level	TETAB	LAB	Blood	Red or Yellow	4 mL	Referred
Tetrahydrocannabinol (THC/cannabinoid)	THCU	LAB	Urine	Dry Sterile Container	25 mL	Ordered as part of DRUGU or can be ordered by itself
Thallium	THAL	LAB	Blood	Navy EDTA	7 mL	Deliver to lab ASAP. Referred
Theophylline	THEO	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect prior to next dose Referred
Thiamin						See Vit B1
Thiocyanate	THIOCY	LAB	Blood	Red	7 mL	Referred

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Thiopurine Nethyltransferase, RBC	TPMT	LAB	Blood	Lavender	7 mL	Referred.
Throat Swab - Beta strep	CT	MIC	Throat swab	Throat swab (liquid transport medium)		Direct Antigen done automatically if patient ≤ 18y
Throat Swab - Gp A direct antigen	GASS	MIC	Throat swab - only one swab required for culture and antigen	Throat swab (liquid transport medium)		Routinely done on patients ≤ 18 years if correct swab sent.
Throat Swab - All pathogens	CTS	MIC	Throat swab	C&S swab		Notify Microbiology if diphtheria is suspected.
Throat Swab - Yeast (thrush)	TY	MIC	Throat swab	C&S swab		Gram smear only – no culture
Thrombin Time (T.T.)	TT	LAB	Blood	Blue	2.7 mL	List thrombolytics/anticoagulants.
Thrush						See Yeast.
Thyroglobulin	THYRO	LAB	Blood	Yellow	6 mL	
Thyroid Antibodies						See Anti Thyroid ab.
Thyroid Receptor Antibody	THYRECEPT	LAB	Blood	Yellow	4 mL	Describe patient's thyroid status, including exophthalmos. Referred
Thyroid Screening (TSH)	TSH	LAB	Blood	Plasma or Serum in Gel Separator tube	4 mL	TSH is analysed. If abnormal FT3 and FT4 are reflexed based on algorithm Not permitted within 6 weeks of last measurement
TSH Newborn Screening	TSHSC	LAB	Blood	Blotter Card		Use for repeat testing of TSH on newborns. If first time order NEWBORNSCR
Thyroid-Stimulating Immunoglobulin	TSI	LAB	Blood	Yellow	4 mL	Must be approved by Medical Head. Referred.
Thyroxine (Free T4)						See Thyroid Screening.
Thyroxine Binding Globulin (TBG)	TBG	LAB	Blood	Yellow	4 mL	Referred
Ticks	BUGID	MIC	Intact, live tick if possible	Dry sterile container		
Tobramycin - Trough	TOBT	LAB	Blood	Yellow	4. mL	Referred. Collect trough specimen within 15 minutes of administering next dose
Tobramycin - Peak	TOBP	LAB	Blood	Yellow	4. mL	Referred. Collect post specimen 30 minutes after IV infusion or 1 hour after IM injection
Tobramycin – Once Daily Dosi	TOBODD	LAB	Blood	Yellow	4. ml	Referred. Collect 6 hours before next dose.

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TORCH-Baby includes CMV, Herpes, Toxo Rubella	TORCH	LAB	Blood	Red or Yellow`	4 mL	Referred for sample from fetus/baby; IgM testing only for each virus
TORCH maternal (CMV, Herpes, Toxo, Rubella)	TORCHMAT	LAB	Blood	Red or yellow	6ml	Referred for sample from mother includes both IgG & IgM testing
Total Protein	TP	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Total Protein	TPU24 Or Random	LAB	Urine	24 hour jug Or dry sterile container	24 hour specimen Or 25 ml	No preservative. Cannot be collected at same time as constituent requiring a preservative.
Toxocara	TOXOCARA	LAB	Blood	Red or Yellow	6 mL	Request must include: clinical history, place of birth, any travel history, relevant lab testing such as parasite found in stool. Referred.
Toxoplasmosis - Recent Infection	TOXO	LAB	Blood	Red or Yellow	3 – 4 mL	Includes IgG and IgM IgM Referred
Toxoplasmosis - Immune Status	TOXOG	LAB	Blood	Red or Yellow	3 – 4 mL	
TPMT -						See Thiopurine Methyltransferase, RBC
Transcobalamine						Test no longer available. Order B12BIND instead.
Transferrin	TRANS	LAB	Blood	Yellow	4 mL	
Transglutaminase	TRANSGLUT	LAB	Blood	Yellow	6 mL	Includes Transglutaminase and IgA.
Trichinella	TRICH	LAB	Blood	Red or Yellow	6 mL	Request must include: clinical history, place of birth, any travel history, relevant lab testing such as parasite found in stool. Referred.
Trichomonas Direct Antigen	VS & TRICHAG	MIC	Vaginal/urethral discharge	C&S swab		Vag smear and Rapid Direct Antigen Test
Trichomonas PCR	TRICHPCR	MIC	Urine	Dry Sterile	15 mL	
Tricyclic Antidepressant Screen	TCAU	LAB	Urine	Dry Sterile Container	25 mL	
Triglycerides	TRIG	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	10 hr fast if requested as fasting. May also be done non-fasting
Trimipramine	TRIM	LAB	Blood	Red	7 mL	Collect prior to administration of next dose. Referred
Triple Marker Analysis						See "Maternal Serum Screen-2 nd Trimester"
Troponin I	TROPI	LAB	Blood	Green	3 mL	

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Trypsin stool						Order ELAST1
Trypsinogen	TRGEN	LAB	Blood	Red	7 mL	Referred
Tryptase (Total)	TRYPTASE	LAB	Blood	Red	7 mL	Referred
Tryptase Mature (primarily Beta)	TRYPTBETA	LAB	Blood	Red	7 mL	Referred
Tuberculosis (TB)						See Mycobacterial infections.
Tularaemia	TULAR	LAB	Blood	Red or Yellow	3 – 4 mL	Referred
Tysabri (Natalizumab) Antibodies	TYSABRI	LAB	Blood	Yellow	4 mL	Referred
Type and Screen	TS	BBK	Blood	Lavender	7 mL	
Tyrosine - Blood						See Amino Acids (AAQS) or PKUSTUDY. Not available alone. Referred
Tyrosine - Urine						See Amino Acid - Metabolic Screen
Unstable Haemoglobin						Test not available – order Hgb electrophoresis
Urate						See Uric Acid.
Urea	UREA	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Creatinine and Urea are not performed together on outpatients. If both are ordered, creatinine only will be measured.
Urea - Random urine	UREAU	LAB	Urine	Dry sterile container	Random	No preservative.
Urea Nitrogen - 24 hour urine	UREAU24	LAB	Urine	24 hour jug	24 hour specimen	No preservative.
Ureaplasma						See Mycoplasmal infections
Urethral Swab						See GC Culture and/or Chlamydia trachomatis.
Uric Acid	URIC	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Uric Acid - 24 hour urine	URICU24	LAB	Urine	24 hour jug with preservative	24 hour specimen	10 ml of 10N NaOH
Urinalysis	UA	LAB	Urine	Dry sterile container	10 mL	
Urinary Free Cortisol						See Cortisol, urinary free. Referred.
Urine - Drug Screen						See Drug Screen
Urine - Routine Culture	CU	MIC	Urine	Dry sterile container	5-10 mL	Note the method collection: catheter, midstream, etc. Note if patient is pregnant
Urine - Yeast and routine culture	CUY	MIC	Urine –clean catch, midstream or catheter	Dry sterile container	5-10 mL	Note the method collection: catheter, midstream, etc.

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Urine - Chlamydia/GC DNA	CHLAMGCU R	LAB	First voided urine	Dry sterile container	10 to 50 mL	
Urine Hemosiderin	HEMOU	LAB	Urine	Dry sterile container	15 mL	
Urine microscopic	UMIC	LAB				Can use same specimen as Urinalysis.
Urine Protein Electrophoresis						See Protein Electrophoresis, urine.
Vaginal culture 1. Vaginitis/ discharge, Trichomonas, Yeast	VS	MIC	Vag	C&S swab or smear		Check age and diagnosis. Write this clearly on requisition.
2. Pregnancy -if Dx as above order both	CGBS	MIC	Vaginal/Rectal is specimen of choice	C&S swab		Write diagnosis clearly on requisition.
3. If ≤ 13 years or sexual assault	CGEN	MIC	Vaginal	C&S swab		Check age and diagnosis. Write this clearly on requisition.
Valium						See Diazepam.
Valproic Acid (Depakene)	VALP	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect prior to dose.
Vancomycin - Trough	VANT	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect trough specimen within 30 minutes of administering next dose
Vancomycin - Peak	VANP	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	Collect 1h after infusion
Vancomycin - Random	VANR	LAB	Blood	Plasma or Serum in Gel Separator tube	4.5 mL	
Vanillylmandelic Acid (VMA)	VMAU	LAB	Urine	24 hour jug	24 hour specimen	Collected over 20 mL 6N HCl. Restrict caffeine, nicotine and alcohol 24 hours prior to collection. List any medications. Discontinue Aldomet for 5 days prior. Referred.
Vanillylmandelic Acid, Random Urine	VMAURAND OM	LAB	Urine	Screw top container	10 mL	Referred.
Varicella zoster - Serology (Recent infection)	VZ	LAB	Blood	Red or Yellow	3 – 4 mL	Chicken Pox, Shingles Includes IgG and IgM Referred GDH
Varicella zoster IgG - Serology (Immune Status)	VZG	LAB	Blood	Red or Yellow	3 – 4 mL	Chicken Pox, Shingles In-house
Varicella group PCR	HSVZVPCR	LAB	Swabs, vesicle fluid, scrapings	UTM		Referred to GDH If requested on CSF, order ZME for Biofire Also includes HSV PCR

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Vasoactive intestinal Polypeptide	VIP	LAB	Blood	Lavender	7 mL	Fasting. Deliver to lab ASAP. Separate plasma and freeze immediately. Send frozen. Stable for 14 days when frozen. Referred
VDRL						See RPR (Syphilis Screen)
Vincent's angina	GS	MIC	Gum swab	C&S swab		
Viral PCR						Ordered according to the specimen type, i.e. RESPVPCR HERPESPCR
Viscosity	VIS	LAB	Blood	Red at 37 degrees	7 mL	Referred. Collect and maintain at 37 degrees. Deliver to lab ASAP.
Vitamin A	VITA	LAB	Blood	Red	7 ml	Protect from light and avoid hemolysis. Avoid gel separation tubes. Sent frozen. Referred
Vitamin B1 (Thiamin)	VITB1	LAB	Blood	Lavender	7 mL	Avoid hemolysis and protect from light. Referred.
Vitamin B12	B12	LAB	Blood	Yellow	4 mL	Not permitted within 12 weeks of last measurement
Vitamin B6 (Pyridoxic Acid)	VITB6	LAB	Blood	2 x Lavender	2 x 4 mL	Avoid hemolysis and protect from light. Separate and freeze within 1 hour. Referred
Vitamin C	VITC	LAB	Blood	Wrapped Yellow	4 mL	Deliver to lab ASAP. Protect from light – wrap in foil. Referred.
Vitamin D: 1, 25 Dihydroxy	VITD125	LAB	Blood	Yellow	4 mL	Referred.
Vitamin D: 25 Hydroxy	VITD	LAB	Blood	Yellow	6 mL	Not permitted within 1 year of last measurement
Vitamin E	VITE	LAB	Blood	Yellow	6 ml	Protect from light. Referred
VMA						See Vanillylmandelic Acid, Random Urine
Vitamin K	VITK	LAB	Blood	Wrapped Yellow	4mL	Referred. 12-hr fast + refrain from alcohol 1 day prior to blood draw. PROTECT FROM LIGHT.
Von Willebrand Factor Antigen						See Von Willebrand panel VWF
Von Willebrand Factor Multimers						Referred. See Multimers of VWF
Von Willebrand Genotype	VWDGENO	LAB	Blood	Lavender	7.0 ml	Referred. DO NOT CENTRIFUGE.

TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Von Willebrand's Panel	VWF	LAB	Blood	Blue	2 x 2.7 mL	Includes VWF antigen, Ristocetin activity, FVIII assay. Clinical history and diagnosis required.
VRE Screen (Vancomycin Resistant Enterococci)	CVRE	MIC	Rectal swab	C&S swab		
Vulva Swab - Routine Culture	CGEN	MIC	Vulva swab	C&S swab		
Warfarin (Coumadin)	WAR	LAB	Blood	Red	6 mL	Referred
West Nile PCR	WNPCR	MIC	CSF	Dry sterile container	0.5 – 1 mL	Will be done routinely in any request for CSF viral culture during the <u>appropriate season of the year</u>
West Nile Virus Serology (Also included in Arbovirus group request)	WNSEROL	LAB	Blood	Red – Yellow	3 – 4 mL	
White Blood Count (WBC)						Request CBC.
Whooping cough (Pertussis) (done by PCR)	BORDPCR	MIC	Nasopharyngeal swab	UTM		Testing done by PCR
Worm for identification	WORMID	MIC	Worm	Dry sterile container		
Wound infections - routine culture	CMISC	MIC	Aspirate or swab of infected area	C&S swab or dry sterile container if fluid		If anaerobes requested, order CMISCAN and send in Anaerobic transport media.
Xylocaine						See Lidocaine.
Yeast Culture - Throat Swab	TY	MIC	Throat swab	C&S swab		
Yeast Culture - Urine	CUY	MIC	Urine – mid-stream, catheter etc.	Dry sterile container	10 – 15 mL	Includes routine culture
Yeast Culture - Blood	CBY	MIC	Blood	Blood culture media	10 - 20 mL	Includes routine culture
Yeast Culture - Vaginal	VS	MIC	Vaginal swab	C&S swab		Actual culture not required - Gram only.
Yeast Culture - Gum/Mouth/Tongue	GS	MIC	Gum, mouth, tongue	C&S swab		
Yeast Culture - Stool	CSY	MIC	Stool	Enteric Pathogen Transport	Walnut sized piece	Includes routine culture
Yellow Fever Serology	YELLFEV	LAB	Blood	Red or Yellow	6 mL	Referred.
Yersinia - Culture	CS	MIC	Stool	Enteric Pathogen Transport	Walnut sized piece	Included in routine stool culture
Yersinia - Serology	YERSER	LAB	Blood	Red or Yellow	6 mL	Referred
Yo Antibody						Referred. See Paraneoplastic Antibody Panel
Zarontin						See Ethosuximide
Zinc, Plasma	ZINCP	LAB	Blood	Navy EDTA	7 mL	Referred

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TEST	MNEMONIC	ORDER ENTRY CATEGORY	SPECIMEN	CONTAINER	AMOUNT	INSTRUCTIONS
Zinc Protoporphyrin	ZPP	LAB	Blood	Navy EDTA	7 mL	Referred.
Zinc	ZINCU24	LAB	Urine	24 hour jug –no preservative	24 hour specimen	Referred. Avoid mineral supplements 5 days prior to collection.

Anatomical Pathology

A. Surgical Pathology

All tissues removed from patients, other than those on the [exemption list](#), are to be sent to Histology for examination. Pathologists are available from 0800 to 1600 Monday to Friday. If they are needed for consultation or frozen section outside these hours, the surgeon must contact the pathologist through the Nursing Office.

B. Procedure for Submitting Specimens

1. All specimens **must** be accompanied by a properly completed requisition including clinical history, operative findings, and source of specimen.
2. Each specimen must be labelled with a numbered label from the requisition along with the patient's name, doctor, Medicare number and tissue source. Handwriting must be legible. Ordering physician and copy to physician must include full first and last name.
3. All tissues must be placed in 10% neutral buffered formalin after removal unless other specific arrangements have been made by the surgeon with the pathologist on call. Delivery to the laboratory should be as soon as possible. ***The container should be of an appropriate size being large enough to hold the specimen plus 20x volumes of formalin.***

C. Specimen Processing

Adequate fixation of all specimens is mandatory. A minimum of 24 hours fixation is preferred for all tissues. Arrangements may be made to handle a specimen as "STAT" (i.e. Processed on the day of receipt). A portion of the sample will be processed that day and any additional tissue will be held for further fixation.

Requests for reports should be made through the Laboratory Office (857-5300).

If a physician requires special attention to a specimen he/she should contact the Pathologist assigned to that case

D. Specimens Requiring Gross Examination and Report Only

Any specimen from the list below demonstrating unexpected or potentially significant lesions will be submitted for histological examination. They will also be examined at the request of a physician with a stated reason.

- Blood clots except intracerebral hemorrhage or bone marrow clots
- Bone fragments and ligaments
- Bony ossicles (ear)
- Foreign bodies (bone plates, nails, bolts, screws)
- Hernial sac membrane on patients under 2 years old
- Hydrocele sac

- Nasal septa (septal resections)
- Optic lens
- Prepuces
- Scar tissue
- Teeth
- Tendon segments (orthopaedic)
- Toes
- Tonsil and adenoids under 12 years old unless requested
- Vaginal wall fragments (plastic repair)
- Varicocele
- Vein strippings

E. Special Tissues / Procedures

1. **Bacteriological Cultures:** Tissue must be in a sterile container with sterile saline (no fixative). Specify on the requisition that these are needed as well as Histology.
2. **Lymph Nodes for Lymphoma Protocol:** These specimens should be booked prior to sending the specimen to the laboratory. Contact the Histology department to book. The specimen should be placed in a bottle with saline, kept moist and sent immediately to the laboratory. Notification (local 2158 or 5300) that the specimen is coming allows the laboratory to prepare reagents for proper processing.

If nodes are removed after 1600 hours weekday or on Saturday, Sunday or Statutory holidays, it is the responsibility of the OR staff to ensure that the pathologist “ON-CALL” be notified. (The on-call pathologist’s name, phone number and/or pager number can be obtained from the Nursing Office).

3. **Amputated Parts:** These are all routinely examined. Include an Authorization for Disposal of Amputated Part form which is signed by the patient or family prior to surgery. Specimens **MUST** be placed in the refrigerator located in the histology department.
4. **Gene Rearrangement:** These specimens are generally lymph nodes or lymph node biopsies and the gene rearrangement is done on in addition to normal lymph node protocol. **These specimens must be booked prior to procedure.** Specimens must be received fresh, kept moist with saline and delivered to the Histology laboratory as soon as possible.
5. **Electron Microscopy and Immunofluorescence Studies:** Consult the laboratory for correct fixative for each.
 - Electron microscopy – 2% buffered Glutaraldehyde
 - Immunofluorescence – Michel’s transport media
6. **Bone Marrow Biopsies:** Bone marrow specimens must be fixed immediately in 10% neutral buffered formalin.
7. **Kidney Biopsies:** Medical kidney biopsies in this hospital are not encouraged since specimen adequacy cannot be assessed at the time of collection. A pathologist should be contacted prior to any biopsy being booked.
8. **Fresh Breast Specimens:** Specimens will be delivered to the laboratory within one hour of the tissue being removed from the body. This time is critical in determining validity of breast biomarkers.
9. **Estrogen / Progesterone Receptors:** Testing for estrogen and progesterone receptors is at the discretion of the pathologist or as directed by synoptic reporting.

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10. **Her-2 neu Gene Amplification for Breast Specimens:** Testing for Her-2 Gene Amplification for breast is at the discretion of the pathologist or as directed by synoptic reporting.
11. **Her-2 neu Gene Amplification for GI Tract Specimens:** Testing for Her-2 Gene Amplification for GI Tract specimens is specialized in performance and interpretation. This testing must be done in consultation with the diagnosing pathologist. Cases are referred out for testing and interpretation.

F. Frozen Section & Operating Room Consultation

1. Call the laboratory office (local 5300) to notify the pathologist and Histology. At least 15 minutes advance notice should be given when possible.
2. The pathologist will pick up the specimen and the intra-operative consultation requisition with all the relevant information from the operating theatre.
3. The pathologist will communicate the results via telephone or personally in the operating theatre.
4. The written report will be left in the appropriate operating theatre or at the desk upon completion of the frozen section.

G. Hospital Autopsy Service

1. Permission for autopsy must be obtained by the attending physician or his delegate.
2. The patient's history should be completed in the medical record or written on the autopsy requisition.
3. The nursing office will notify the pathologist when they have been informed of a required autopsy.
4. The body should be transferred to the morgue with all attached medical devices (IV tubes, solutions, endotracheal tubes, catheters, etc.) remaining in place.
5. When the autopsy is completed, the morgue attendant will inform the nursing office who will contact the funeral home.

H. Coroner's Autopsy

1. Autopsies on persons dying in the emergency department or declared dead-on-arrival will be performed if only ordered by the coroner.
2. Discharge of the body is not effective until the coroner has given permission for the release of the body. The pathologist will notify the nursing office when this has been received prior to completion of the autopsy. If permission is not received by then, the nursing office will obtain permission from the coroner prior to releasing to a funeral home.

I. Forensic Autopsy

During a forensic autopsy, a sign is placed on the morgue door. Access to the morgue is restricted. Please call ext.5313 to gain access, if moving a body is required. Release of body must be done by a morgue attendant.

J. Products of conception (POC)

Central Receiving will dispatch POCs for genetic testing upon request, to IWK, Halifax.

Clinical Chemistry

A. Information on Fasting

When a patient is required to fast prior to the start of a test, the patient should remain inactive and should consume nothing by mouth during the fasting period. A small sip of water or ice is permissible. The length of time of the fast varies by test. **Patients should check with their Provider about taking their medication during the fasting period.**

B. Glucose Tolerance Testing

Several Glucose Tolerance tests are available:

- Screen for Gestational Diabetes: (GLU50G) a non-fasting 1 hr. post 50 gram load.
- Diagnosis of Gestational Diabetes: (GTT2MAT) fasting glucose, then 1 and 2 hour post 75 gram load.
- Diagnosis of Diabetes: (GTT2) fasting glucose and 2 hr. post 75 gram load. Children should receive a dose that is equal to 1.75 gm/kg of body weight, up to the maximum of 75 gm.

All patients who are for fasting tests must be NPO (nothing by mouth) for 8 hours, with the exception of small amounts of water.

Patients are to remain in the area for monitoring by hospital staff during the test, with the exception of the screen for Gestational Diabetes (50g load). In this case, they may go to a physician's office within the health care facility, but are not permitted to leave the facility.

All patients should be advised to remain sitting during the test.

Once the test has started, nothing can be given to the patient except small amounts of water until the test is complete. Smoking is not permitted.

C. Instructions for Urine Collection (Routine Urinalysis)

1. It is necessary to use a clean urine container.
2. Instruct patient to obtain a urine sample.
3. Avoid wetting the outside of the container and cap well.
4. Label specimen with patient's name and unique ID or Medicare Number.
5. If the specimen cannot be delivered promptly it should be refrigerated until delivery can be made. If testing is to be delayed by more than 1/2 hour after collection, specimens should be refrigerated.
6. Specimens older than 12 hours will be rejected.

D. Creatinine Clearance

1. Make sure the patient is well hydrated prior to starting test.
2. Order a Creatinine Clearance and a serum creatinine. Include patient height (cm) and Weight (kg) on the requisition or enter in Meditech. Height and weight must be entered into Meditech in the metric units as requested.
3. Collect a 24 hour urine specimen – no preservative is required. (see directions below)

4. The serum creatinine and 24 hour urine should be collected at the same time, but will be accepted if done within 3 days of each other.
5. Send the 24 hour urine sample and the serum creatinine to the laboratory.

E. Instructions for 24 Hour Urine Collection

Please use the following links to view or print as required: [HHN-0858-24-hr-Urine-Collection-Patient-Instructions](#) or [FR-24-Hour-Urine-Collection-Patient-Instructions-HHN-0858](#).
[Instructions for 24 Hour Urine Collection French and English](#)

Urine collection over a 24-hour period should not begin on Friday or Saturday, but if specimens are completed on weekends, they must be sent to the laboratory promptly for refrigeration or freezing as indicated by test requested. If not protected over the weekend, specimens may be unsuitable for analysis on Monday.

F. Diet/Drug Restrictions prior to 24 Hour Urine Collection

Please use the following links to view or print as required: [HHN-0840-Diet-and-Drug-Restrictions-Prior-to-24-Hour-Urine-Collection](#) or [FR-Diet-and-Drug-Restrictions-Prior-to-24-Hour-Urine-Collection-HHN-0840](#)
[Diet-Restrictions Prior to 24 hr. Urine Collection](#)

G. Fecal Fat - 72 Hour

Please use the following link to view or print as required:
[Patient Instructions for 72 Hour Fecal Fat Collection.pdf \(rha-rrs.ca\)](#)

H. Fecal Transplant

Fecal transplantation or FMT (Fecal Microbiota Transplant) is based on a principle of infusing healthy bacteria that are missing in a patient with altered micro flora and persistent CD infection. The donor is carefully selected (usually 1st degree relative or spouse) and is screened for blood borne diseases and syphilis. A successful fecal transplant will re-colonize the colon of patients with abnormal, absent, or obscure fecal flora in conditions such as long term antibiotic use, non-responsive C.difficile, or chronic GI issues. The role of the laboratory is to prepare an appropriate emulsification of donor stool, ready for transplantation into the recipient.

Physician must notify the laboratory section and arrange appropriate day and time, one week in advance.
Chemistry: phone 857- 5303 or 860-2159
[Donor Instructions for fecal transplant](#)

I. Drug/Diet Instructions for Stool Occult Blood

Please use the following links to view or print as required:

[HHN-0752-Patient-Occult-Blood-Collection-Instructions](#) or
[FR-Patient-Occult-Blood-Collection-Instruction HHN-0752](#)

[Stool Collection for Occult Blood](#)

J. Sperm Analysis Patient Instructions

1. Collection of specimen must be done in the morning, by masturbation only, after 2 - 7 days abstinence.
2. **It is very important that the complete ejaculation sample be collected. Please indicate on the requisition if any portion of the sample was lost, i.e. beginning or end of sample.**
3. Use container supplied by the laboratory or by the Physician's office.
4. Please note **date and time of collection of specimen**, and also the date of the previous ejaculation. Fill out information in the appropriate spaces on this form.
5. The patient's full name and Medicare Number **must** be written on the specimen container and must match the requisition.
6. Specimen should be delivered to the laboratory **within 30 minutes** of collection.
7. Keep specimen warm by transporting it next to the body. Do not expose to heat or cold.
8. **Testing is only performed on Thursday mornings.** Specimens for infertility must be delivered to The Moncton Hospital. Post vasectomy samples may be delivered to Sackville Memorial Hospital or The Moncton Hospital.

Cytology

- A. [Cytology General Information](#)
- B. [Cytology Hours](#)
- C. [Cytology Supplies](#)
- D. [Collection Instructions](#)
- E. [Booking for Fine Needle Aspirates](#)
- F. [Gynecological HPV Testing Information and Collection Instructions](#)
- G. [Sputum and Urine Collection Instructions](#)

A. Cytology General Information

Diagnostic Cytology is the process of studying cells to identify diseases. Cytology is a useful method for detection of malignant and pre-malignant changes, as well as for the diagnosis of certain reactive and infective conditions.

The procurement of adequate specimens is essential for the proper interpretation of the submitted material. Many diagnostic problems can be avoided if careful attention is given to collection and fixation of patient samples. Rapid fixation of smears (slides) and fluid cytology specimens is necessary to preserve cellular detail. Please deliver all cytology specimens with accompanying completed blue requisition(s) to the laboratory as soon as possible. Missing or incorrect information will result in specimen rejection or unnecessary delays in processing. Please include all relevant clinical history such as any previous history of cancer and include date of LMP, hormone treatment and HPV vaccination status if known.

B. Cytology Hours

- Monday - Friday: 0800 - 1600
NOTE: Closed weekends and statutory holidays

C. Cytology Supplies

The laboratory does not supply slides for collection of gynecological specimens (pap smears). Submission of pap smears should be discontinued ASAP. Slides should be replaced with liquid-based samples as below.

- **SurePath Collection Vials for pap specimens**
The Cytology Department now offers liquid-based gynecologic sampling. Vials and collection devices are ordered from hospital Stores. Vials must be labeled with patient's name and other unique identifier and submitted with the same blue Cytology requisition as before.
- **Specimen containers and Cytology fixative**
Cytology will supply sterile specimen containers (90ml size) containing CytoRich™ Red (CRR) fixative for the collection of *non*-gynecological fluid specimens. These containers can be obtained from the Specimen Dispatch/Receiving area of the laboratory (Level 3 Ambulatory Care facility)
NOTE:
(a)The laboratory does not provide spray fixative for preservation of slide preparations.

- **Slide mailers**

The Hospital Stores department will supply cardboard slide mailers for submitting pap smears. These are for single use.

D. Collection Instructions:

All non-gynecological specimens are to be collected in CytoRich™ Red fixative, unless it is not possible due to the type of specimen (e.g., nipple discharge, scraping of skin lesion, etc.).

The amount of specimen does not need to exceed the amount of fixative in the jars.

Ensure specimen site is clearly indicated on the paper requisition, in the bottom section of the page.

Specimen	Amount	Container	Instructions
-Body cavity fluids - Sputum - Washes - Urines - CSF	1-50 mL	Cytology bottles containing CRR fixative obtained in Central Receiving labeled with 2 unique identifiers.	Collect specimen in bottle with fixative. Equal amounts of fixative and specimen are acceptable. Note: if CSF tube is for both Hematology and Cytology, do not add fixative
Brushings	2-4 slides but fluid specimen preferred	Bottle with Cytology fixative or glass slides labeled with 2 unique identifiers.	Smear or brush specimen on slide. Spray immediately with aerosol fixative (Cytospray). Cut brush and place in bottle with CRR fixative if possible
- Pap smears - Lesion scrapings - Nipple discharge - Viral/Fungal detection Note: Pap smears should be replaced with liquid-based sampling (SurePath™)	1-2 slides (or liquid sample in SurePath™ collection vial) Note: a single slide containing cervical and endocervical samples is preferred for Pap smears	Glass slide with frosted end labeled with 2 unique identifiers	Smear or brush specimen on slide. Spray immediately with aerosol fixative (Cytospray). To ensure optimal specimen collection, the Pap test should be done before other cervical procedures including STI testing and IUD insertion, so that the diagnostic cells needed for the Pap test are not removed. The optimal time to schedule a Pap test is at least 5 days after the end of the menstrual period to avoid excess blood on slide which obscures cells.
Fine Needle Aspirations of tumors, cysts, nodes, etc. Example: breast, thyroid, lymph nodes	up to 50 mL	Bottle with Cytology fixative or glass slides labeled with 2 unique	Expel specimen into bottle containing Cytology fixative, then re-aspirate some fixative to rinse needle and

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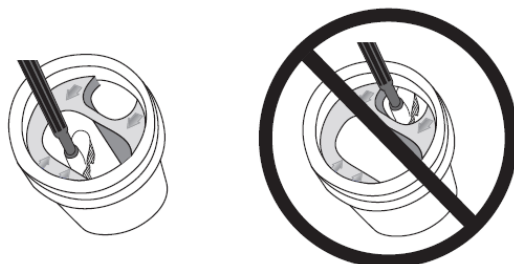
See below (E) for detailed collection instructions		identifiers	expel back into bottle. OR Expel material onto glass slides, smear and Cytospray fix immediately
SurePath™ liquid based Gyn samples.	N/A	Vial with Gyn preservative fixative, supplied by hospital Stores	Collect the cytology sample using either a broom-like device or combination brush/plastic spatula with detachable heads. Follow collection instructions for detachable head device summarized below. Insert Rovers Brush into cervical opening and while applying gentle pressure rotate clockwise 5 times. Drop the detachable head device into the SurePath™ vial. Place the cap on the vial and tighten.

SurePath™ Gynecologic Specimen Collection (adapted from BD):

NOTE: For specimen collection, use either a broom-type device with detachable head (e.g., Rovers Cervex-Brush) or a combination endocervical brush/plastic spatula device with detachable head(s) (e.g., Pap Perfect Spatula).

1. Obtain a sample from the cervix according to the standard collection procedure.
2. Holding the collection vial firmly down on a flat surface, insert the head(s) of the collection device(s) into the larger of the two openings in the BD SurePath™ Collection Vial using one of three methods:
 - 1) Using the thumb and forefinger of a gloved hand, disconnect the head of the broom-type device from the handle and deposit into the larger of the two vial openings.
 - 2) Insert the head of the broom-type device into the larger of the two vial openings. Rotate the handle of the collection device while gently pulling up to detach the device head from the handle, depositing the device head into the larger of the two vial openings.
 - 3) When using combination brush/spatula collection devices with detachable heads, insert the first device so that the break point is above the top of the light blue vial insert and the head is below the insert. Bend the device back and forth until the device breaks, depositing the collection head into the larger of the two vial openings. Repeat for the second device.

Discard the handle(s) of the sampling device(s). Do not touch the head(s) of the sampling device(s).



NOTE: Arrows on top of the light blue vial insert point to where the collection device head(s) should be deposited. **Always deposit collection device head(s) into the large vial opening.**

DO NOT place collection device head(s) into the smaller vial opening.

3. Cap the vial tightly.
4. Send the specimen containing the head(s) of the sampling devices(s), with appropriate requisition, to the laboratory for processing without delay.

Storage and Disposal

- Store the BD SurePath™ Collection Vial without cytologic samples at room temperature (15-30°C).
- Do not use the BD SurePath™ Collection Vial beyond the expiration date printed on the vial.

Specimens smeared on microscopic slides (pap smears, esophageal brushings, bronchial brushings, skin lesions) **MUST** be sprayed with cytology fixative immediately (2-3 squirts). **DO NOT AIR-DRY SMEARS.**

- Ensure frosted end of slide is labeled, in *pencil*, with patient's full name and Medicare number and/or unique hospital number. Slides submitted without two correct identifiers will not be processed. Please note that ink will wash off in ethanol-based staining solutions and should never be used to label slides.
- Place the patient's slide in a cardboard slide mailer. Secure the slide mailer shut with tape or elastic band.
- Deliver to the laboratory with completed Cytology requisition (blue).
- Liquid-based pap samples have a limited shelf-life at room temperature and should be delivered to the laboratory without delay.

E. Booking and Collecting Fine Needle Aspiration Biopsies

Booking

Fine Needle Aspiration Biopsy (FNAB) is designed to sample tumor masses with a thin 22/25-gauge needle to obtain material which can be examined microscopically for evidence of tumor cells or infectious agents. The Cytology Department can bring a cart equipped with staining set up and microscope to do Rapid Onsite Evaluation (ROSE).

It is strongly recommended to book fine needle biopsies requiring ROSE in advance by calling the Cytology Department at 857-5311. The following information should be provided:

1. Name and Medicare of patient - or other identifying information
2. Site of biopsy
3. Location of procedure (department)
4. Name of submitting physician
5. Request for other tests such as Flow Cytometry if known

Collection procedure

The instructions below pertain to fine-needle aspiration biopsies performed by the clinical care provider at the client site.

Equipment:

- Syringe: Disposable 10-20 mL plastic syringe.
- Syringe holder (optional): It is entirely possible to aspirate lesions without a syringe holder; however, some prefer to use one since it allows one hand to immobilize the target lesion and the other hand to control the movement of the syringe while applying suction. This may be helpful for the aspiration of cystic lesions. For solid lesions, however, applying suction is typically not necessary as the cutting action of the needle during a needle pass is sufficient to advance the cellular material into the needle hub via capillary action.
- Needle: Disposable fine-gauge needle, preferably with clear plastic hubs. This simple feature will enable you to see the first drop of material (bloody or otherwise) entering the hub of the needle.
- CRR (CytoRich Red®) Solution in 90 ml specimen container or 10% neutral-buffered formalin in 20- or 60-ml container. Note: samples requiring molecular, or immunohistochemistry testing must be collected in formalin.

Procedure:

1. Cleanse the skin over the lesion with an alcohol swab. If local anesthesia is needed, use ethyl chloride spray or 1% lidocaine.
2. Fix the mass between your fingers to immobilize the mass during the needle passes.
3. Carefully poise needle at right angles to the surface of the skin, just touching the point of insertion. Quickly introduce the needle through the skin and advance it into the mass. When the needle has entered the mass, apply strong suction.
4. Apply negative pressure to the syringe and move the needle back and forth within the mass and in different directions to effect the cutting action of the needle point and retain cells in the needle hollow.
5. It is not necessary to see visible aspirated material in the hub, but the moment blood or any material appears in the hub, stop aspirating but do not remove the needle from the mass until pressure on the plunger is released; this will allow cells to be contained in the needle and not the syringe. If you do not release the suction, the aspirated material will enter the barrel of the syringe and may result in loss of cellular material as it is difficult to recover material from the syringe.
6. Place the entire sample directly into either formalin or CytoRich Red (CRR®) solution (by aspirating formalin or CRR® solution through the needle into the syringe and then expelling back into the container several times). **Samples from different anatomic sites should be placed in separate containers or slides, labeled appropriately, and submitted with separate requisitions.** Slides must be fixed immediately with Cytospray.
7. Occasionally the aspirated lesion is cystic. In this case, aspirate as much fluid as possible and place the fluid into the CRR® vial. Resample any residual mass following the procedure described above.

Fine Needle Aspirate Collection Guidelines for Cytologic Examination

University of Michigan Health System

Department of Pathology – Specimen Processing

UH 2F361

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Laboratory User Manual Version 17.0

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Effective: September 09, 2025

F. HPV Testing (Gynecological): Collection

NOTE:

Gynecologic HPV testing is performed at Saint John Regional Hospital (SJRH). Collection devices and vials are the ones used for liquid-based (LBC) paps. Requisitions for HPV testing are available from the Cytology department. Specimens that are collected for pap in SurePath® fixative can be used for reflex HPV testing. An HPV requisition must be filled out in addition to the Cytology requisition when both tests are requested.

All specimens must be labeled with the corresponding tear-off label located on the bottom of the HPV requisition. Labels must contain patient's full name and Medicare number. Requisitions must have all information fields completed to prevent specimen rejection. Deliver samples and requisitions to the laboratory ASAP for referral to Saint John.

- **HPV Testing Anal Pap**

NOTE:

Anal swabs are not processed by the Microbiology laboratory in Saint John but are sent to the National Medical Laboratory (NML) in Winnipeg.

Specimens are to be collected and placed in SurePath® fixative supplied by the Cytology laboratory upon request. An HPV requisition should be filled out, or if not available, the required HPV request must be clearly written on the Cytology Requisition.

All specimens must be labeled with the corresponding tear-off label located on the bottom of the requisition if using HPV requisition. Labels must contain patient's full name and Medicare number. Requisitions must have all information fields completed to prevent specimen rejection. Deliver samples and requisitions to the laboratory ASAP for referral to NML.

G. Instructions for Cytology Urine/Sputum Collection

Patient Instructions Cytology Urine/Sputum Collection

☐☐ Sputum for Cytology (CytoRich Red® fixative)

• **FIRST** thing in the morning and after a **DEEP** cough, place sputum (mucus) directly into the sterile bottle containing pink liquid, and with a bright orange label on the outside which reads-CYTOLOGY FIXATIVE POISON

CAUTION – TOXIC – DO NOT DRINK

- Label the bottle with your Name, Medicare #, Date and Time of specimen collection.
- Bring specimen directly to the Lab with the written doctors' orders as soon as possible.
- If you are instructed to collect a specimen for more than one day, collect day 2 and 3 the same as the first collection. Only collect one sample each day. Specimens do not need to be refrigerated. All three specimens can be brought to the Lab at the same time, as soon as possible after the third sputum sample has been collected.

☐☐ Urine for Cytology (CytoRich Red® fixative)

- Do not collect the first morning urine. Any other time of the day is okay.
- Collect urine (same amount as fixative) directly into bottle containing pink liquid and with a bright orange label on the outside which reads-CYTOLOGY FIXATIVE POISON

CAUTION - TOXIC - DO NOT DRINK

- Label the sterile bottle with your Name, Medicare #, Date and Time of specimen collection.
- Bring specimen directly to the Lab with the written doctors' orders as soon as possible.
- If you are instructed to collect a specimen for more than one day, collect day 2 and 3 the same as the first collection. Only collect one sample each day. Specimens do not need to be refrigerated. All three specimens can be brought to the Lab at the same time, as soon as possible after the third urine sample has been collected.

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Directives aux patients prélèvement cytologique d'urine/crachat

☐☐Cytologie du crachat (Fixateur cytologique CytoRich Red®)

- En vous levant le matin et après avoir toussé profondément, placez le crachat (mucus) directement dans la bouteille contenant un liquide rosé, et qui porte une étiquette de couleur orange vif indiquant – FIXATEUR CYTOLOGIQUE TOXIQUE

PRUDENCE – TOXIQUE – NE PAS CONSOMMER

- Inscrivez votre nom, votre numéro d'assurance-maladie, la date et l'heure de prélèvement de l'échantillon sur l'étiquette de la bouteille.
- Apportez l'échantillon accompagné du billet du médecin directement au laboratoire le plus tôt possible.
- Si vous devez prélever des échantillons pendant plusieurs jours, prélevez les échantillons aux 2^e et 3^e jours de la même façon que vous le faites la première journée. Prélevez seulement un échantillon par jour. Il n'est pas nécessaire de conserver les échantillons au réfrigérateur. Tous les trois échantillons peuvent être apportés au laboratoire en même temps, le plus tôt possible après le prélèvement du troisième échantillon de crachat.

☐☐Cytologie urinaire (Fixateur cytologique CytoRich Red®)

- Ne pas prélever la première urine du matin. Vous pouvez prélever l'urine à n'importe quel autre moment de la journée.
- Prélevez l'urine (le même montant de fixateur) directement dans la bouteille contenant un liquide rosé et qui porte une étiquette de couleur orange vif indiquant – FIXATEUR CYTOLOGIQUE TOXIQUE

PRUDENCE - TOXIQUE - NE PAS CONSOMMER

- Inscrivez votre nom, votre numéro d'assurance-maladie, la date et l'heure de prélèvement de l'échantillon sur l'étiquette de la bouteille.
- Apportez l'échantillon accompagné du billet du médecin directement au laboratoire le plus tôt possible.
- Si vous devez prélever des échantillons pendant plusieurs jours, prélevez les échantillons aux 2^e et 3^e jours de la même façon que vous le faites la première journée. Prélevez seulement un échantillon par jour. Il n'est pas nécessaire de conserver les échantillons au réfrigérateur. Tous les trois échantillons peuvent être apportés au laboratoire en même temps, le plus tôt possible après le prélèvement du troisième échantillon d'urine.

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Haematology

A. CBC Specimens

- CBC specimens must immediately be inverted gently 8-10 times after collection to prevent formation of fibrin strands, platelet clumping or clotted specimens.
Minimum volume for CBC vacutainer is 1 ml and 300 ul for Capillary specimens.
- CBC measured parameters are stable for 24 hrs. at room temperature however the differential may be slightly affected due to slight morphological degeneration.
- Occasionally, an ACD (yellow stoppered) collection tube is required to perform a CBC because of a reaction between the patient's blood and the anticoagulant in the lavender stoppered tube.

B. Turn-Around Time for Complete CBC Results

A complete CBC is performed with instrumentation that electronically recognizes counts and sizes WBCs, RBCs and Platelets. Occasionally, the instrument will fail to recognize a certain cell population because of an abnormality with the patient's blood cells. In this case, the technologist will release only the results that are judged to be accurate. The nursing unit will receive a partial CBC result. The rest of the CBC results will only be released after certain protocols are followed which involves alternate methods of processing the specimen. The turn-around time for the complete CBC result is therefore delayed until accuracy is attained.

C. Mono testing

The turnaround time can vary for MONO testing results. Mono testing is routinely batched and done once per shift.

D. Malaria

Malaria is extremely time sensitive and samples must be delivered to the Lab immediately after collection.

E. Coagulation Specimens

- Coagulation samples require correct blood to anticoagulant ratio for accurate results. Under filled and overfilled coagulation specimens will not be processed.
- Hemolyzed samples will not be processed
- Coagulation specimens must immediately be inverted gently 8-10 times after collection to prevent clotted specimens.
- PT specimens are stable for 24 hrs. at room temperature.
- APTT specimens are stable for 4 hrs. See exception below.
Exception- APTT for patients on IV HEPARIN, order as STAT. APTT must be in Lab within 1 HR of collection. Specimens exceeding one hour will not be processed.
- Specimens with an UNK collection time will not be processed.
- Patient's current anticoagulant therapy should be noted.
- Rivaroxaban, Apixaban specimens are stable for 6 hours at Room Temperature.
- Dabigatran specimens are stable for 8 hours at Room Temperature.
- Heparin Anti-Xa must be in lab within 2 HR of collection. Order as STAT. Specimens exceeding 2 hours will not be processed.
- Closetime (PFA) must be received in the lab within 4 hours of collection and platelet aggregation must be received in the lab within 2 hours of collection. Do not send through the pneumatic tube system
- Other coagulation tests: Samples are stable at room temperature for 4 hours.
- HIT testing-must be received in laboratory within 1 hour of collection. Order as STAT. Testing will be done within 24 hours.

F. CSF

- CSF specimens are very time sensitive. Deliver to the lab immediately after collection.
- **3 tubes** collected. Order of Draw: #1 Chem, #2 Micro, #3 Haem + Cytology (shared).
Haematology receives tube # 3.
- **4 tubes** collected. Order of Draw: #1 Chem, #2 Micro, #3 Haem, #4 Cytology.
Haematology receives tube # 3.
- **To rule in/out a bleed or trauma: 4 tubes** collected. Order of Draw: #1 Haem, #2 Chem, #3 Micro, #4 Haem + Cytology (shared). *Haematology receives tube's # 1 and # 4.*

G. Proper Collection Tubes for Body Fluid Cell Counts

- Certain body fluids will clot when they are removed from the body. If a clot forms, cells become trapped within this clot. If a count is attempted on a body fluid that is clotted, the number of enumerated cells will be grossly lower than the true value because the count is performed on the fluid that surrounds the clot.
- To obtain an accurate cell count, it is very important to collect the body fluids in the appropriate container to prevent clotting. The collection tube of choice for a body fluid cell count is the same lavender stoppered tube that is used to collect venous blood for a CBC.
- Immediate gentle mixing should be done once specimen is procured.
- Deliver to Laboratory Central Receiving section immediately after collection.

H. Platelet Aggregation

- Platelet Aggregation testing must be booked in advance. This is a non-routine specialty test, with only 3 technologists trained in the procedure.
- Testing requires a full day to process so specimens must be received by 8:30 a.m.
- As some drugs affect testing, a complete list of the patient's medications must be included when booking the test. Patients cannot take ASA.
- A light breakfast is allowed prior to testing.

I. Flow Cytometry

- Testing in Flow Cytometry requires a diagnosis. Procedures are varied and labor intensive; therefore a diagnosis helps to decide which tests to perform, cutting costs and time requirements.
- Flowcytometry does not routinely operate during off shifts, weekends or holidays.
- Flowcytometry specimens can include peripheral blood, bone marrow, lymph nodes, tissue, CSF or Body fluids.
- Lymph node and tissue specimens should be received in saline or on gauze saturated with saline to prevent dehydration and be in the lab no later than 1300 hrs. Call to notify the Flow Lab 860-2163, or 857-5305.
- Formalin embedded tissue samples are not suitable for flow cytometric evaluation. Flow lab should be informed about formalin embedded samples before sending them, otherwise those samples will be rejected.

J. Bone Marrows

- Bone Marrow test requests must be accompanied by a diagnosis.
- In cases where the sample will be referred for outside testing, special requisitions must be completed by the physician.
- A lab technologist specially trained in bone marrows assists the physician with the procurement of the sample. Call the lab to request the presence of a Technologist when the Physician arrives to do the procedure.

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- Although it is not always possible, advance booking of bone marrow testing is preferred.

K. Rotem (Thromboelastometry testing)

- The Rotem tests a single patient specimen at one time with a duration of approximately 60 minutes to fully complete.
- Testing can be terminated at any time if a second follow-up sample is required to be tested.
- It is recommended that at least 20-30 minutes of testing should elapse before interpretation of data.
- Two ROTEM testing panels
 - Routine panel: **INTEM, EXTEM, FIBTEM** and **APTEM**.
 - Heparinized patient panel: **INTEM, EXTEM, FIBTEM** and **HEPTEM**.
- **HEPTEM** will only be tested on patients receiving unfractionated heparin
- Proficiency must be demonstrated prior to obtaining access to ROTEM remote viewing.
- Information, Rotem Transfusion Algorithms, access regarding the Rotem Delta and the “*ROTEM Access Request for Remote Viewing Form*” may be found on Skyline/Tools and Resources/Patient Care/Blood Products Administration site.
- Rotem must be received in the lab within 4 hours of collection

Microbiology

A. GUIDELINES FOR TRANSPORT OF MICROBIOLOGY SPECIMENS

RT = room temperature 20 to 25°C

For optimum results all specimens should be received by Microbiology within 24 hours of collection.

Special conditions and stat (ASAP) samples are noted in the chart below

Specimen		Tests	Container	Conditions for Transport
Urine	Clean catch, MSU, Cath etc.	Bacterial Culture (C&S)	Dry sterile	Refrigerate 4°C within 1 hour of collection, ship in cooler but do not place directly on ice
	First void^	Chlamydia / GC DNA		^ First Void = first 15 to 30ml of voided urine
	Early morning	TB/Mycobacteria		
Throat swab		Routine C&S or Strep A Antigen	Liquid transport swab	Transport at RT *
Swabs – Wound, Genital, etc.,		Bacterial Culture (C&S)	C&S swab or Dry sterile container for pus or liquid samples	Transport at RT *
Blood Cultures Body Fluids CSF (for cult)		C&S	Aerobic, Anaerobic or Pediatric bottle or Dry Sterile for fluids	Keep at room temperature (RT) – do not allow to cool as this may result in the death of some fastidious bacteria. <u>Send to Lab ASAP</u>
Sputum		C&S TB/Mycobacteria	Dry sterile	Refrigerate 4°C
Sputum		Viral	Send to Lab <u>ASAP</u>	
Nasopharyngeal swab		Pertussis PCR (Bordetella)	UTM (pink fluid)	Transport at RT
Nasopharyngeal swab		RSVPCR	UTM (pink fluid)	
Stool		Culture (C&S)	Enteric Transport (pink)	Collect into appropriate transport containers and ship at RT. * Do NOT refrigerate
		Parasites (O&P)	SAF Fixative	
		H.pylori antigen	Dry sterile	
		C. difficile toxin	Dry sterile	Refrigerate – <u>send to lab ASAP</u>
		Viral PCR	Dry sterile	
Genital		Urogenital Mycoplasma	UTM (pink fluid)	Transport to lab on ice ASAP
		GC/Chlam DNA	Special transport	See separate directions, send at RT
		Vaginal swab	C&S Swab	Transport at RT
Various samples		Viral PCR	Swab – use UTM (pink fluid) } Refrigerate and transport to lab ASAP Fluid sample – use dry sterile	
Pre-inoculated culture plates		Sent for further work-up and/or confirmation from other laboratories		Secure the caps/lids of the petri dish or tube with tape or Parafilm® – ship at RT. Do not allow to freeze.*

- *Do **not** allow specimens to freeze or to warm above RT, i.e., do **not leave in vehicle** unless the specimens have been placed in a protected container, e.g. cooler.
- All packaging should comply with the Transport of Dangerous Goods Guidelines – see appropriate section of this manual

B. Microbiology Specimen Containers

Description	Store Order #
Micro Amies Transport (C&S) swab	0048227
Throat and MRSA transport	0045440
Sterile Container	0004940
Stool (Fecal) container (dry sterile with spoon)	0048245
Blood Culture Bottle Aerobic	7013912
Blood Culture Bottle Anaerobic	0018284
Blood Culture Bottle Pediatric	7013914
Stool Culture Container (Cary Blair Enteric Transport)	0068174
Stool for Parasites/O&P (SAF fixative)	0071239
Chlamydia / GC (swabs and urine) Multi-Collect Specimen Collection Kit	0164005
Containers obtained directly from Microbiology Laboratory	
UTM (Universal Transport Medium) - <i>Previously Viral Transport Media</i>	
Pertussis Collection swab- Use UTM	
Pinworm Paddle	
Mycoplasma/Ureaplasma PCR transport (use UTM)	
Fungal Kits – skin scrapings- Dry Sterile container supplied by Stores	
Anaerobic Transport Medium	

C. Guidelines for the submission of Stool Samples for Bacteria, Viruses or Parasites

Agents	Order	Notes	Container / Transport
Viruses	Rotavirus (ROTA)	Direct Antigen test – <u>Results</u> within 6 to 10 hours of receipt	- Dry Sterile container - Obtain from Hospital Stores - One sample for ALL tests - Refrigerate specimens and transport ASAP
	Norovirus (NORPCR) or Viral Gastroenteritis PCR (VIRALGASTR)	Includes the following viruses: Norovirus G1 Norovirus G2 Astrovirus Adenovirus Rotavirus Sapovirus	
	Enterovirus (EVPCR)		
Bacteria	C&S (CS)	<u>Routinely look for Salmonella, Shigella, E.coli 0157, Campylobacter and Yersinia – other pathogens must be clearly identified on the request</u> <u>Results: positives will be at least 48 hours</u> , negative reports may take >72 hours from time of receipt	<u>Enteric Pathogen Transport (liquid transport)</u> - Obtain from Hospital Stores - Transport at Room Temperature within 24 hours
	C. difficile Toxin (CDIFF)	Formed stool NOT processed Resulted daily on in-patient samples	- Dry Sterile container - Obtain from Hospital Stores - Refrigerate and send ASAP

	H.pylori (HPYL)		• Dry Sterile container • Transport at Room Temperature within 48 hours
Parasites	Ova & Parasites (OP)	<u>Screening for intestinal parasite only</u> <u>Result:</u> turn-around time is an average of 3 to 5 days Rapid Giardia and Cryptosporidium	• <u>SAF Fixative – fill to line & mix well</u> • Obtain from Hospital Stores • Transport at Room Temperature within 24 hours

Specimen Labels: All specimens **must be labeled with two identifiers** – the Patient's Name & Medicare # preferred, these should also be on the requisition

Notes on Outbreak Situations

- Do not submit formed stool – unformed samples i.e. specimens which assume the shape of the container are appropriate
- Samples for Bacterial culture and Viral PCR should also be submitted at the same time
- Parasites are generally not implicated in rapid onset outbreaks

Patient Specimen Collection Instructions

Please use the following links to view or print as required:

- D. [Patient Instructions for Collection of Stool specimens for Microbiology HHN-0448-Instructions-for-Collection-of-STOOL-Specimens-for-Microbiology or FR-Instruction- for-Collection-of-Stool-Specimens-for-Microbiology-HHN-0448](#)
- E. [Patient Instructions for Use of Pinworm Paddle](#)
- F. [Patient Instructions for Collection of Urine Specimens for C&S HHN-0822-Instructions-for-Collection-Urine-Routine-Culture-Yeast-and-TB-Mycobacteria or FR-Instruction-for-Collection-Urine-Routine-Culture-Yeast-and-TB-Mycobacteria-HHN-0822](#)
- G. [Patient Instructions for Collection of Sputum Specimens](#)

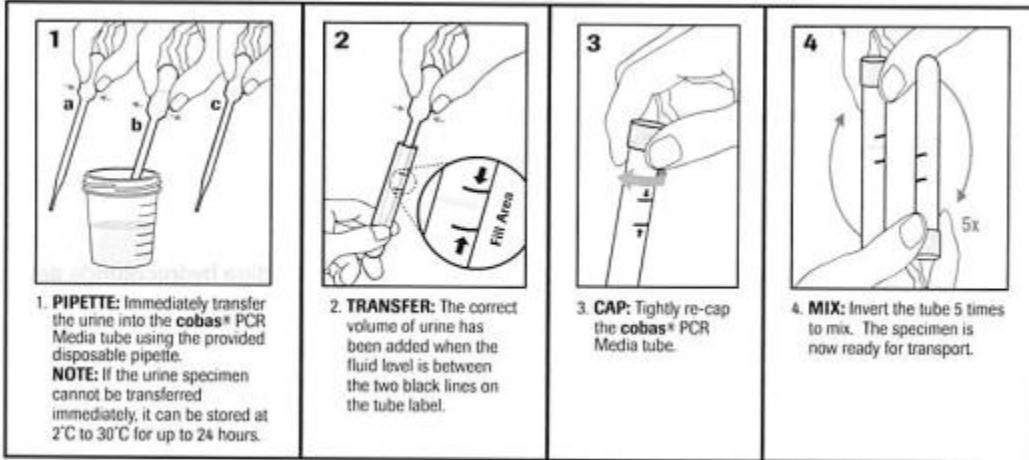
H. Chlamydia and GC DNA Amplification testing – Sample Collection

The majority of specimens requesting *Chlamydia trachomatis* and *Neisseria gonorrhoeae* received in this laboratory are processed using a nucleic acid (DNA) amplification method.

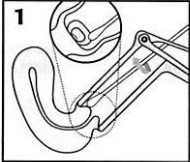
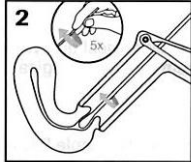
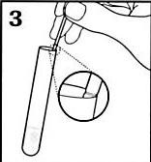
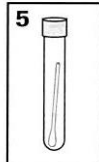
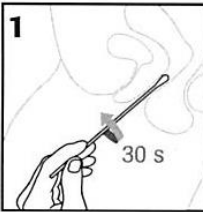
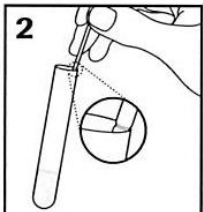
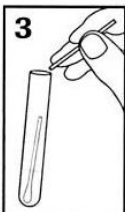
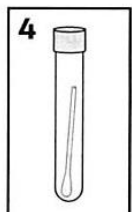
The specimen of choice for the diagnosis of genital infections in females continues to be the endocervical swab although an appropriately collected urine sample may be submitted. In males, a urine sample is acceptable.

Note: All specimens will be tested for the presence of both agents.

Instructions for collection of URINE Specimens for GC/CHLAM testing

Precautions	• Avoid contact of the liquid PCR media with the skin, eyes, or mucous membranes. If contact does occur, immediately wash with large amounts of water. • If spills occur, DO NOT clean with bleach or other highly reactive reagents such as acids and bases.
Urine Collection	• Prior to sampling, the patient should not have urinated for at least one hour. • They should then collect the first 20-30 ml of the initial urine stream into a urine collection cup. • For best results, female patients should not cleanse the labial area prior to collection. • Urine specimens should be transferred into the multi-collect Specimen Collection Kit transport tube immediately using the plastic transfer pipette provided in the kit. • If specimens cannot be transferred immediately, they can be stored at 2°-8°C for up to 24 hours.
Specimen transfer	 1. PIPETTE: Immediately transfer the urine into the cobas® PCR Media tube using the provided disposable pipette. NOTE: If the urine specimen cannot be transferred immediately, it can be stored at 2°C to 30°C for up to 24 hours. 2. TRANSFER: The correct volume of urine has been added when the fluid level is between the two black lines on the tube label. 3. CAP: Tightly re-cap the cobas® PCR Media tube. 4. MIX: Invert the tube 5 times to mix. The specimen is now ready for transport.
Specimen Transport	• Stabilized urine specimens are stable at 2°- 30°C for up to 14 days or -20°C for up to 60 days

I. Instructions for collection of SWABS for GC/CHLAM testing

Precautions	Avoid contact of the liquid PCR media with the skin, eyes, or mucous membranes. If contact does occur, immediately wash with large amounts of water. If spills occur, DO NOT clean with bleach or other highly reactive reagents such as acids and bases.
Specimen collection	<u>Endocervical swab specimen collection</u> Warning: Do NOT pre-wet swab in liquid 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. <u>Vaginal swab specimen collection</u> Warning: Do NOT pre-wet swab in liquid 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.
Specimen transport	Specimens are stable at 2° - 30°C for up to 14 days, or -20°C for up to 60 days

Exceptions – non DNA amplification testing

Chlamydia trachomatis:

- Pediatric eye swabs or nasopharyngeal specimens – Special request; contact Microbiology laboratory. Collect UTM and transport to laboratory ASAP

Neisseria gonorrhoeae:

- When there is a strong suspicion that the results will be positive submit a swab (routine C&S swab) for culture at the same time – susceptibility testing can then be done on the isolate as well as epidemiological typing if required

J. Guidelines for the submission of Respiratory Samples for Bacteria or Viruses

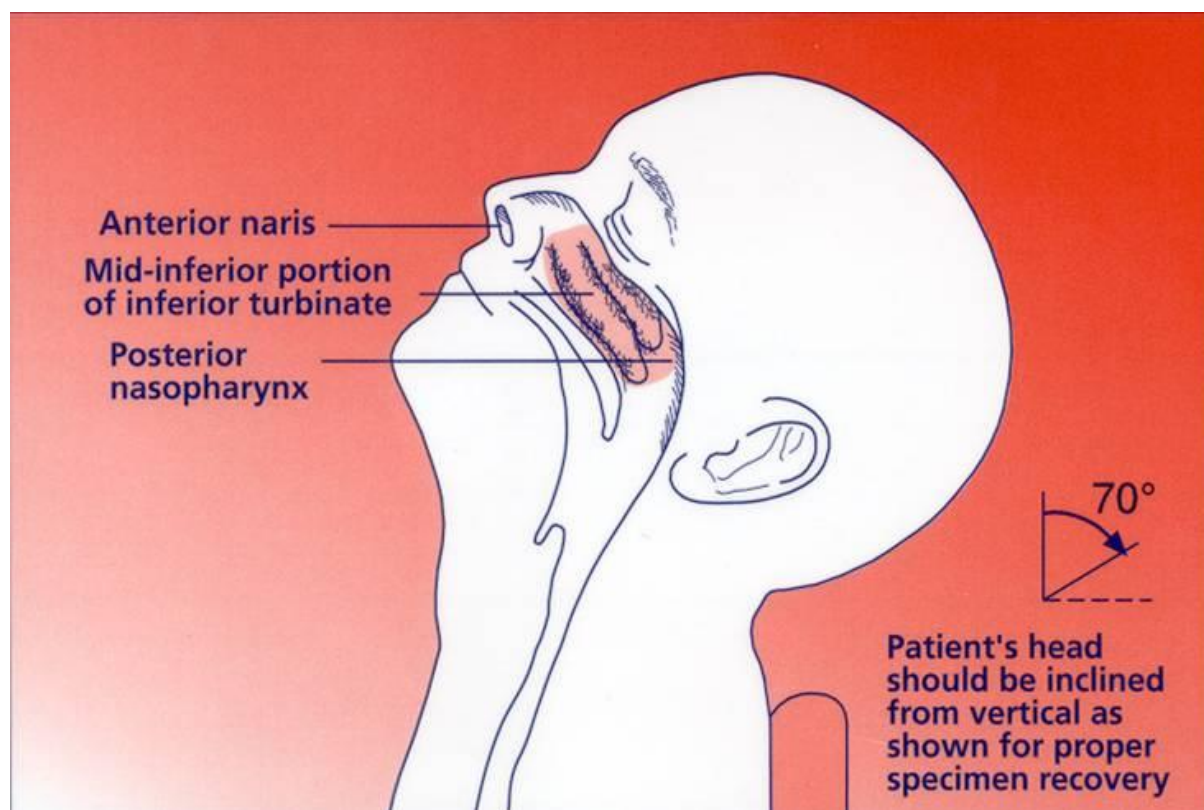
Agents	Order	Specimen/Notes	Container/Transport
Viruses	RSV RSVPCR	Nasopharyngeal Swab	UTM
	Respiratory Viruses RESPVPCR Includes:	Sputum, BW, BAL, Nasopharyngeal Swab/ Aspirate Throat swab or washings Parainfluenza 1/2/3/4 Rhinovirus/Enterovirus Coronavirus NL63/OC43/229E/HKU1 Metapneumovirus ,Human Bocavirus , Adenovirus, Mycoplasma pneumoniae, Chlamydia pneumoniae	Swabs in UTM or fluids in dry sterile container (MUST send to Lab ASAP) Panel does not include testing for COVID-19. Referred to GDH
	Biofire respiratory Panel, In-house ZRESPVPCR	Nasopharyngeal Swab, includes: Influenza A/B, RSV Parainfluenza 1/2/3/4 Rhinovirus/Enterovirus Coronavirus NL63/OC43/229E/HKU1 Covid-19, Metapneumovirus, Adenovirus, Mycoplasma pneumoniae, Bordetella, Chlamydia pneumoniae	UTM Includes Covid-19 testing
	Influenza INFLUSCR	Nasopharyngeal swab Throat Swab	Swab in UTM
	Covid-19 ZCOVID	NPS, Throat/Nose, Nasal Aspirate	UTM for Rapid by GeneXpert
	CO/FLU/RSV ZCOFLURSV	NPS, Throat/Nose	UTM for Rapid by GeneXpert
	Meningo/Enceph Panel, by Biofire ZME	E.coli, Haemophilus, Listeria, Neisseria meningitidis, GBS, Strep pneumo, CMV, Enterovirus, Herpes Simplex 1&2, Human Herpesvirus 6, Parechovirus, Varicella zoster, Cryptococcus	Dry sterile
Bacteria	Bordetella Pertussis BORDPCR	Nasopharyngeal swab (test done by PCR)	Swab in UTM
	Routine Culture ¹ CRESP	Sputum – Expecterated, BAL, BW Endotracheal suction/swab	Dry Sterile container
Mycobacteria	AFB, TB Culture ² CMYCOB	Sputum, Endotracheal suction Bronchial washing/lavage	Dry sterile container
Less common requests:			
Legionella	CLEGION- Sputum, BAL, BW, ETT submitted in dry sterile container, referred.		
Chlamydophila pneumoniae	Cultures not routinely available. Order PCR test CHLAMPNPCR		

Notes:¹Routine Culture includes a Gram smear that is also used to assess the quality of the specimen – if there is evidence of excess saliva a repeat specimen will be requested

²Mycobacterium/AFB culture includes an acid fast smear if sufficient sample received

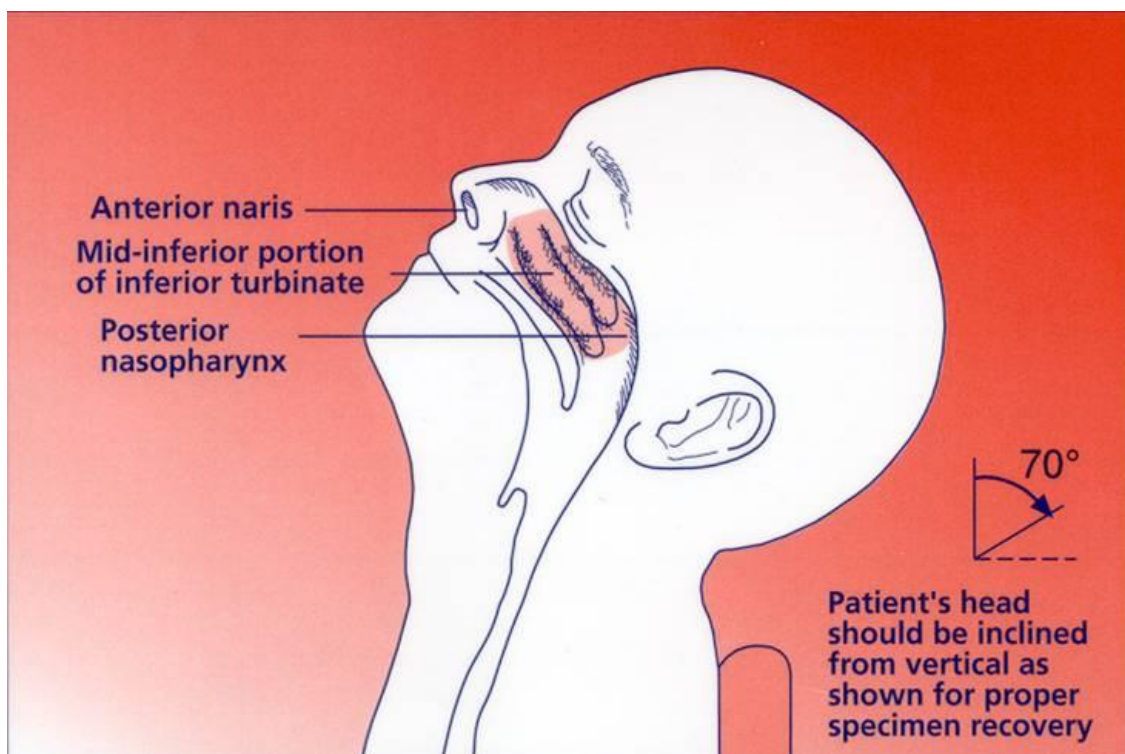
K. INFLUENZA/RSV/COVID-19 PCR – Specimen Collection

Equipment	1. UTM media (swabs in package)
Collection Procedure	1. Clean off any obvious mucus from the patient's nostrils. 2. Immobilize the patient's head. 3. Gently insert the swab into the nostril until it reaches the posterior nasopharynx (see diagram below) 4. Leave the swab in place for up to 30 seconds. 5. Remove the swab and re-place into the tube – if the patient is cooperative the same swab can be placed in the other nostril 6. Label the tube, refrigerate, and send to laboratory ASAP along with a completed requisition.
Notes	• Transport to the laboratory at room temperature • UTM is available from the Microbiology Laboratory (857-5309).



L. PERTUSSIS (Bordetella) PCR– Specimen Collection

Material	• UTM media (swabs included in package)
Procedure	1. Clean off any obvious mucus from the patient's nostrils. 2. Immobilize the patient's head. 3. Gently insert the swab into the nostril until it reaches the posterior nasopharynx (see diagram below) 4. Leave the swab in place for up to 30 seconds or until a coughing spell is induced. 5. Remove the swab and re-place into the tube – if the patient is cooperative the same swab can be placed in the other nostril 6. Label the tube, re-fridge, and send to laboratory ASAP along with a completed requisition.
Notes	• Transport to the laboratory at room temperature • UTM is available from the Microbiology Laboratory (857-5309).



M. Turn Around Times – Microbiology Tests done in-house

Note:

1. These are based from the time of receipt; other factors may influence the TAT such as other workload, the type of specimen and requirements for processing, etc.
2. Specific information on **critical value reporting** is given in Provision of Services section of this Users Manual
3. All results are entered into the computer and verified as they become available

Specimen Type	Preliminary	Positive Final	Negative Final	Notes
CSF other sterile Body Fluids	1hour for Gram & any positive findings	24 - 48 hours depending on isolate	72hours	
Blood Cultures	1 hour any positive findings with updates as available	24 - 48 hrs. after isolation	5 days	specific cultures are kept for extended periods
Urine	Within 15 to 18 hours of incubation	24 to 48 hours	18 - 24 hours	
Wounds	1 hour for stat Gram significant cultures as appropriate	24 - 48 hrs. after isolation	48 - 72 hours	certain cultures may be kept for extended periods
Throat (β Strep)	Antigen Test - 2 hrs. Culture 24 hrs.	24 hours	24 hours	
Eyes, ears, etc.,	1 hour for stat Gram	24 - 48 hrs. after isolation	48 - 72 hours	
Sputum other respiratory specimens	1 hour for stat Gram within shift for validating quality	24 - 48 hrs. after isolation	48 - 72 hours	
Respiratory – RSV PCR	N/A	STAT – 2 hour otherwise within shift	STAT – 2 hour otherwise within shift	
Stool Culture		24 - 48 hrs. after isolation*	72 hours	*some isolates may be sent to reference lab, resulting in delays
Stool – Rotavirus	Resulted within shift			
Stool - C.difficile Toxin	In-patient samples done daily			
Stool O&P	STAT only within day shift		3 to 5 days	not routinely processed on weekends
Genital Culture	1 hour for stat Gram significant cultures as appropriate	24 - 48 hrs. after isolation	48 - 72 hours	
Gp B Strep Screen	48 hours	48 - 72 hours	72 hours	
Vaginal Smears	N/A	48 - 72 hours	48 - 72 hours	not routinely processed on weekends
Chlamydia / GC DNA testing	N/A	24 - 72 hours	24 - 72 hours	not routinely processed on weekends
Legionella Antigen	done within shift	2 – 12 hours	2 – 12 hours	

N. Turn Around Times - Serology Tests done in-house

Notes:

1. These are based from the time of receipt,
2. Serology tests are not routinely processed on weekends or holidays.

Test	Schedule	Usual TAT
CMV IgG	2-3 times per week	1 to 5 days
EBV Panel	1-2 times per week	1 to 7 days
HAV IgG HAV IgM	4-5 times per week	1 to 3 days
HBsAG	4-5 times per week	1 to 3 days
HBsAB	4-5 times per week	1 to 3 days
HBcore Total	4-5 times per week	1 to 3 days
HCV	4-5 times per week	1 to 3 days
HIV Ag/Ab	4-5 times per week	1 to 3days
H. pylori antigen	2-3 times weekly	1 to 5 days
Syphilis	4-5 times per week	1 to 3 days
Rubella IgG	4-5 times per week	1 to 3 days
Toxoplasma IgG	1-2 times per week	1 to 7 days
VZV IgG	Once Weekly	3 to 7 days

O. Referred-out Serology Test Results

- Generally take 7 to 21 days unless requested as urgent

P. Department of Health (Public Health) Notification

- In accordance with the Public Health Act the laboratory provides details of patients (including the name of the submitting Provider) with laboratory evidence of certain diseases a list of which, is provided to all physicians
- Certain findings are considered critical from a Public Health standpoint and are reported immediately by phone and fax as the results become available (see section on reporting Laboratory Critical Values), all other results are provided in a weekly report.

Department of Health Notifiable Diseases List

- **Microbiology**

- All bacterial meningitis
- Systemic infections with: *N. meningitidis*, *S. pneumoniae*, *H. influenzae* type b, Group A *Streptococcus*
- STDs – Chlamydia, *N. gonorrhoeae*, *Herpes simplex*
- Enteric infections – *Salmonella*, *Shigella*, *Campylobacter*, *E. coli* 0157; *Giardia*, *Cryptosporidium*, etc.
- *Bordetella pertussis*, *Mycobacterium tuberculosis*, *Legionella pneumophila*
- Other agents as deemed appropriate by Public Health Inspector.

- **Infectious Disease Serology**

Confirmed positive results in the following tests:

CMV IgM	Measles IgM
Hepatitis A IgM	Mumps IgM
Hepatitis B Antigen	Rubella IgM
Hepatitis C antibody	Syphilis test
HIV	Varicella IgM
Lyme Disease	

Phlebotomy

Please refer to [Regional Phlebotomy Manual](#) for Phlebotomy Procedures on Skyline

Transfusion Medicine

Blood Products Administration Resources on Skyline

To access, either:

- 1) Click this link: [Blood Products Administration](#)
- 2) Or from the Skyline Home page, select “Tools & Resources” ► “Patient Care” ► “Blood Products Administration”

A. Specimens: Specimens must be labeled, at the patient’s bedside, with the full name of the patient and one unique identifier (e.g. health card number or hospital unique number)
Both Transfusion Medicine specimens and the requisition **must** bear Meditech mnemonic or **legible** signature or initials of the person drawing the specimen. Specimens **will not** be processed if the proper signatures are not in place. Please also refer to [Sample Identification](#) under the specimen handling section on page 14.

Note: * This is a MUST for all [Blood Bank Specimens](#), **must send sample with the requisition together!**

The initials on the tube and the signature on the requisition indicate that the person drawing the blood has verified that the patient information on the tube and the requisition exactly matches the information on the armband and therefore the patient has been correctly identified.

Blood will be held for 24-48 hours post-surgery unless the laboratory receives a request to hold it longer.

Orders for units to be held require a new specimen collected every 96 hours if the patient is receiving blood products.

Transfusion Medicine Orders:

Type and Screen (TS); ABO, Rh and antibody screening test is performed and specimen held in Blood Bank for 96 hours. Blood can be crossmatched and made available within 5-10 minutes of a request. This should be ordered if there is no immediate requirement to transfuse.

Crossmatch (RCC); Blood is required to be available to the patient for a transfusion or surgical procedure.

Product orders: Order product requested and quantity of boxes. Indicate actual Dr.’s orders in appropriate section

BBKAOT: Add on tests: Telephone Transfusion Medicine to ensure a valid specimen is available. Order BBKAOT in both category and procedure and indicate actual Dr.’s orders in appropriate section

ROTEM Testing: refer to [Hematology page 119](#).

Turnaround Times (TAT) for Transfusion Medicine Testing

Test	Indication	STAT	Urgent	Routine
Crossmatch		<1 hour	<1 hour	<3 hours
Group & Screen		<1 hour	<2 hour	<5 hours
Direct Antiglobulin Test		<1 hour	<1 hour	<3 hours
Transfusion Reaction Investigation		<1 hour Gram stain and culture to follow		
Cord Blood Workup	Rhlg Eligibility	<1 hour	<1 hour	<3 hours
	Suspect HDN	<1 hour	<1 hour	<2 hours
Kleihauer-Betke	Rhlg dosing	<2 hours	<2 hours	<5 hours
	FMH suspected	<1 hour	<2 hours	<2 hours
Prenatal Group & Screen		<1 hours	<2 hours	<36 hours
Antibody titer		n/a	n/a	<72 hours
Cold Agglutinin Testing		<2 hours	<2 hours	<24 hours

Blood Product Preparation

Test	Indication	STAT	Urgent	Routine
Thaw Plasma		Within 30 min of request to transfuse		
Cryoprecipitate Thaw and Pool		Within 30 min of request to transfuse		
Red Cell Aliquot		Within 20 min of request to transfuse		
Washed red cells		Within 20 min of request to transfuse		
Blood for Exchange Transfusion		Within 1.5 hours of request to transfuse		
Volume reduced platelets		Within 2 hours of request to transfuse		

A. Signing Out Blood and/or Components

1. Blood will be issued to physicians, nurses, licensed practical nurses, porters, orderlies, ward secretaries and ward aides. The name, hospital number, group and unit number must be checked by both the person receiving and issuing the blood.
2. The nursing unit will be notified when the crossmatch is completed and the blood is available. The requisition (issue voucher) will be issued by the laboratory when the blood is released.
3. **Requests for transport:** Portering system: All requests for transport of blood products will use the Allscripts patient flow system. The patient's full name, unique hospital ID number and the type of blood product requested must all be in the message on the cellular telephone.
Other messengers or if the Allscripts system is down: The patient's full name and unique hospital ID number may be indicated on a product label, the broadcast report or a card stamped with the patient's addressograph or written legibly on a piece of paper.

B. Use of uncrossmatched blood

1. In the case of extreme emergency, Group O Rh negative or Group O Rh-Positive blood can be given. The physician must sign the Responsibility Form to acknowledge the urgent need for administration of the product. The form should be returned to Transfusion Medicine. A specimen of patient's blood drawn prior to administration of the blood must be delivered to Transfusion Medicine so a crossmatch can be performed for group specific blood.
2. It is always recommended that group specific blood be given and every effort will be made to determine the Group and Rh rather than having to give O Rh negative blood.
4. One or two units (depending upon stock) of Group O Rh negative blood will be kept in the blood refrigerator in the Operating suite. These will be marked **"Emergency Use Only"**.
5. Group O Rh-Negative, or Group O Rh-Positive uncrossmatched blood may be sent from the TM Lab to the Trauma room via pneumatic tube

C. Immediate Spin crossmatch

If the patient has had a group, type and a negative antibody screen in the previous 96 hours or on a specimen drawn in the peri-operative clinic, the blood will be released after the immediate spin phase of the crossmatch. For patients with antibodies or previous transfusion reactions, blood must be fully crossmatched.

D. General Rules for Transfusion

1. The consent for transfusion of blood and blood products shall be completed and signed by the patient and the physician prior to the patient receiving blood and/or blood products.
2. Please refer to HHN-CL-NU022 *Administration of Blood Products*, Nursing Patient Care Policy and Procedure Manual for policy and procedure on administration.
3. All identifying information must be checked and all discrepancies resolved before blood product is transfused.
4. Administration of blood and blood products must commence within 30 minutes of it being released from the laboratory. If this is not possible, return product to Transfusion Medicine immediately.
5. Do not warm the unit except where ordered by a physician (e.g. massive transfusion or cold agglutinin disease)
6. No medications or solutions may be added or infused through the same tubing simultaneously with blood or blood components, unless the solution has been approved for this use by Health Canada. Co-administration of 0.9% sodium chloride injection, ABO compatible plasma or 5% albumin can be performed at the discretion of the recipient's physician.
7. Blood transfusions are to be started only by authorized nursing personnel, house staff and physicians. Pressure infusions may be given only in the presence of a physician. Personnel are responsible for supervising the transfusion and the patient must be closely observed during the administration of the first 50-100 ml. The patient should be checked at regular and frequent short intervals for any sign of reaction.
8. Administration time should be between 2 and 3 hours. Transfusion must be completed within **4 hours of removal from the temperature controlled environment of a Blood Bank refrigerator**. The physician should specify the period of time and volume per hour.
9. The crossmatch/assignment tag must remain attached to the unit until the transfusion is complete. Complete the tag attached to the unit and return to the laboratory. The unit should be discarded on the nursing unit.

10. A card will be issued by the laboratory to patients informing them of a transfusion of blood products the first time that they are received in any calendar year. This card should be given to the patient prior to discharge.
11. All suspected transfusion reactions should be reported to the Transfusion Medicine department immediately.

E. Transfusion Reactions

The major types of transfusion reactions are described in this manual. Investigation of other types involve special procedures and will be the responsibility of the physician and pathologist. The aim in all cases is to determine as rapidly as possible if a potentially lethal reaction is occurring.

Definitions:

Transfusion Reaction: Undesirable condition which occurs during or after the administration of blood products.

Acute Transfusion Reaction : reaction seen within first 24 hours after start of transfusion

Delayed transfusion Reaction: Reaction seen more than 24 hours after transfusion started

Symptoms	Possible reactions
Urticaria	Allergic Anaphylaxis
Fever, chills, rigors	Febrile Non-hemolytic Transfusion Reaction (FNHTR) Acute Hemolytic Transfusion Reaction (AHTR) Transfusion Related Acute Lung Injury (TRALI) Bacterial Contamination
Dyspnea	Transfusion Associated Circulatory Overload (TACO) Transfusion Related Acute Lung Injury (TRALI)
Hypotension	Bacterial Contamination Anaphylaxis Transfusion Related Acute Lung Injury (TRALI)
Hemolysis, dark or red urine	Acute Hemolytic Transfusion Reaction (AHTR)
Hypertension	Febrile Non-hemolytic Transfusion Reaction (FNHTR) usually diastolic BP ↑ Transfusion Associated Circulatory Overload (TACO)

Investigation of Transfusion Reactions

1. **STOP** the transfusion but do not disconnect the blood product
2. **KEEP** the IV open with 0.9% saline by using different IV tubing
3. **CHECK** the patient's vital signs or initiate continuous monitoring if a reaction is severe
4. **RECHECK** patient's armband and product identifiers for a possible clerical error. ANOTHER PATIENT MIGHT BE AT RISK
5. **NOTIFY** the attending physician or nurse practitioner (NP). The decision on restarting the transfusion will be made by the physician or NP

6. **NOTIFY** Transfusion Medicine (TM), save the offending product, leaving the filter attached and note the details of concomitant IV therapy and the clinical description of the reaction
7. **DRAW** a post-transfusion blood specimen (7 mL lavender stoppered EDTA tube)
8. **Complete** the Transfusion Reaction form LAB-1-TM-F0008(forms are available from the Transfusion Medicine department) and take along with blood sample and suspected unit to Transfusion Medicine. **The reporting person must sign the Transfusion reaction report form.**
9. **SAVE** all urine until further physician notice. TM may ask for urinalysis and/or chest X Ray.

Reaction	Signs and Symptoms
Hemolytic	Hemolysis is caused by incompatibility between donor and recipient's blood. Either donor's or recipient's cells may be hemolyzed, the first by antibodies in the recipient's serum and the latter by antibodies in the donor's serum. These reactions are most often due to a failure to properly identify the patient, clerical error or mismatching. <i>Identification of the patient and correct labeling of specimens is of utmost importance.</i> Symptoms usually begin after transfusion of the first 100 to 200 cc's of blood and consist of some or all of the following: - Fever and Chills - Hemoglobinuria - hypotension - increased respiratory rate - lumbar pain - feeling of heat along the transfusion vein - unexplained bleeding - precordial pressure or pain Nausea and vomiting may follow and progress to cyanosis, shock with cold clammy skin, coma and a failing pulse. A chill may be followed by a temperature rise to greater than 42 C and delirium may result. A hemorrhagic tendency may develop immediately and be manifested by bleeding from the transfusion site, IV sites or mucous membranes. The picture can be variable and there is one case reported of severe hemolysis in which the only clinical feature was mild urticaria. Rarely there is only hypertension and tachycardia which can vary in severity. Under anesthesia the clinical recognition is difficult but the following may be seen: - Fever and Chills - Hemoglobinuria - tachycardia - tachypnea - petechial hemorrhages All of the above are more commonly related to the patient's disease process, to anesthesia, and to surgical blood loss than to hemolytic transfusion reaction. Post-operative anuria is rarely as a result of a reaction but should be considered whenever unusual bleeding occurs during or following transfusion.
Allergic Reactions	These are usually due to the transfer of allergens in the donor's plasma to which the recipient is sensitive. Symptoms may develop several days after transfusion and include: - urticaria (wheals, hives) - sore throat - eosinophilia - lymphadenopathy - fever - joint pains Rarely the more severe manifestation of allergy could occur: - anaphylactic shock - angioneurotic edema (face, glottis, larynx) - bronchial asthma The usual allergic reactions are seldom of any consequence and can be prevented or reduced in severity by premedication with an antihistamine if clinical history so indicates.

Reaction	Signs and Symptoms
Febrile Non-Hemolytic Reaction	Characterized by a fever ($\geq 38^{\circ}\text{C}$ and a change of $\geq 1^{\circ}\text{C}$ from pre-transfusion value), chills, sensation of cold, rigors, with or without headache and nausea or hypotension. Fever may not always be present
TRALI	Transfusion related acute lung injury can occur up to 6 hours post transfusion Symptoms: Hypoxemia ($\text{O}_2 \text{ sat} < 92\%$, $\text{pO}_2 < 60$ or requiring O_2): New bilateral CXR infiltrate findings: <u>Risk factors:</u> Direct Lung Injury • Aspiration • Pneumonia • Toxic inhalation • Lung contusion • Near drowning <u>Indirect Lung Injury</u> • Severe sepsis • Shock • Multiple trauma • Burn Injury • Acute pancreatitis • Cardiopulmonary bypass • Drug Overdose <u>Presentation:</u> • Dyspnea, hypoxemia, fever and hypotension • Chest x-ray reveals interstitial and alveolar infiltrates (pulmonary edema) without elevated pulmonary pressures • Occurs with transfusion of RBCs, platelets and plasma, rarely with other blood products • Almost always within the first 1-2 hours after start of transfusion but may be up to 6 hours • Usually resolves within 24-72 hours • 72% of reported cases require mechanical ventilation • 5-10 % of patients die • Milder forms may present as transient hypoxia • Acute transient leucopenia may be observed after a TRALI reaction Suspected cases of TRALI should be reported immediately to the Transfusion service. Donors and patient will be tested by Canadian Blood Service
TACO	Transfusion Associated Circulatory Overload. Results from impaired cardiac function or excessively rapid rate of transfusion. Clinical presentation includes dyspnea, orthopnea, cyanosis, tachycardia, increased venous pressure and hypertension.

Revised by Anne Robinson	March 16, 2015
Reviewed and Approved by Dr. H Buyukdere	March 30, 2015

Point of Care Testing

Please refer to [Point of Care \(POC\) Manual \(Includes Moncton Area Documents\)](#) on Skyline

Point of Care (POC) 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 POC Coordinator at 857-5315.