MICROBIOLOGY LABORATORY SERVICES

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LOCATION, HOURS OF OPERATION AND CONSULATATION

LOCATION:

St Paul's Hospital 604.682.2344 (Switchboard)

Providence Wing - Second Floor 604.806.8184 (68184) (For special requests)

HOURS OF OPERATION AND SERVICES

HOURS OF OPERATION:

Regular operating hours 0700 - 2300 hours

(Monday – Friday excluding statutory holidays)

Saturday, Sunday & statutory holidays 0800 - 1600 hours

CONSULTANT MEDICAL MICROBIOLOGISTS:

 Dr. M. Romney
 604.806.8188 (68188) Pager: 604.252.4184

 Dr. S. Champagne
 604.806.8813 (68813) Pager: 604.252.4387

 Dr. C. Lowe
 604.806.8422 (68422) Pager: 604.252.4294

 Dr. V. Leung
 604.806.9373 (69373) Pager: 604.252.4650

 Dr. N. Matic
 604.806.8423 (68423) Pager: 604.252.4497

 Dr. A. Stefanovic
 604.806.8371 (68371) Pager: 604.252.4005

TECHNICAL SUPERVISORS:

Willson Jang (Team Lead) 604.806.8369 (68369)

Leah Gowland (Technical Coordinator) 604.806.2344 x 62738 (62738) Jennifer Bilawka (Technical Coordinator) 604.806.2344 x 62738 (62738) Jeffrey Taruc (Weekend) 604.806.8184 (68184)

CONSULTATION SERVICE:

A Medical Microbiologist is available at all times for consultation on any aspect of clinical microbiology (prevention, diagnosis, treatment, infection control issues).

For emergency consultations after hours, please contact the Medical Microbiologist on-call through the hospital switchboard.

AFTER HOUR ON-CALL SERVICES:

A Microbiology Technologist is on-call from 2300 - 0700 hours Monday – Friday, and 1600 - 0800 hours weekends and statutory holidays for the following procedures:

- CSF examination when the white cell count is ≥ 5 and the ordering physician has requested a smear interpretation
- CSF Cryptococcal Antigen NEW patient (ie. no previous CRAG testing previously)
- Endophthalmitis diagnosis (Intraocular samples eg. aqueous or vitreous fluid)
- Luna Biopsy processina
- Other procedures, including smear interpretation of a STAT specimen when approved in advance by a Medical Microbiologist (e.g. STAT AFB smear, necrotizing fasciitis)

LAB RESULTS REPORTING:

Lab results may be viewed by facilities linked to the PHC Laboratory Information System (LIS).

STAT results, critical and urgent positive results are called directly to the wards and/or ordering physician (Refer to "Reporting of Critical and Urgent Results").

STAT REQUESTS

BLOOD CULTURES:

Phone STAT collection requests to Laboratory Accessioning - Local 62741.

GRAM STAINS:

- Deliver specimens to Microbiology before 2230 hours Monday Friday or before 1530 hours weekends and statutory holidays
- Phone requests for STAT Gram stains on specimens already submitted to local 68184
- After hours Telephone or deliver the specimen to the Laboratory Accessioning area Second floor Providence Wing, Blood Work Dispatching, Local 62741
- On request, Gram stains will be prepared on sputum specimens from ICU or Emergency for interpretation by the house staff

OTHER SAMPLES: Surgical samples and samples listed on page 1 (After Hour On-Call Services)

NOTE: Due to the poor sensitivity of performing an acid-fast stain on unconcentrated respiratory specimens, STAT requests for AFB smears are no longer processed on a routine basis. Exceptional requests for STAT AFB stains will be considered only after consultation with the Medical Microbiologist.

CULTURE REQUESTS

The Microbiology Laboratory strives to culture all routine specimens received during regular operating hours on the day of receipt. Routine specimens arriving near to closing time will be processed as early as possible the following day. The following specimens will be cultured upon receipt in the laboratory 24 hours per day:

Evening/night staff cultures the following specimens:

- CSF
- Joint fluid
- Pleural and pericardial fluid

Evening/night staff upon direct request, will culture the following specimens:

- Newborns all specimens
- Fluids dialysates, peritoneal fluids etc.
- Any specimens from the operating room or collected by a surgical procedure
- Sputum specimens from Emergency only

The Medical Microbiologist must approve all other requests. Smears on the above specimens are routinely made. They will be Gram stained for reading by the house staff *on request*.

TELEPHONE INQUIRIES

LM Labs Call Centre 1.877.747.2522

When telephoning the laboratory for patient results, please give the following information:

- Your full name and authority to access results
- Patient's name and birth date
- Patient's chart number or PHN
- Site or source of the culture (e.g. right leg wound, pleural fluid) or the test ordered
- Date the specimen was taken

SPECIMEN DROP OFF

Specimens may be brought down to the Laboratory and dropped off either in the hall refrigerator, or placed in the microbiology box in the Laboratory accessioning area. (For urgent deliveries to the Laboratory, page the stores porter.)

STAT specimens, cerebrospinal fluids or specimens for anaerobes should be brought directly to the Laboratory and handed to a technologist.

REFERRED-OUT SPECIMENS

The following tests are referred to the British Columbia Centre for Disease Control Laboratory Services (BCCDC — commonly known as Public Health Microbiology Reference Laboratory) Monday – Friday except statutory holidays:

- Parasitology (i.e. ova & parasites)
- Non Viral Serology (i.e., serology for bacterial, fungal and parasitic diseases)
- Stool for mycobacteria (AFB/MAC/MAI)

Collect these specimens in a separate container **and** complete the designated requisition. A requisition is required even when entering orders electronically through Sunrise Clinical Manager. Instructions for specimen collection are on the reverse side of the requisition. BCCDC performs the test and reports the results. The contact phone number for results is **1.877.747.2522 (LM Labs Call Centre)**

The PHC Virology Laboratory (6th floor Burrard) performs the following tests and reports the results. Refer to Virology Services manual for a complete list of available tests. Refer to Sunrise Clinical Manager for order entry instructions.

Various other tests may be referred out to other reference laboratories as appropriate.

FOOD POISONING AND OTHER OUTBREAK INVESTIGATIONS

- 1. For cases of suspected botulism or other outbreak:
 - Contact the PHC on call Medical Microbiologist through the hospital switchboard.
 - For botulism, if unable to contact the PHC Medical Microbiologist, contact the BCCDC Medical Microbiologist through the 24-hour answering service at 604.661.7033. Leave your name, telephone number and a brief message.
- 2. Notify Vancouver Coastal Health Communicable Disease Control at **604.675.3900** during regular office hours (0830 1630 hours). After hours page public health **604.527.4893.**
- 3. Collect specimens as soon as possible after the food poisoning incident. Complete the appropriate form(s). The forms are included in the kit (after hours via local 62756)
- 4. Refer to the alphabetical listing under *Botulism Investigation* and/or *Food Poisoning* for specimen collection information. Special collection kits are available from the Microbiology Laboratory.

SUMMARY OF TEST PROCEDURES

Key: R = Routinely done N = Not available S = Requires a special request	DIRECT GRAM STAIN	AEROBIC CULTURE	ANAEROBIC CULTURE	GC CULTURE	LEGIONELLA EXAM	PNEUMOCYSTIS EXAM	CRYPTOCOCCAL ANTIGEN	AFB STAIN	T.B. CULTURE	FUNGUS/YEAST CULTURE	COLONY COUNT	ENTERIC PATHOGENS (1)	C. DIFFICILE TOXIN NAT	Chlamydia / GC NAT
BIOPSY (Tissues, FNA)	R	R	R		S			R	R	R				
BLOOD CULTURE	N	R	R						S					
BODY FLUIDS	R	R	R					S	S	S				
BONE MARROW	N	R	R					S	R	R				
BRONCHOSCOPY	R	R	R		S	S		S	S	S				
CSF	R	R					S	S	S	S				
EAR	R	R	R							R				
EYE	R	R		R*										S
GENITAL	R	R		R										R
MOUTH	R	R												
NOSE		R												
RECTAL				R										S
SPUTUM	R	R	N					S	S	S				
SYNOVIAL FLUID	R	R	R	R										
STOOL								S				R	S	
THROAT	N	R		S										
URINE	R**	R									R			R
WOUND (Swabs & aspirates)	R	R	R											

 R^* = Routinely done on specimens from neonates R^{**} = Done on surgically collected specimens and specimens with significant growth

⁽¹⁾ Enteric pathogens: Aeromonas, Campylobacter, E. coli O157, Salmonella, Shigella, Yersinia

SPECIMEN HANDLING, TRANSPORT & STORAGE

Proper specimen collection, handling, storage and transport are *essential* for optimal microbiology testing. If in doubt about the collection or handling of any specimen, please contact Microbiology, local 68184..

If specimens are being submitted on a C&S swab, please collect material on both the swabs provided in the collection package and follow the instructions on the package. In most cases it is preferred if tissue and/or fluids rather than a swab are submitted as these are optimal specimens.

Be specific in the identity of the specimen, site or source. Indicate special test requests and provide the laboratory with accurate and complete clinical information to assist with proper processing.

Do **NOT** refrigerate the following specimens:

Deliver to Microbiology as soon as possible after collection. Leave specimens on the counter in the specimen accession area **EXCEPT** for blood cultures and cerebrospinal fluid (see below for special instructions).

- 1. Blood cultures
 - BacT/Alert® bottles place in 35°C incubator (or keep at room temperature)
 - Isolator® (lysis centrifugation) during regular hours, hand to a technologist. Outside regular hours, bring down to Microbiology and leave at room temperature
- 2. Cerebrospinal fluid hand directly to a technologist
- 3. Culture for anaerobes
- 4. Joint synovial fluid
- 5. Specimens for Neisseria gonnorrhoeae ("GC") leave at room temperature
- 6. Specimens for Trichomonas
- 7. Swabs in transport media

DO refrigerate the following specimens:

- 1. ALL urine specimens
- 2. Body fluids that may be contaminated with faecal flora
- 3. Dialysates
- 4. Pleural fluid
- 5. Blood/Serum for serology testing
- 6. All specimens being transported to the Provincial Laboratory
- 7. Virology specimens taken after hours
- 8. Catheter tips
- 9. Stool for culture or toxin assay
- 10. Sputum specimens

A specimen refrigerator is located in the hallway outside the Laboratory for after hours specimen drop off. (Refer to alphabetical listing of anatomical sites, sources and requests for detailed instructions.)

MICROBIOLOGY TURNAROUND TIME

CULTURE & SENSITIVITY:

In all cases, we strive to report results as quickly as possible. The majority of Microbiology tests, however, require at least overnight incubation before a result will be available. Occasionally, it may take several days to identify an organism and/or report a susceptibility result.

Most **cultures** take 24 - 48 hours to several days depending on the number and type of bacteria grown. Interim reports are sent after 1 day incubation whenever possible. Length of incubation for cultures varies depending on the type of specimen.

Sensitivity Tests - take 48 hours to several days. Testing is not usually done on organisms that constitute the normal flora of the site cultured.

A final report is sent on negative cultures or cultures with non-significant growth, after the full incubation period for that specimen. Interim reports are sent on all specimens submitted for culture.

Final reports are sent on positive cultures once all the work on the isolate(s) is completed. Refer to the "Summary of Test Procedures" for a list of the tests routinely performed on specimens.

Blood Cultures:

Routinely incubated for 7 days. Cultures are continuously monitored and growth is reported by phone as soon as it is detected. Interim reports are sent on all negative culture after 2 days incubation. Another report is sent immediately, if a culture becomes positive.

Cultures for *Brucella* species and fungus are incubated for a further 2 weeks. Interim reports on negative cultures are sent after 2 days and 7 days of incubation. Growth is reported and another report sent immediately, if a culture becomes positive.

Cultures for mycobacteria are incubated for 6 weeks. Growth is reported as soon as it is detected

Cerebrospinal Fluid:

Routinely incubated for 7 days. A Gram smear report is phoned within approximately 45 minutes of receipt of the specimen. Cultures are checked daily and growth is reported by phone as soon as it is detected. Interim reports on negative cultures are sent after 1 day of incubation.

The Cryptococcal Latex Agglutination test, which is more sensitive than the India ink preparation, is available during regular hours. This test takes approximately 1hour and 15 minutes to perform.

Gram smears (STAT):

20-25 minutes. Fluid specimens that require centrifugation to concentrate the specimen prior to making the smear require 25-45 minutes.

Pneumocystis (carinii) jiroveci NAT Assay:

Test requires approximately 24-36 hours.

C. difficile Toxin NAT Assay:

C. difficile toxin results are reported when the test is completed. (Usually within 24 hours of receipt.)

Stool Culture For Enteric Pathogens:

Aeromonas, Campylobacter, E. coli O157:H7, Salmonella and Shigella - negative results are reported 2 days after incubation.

Yersinia - An interim negative result is reported 2 days after incubation. Culture is incubated for a further 10 days. Positive cultures are reported as soon as they are confirmed.

Chlamydia / GC / Trichomonas NAT Assay:

Results are reported when the test is completed. (Usually within 24 hours of receipt.)

Urine Cultures:

Negative cultures and cultures with non-significant growth are reported after 1 day of incubation. For cultures with significant growth, an interim report is sent after 1 day of incubation. Identity and sensitivity of isolate(s) usually follow by the next day.

Mycobacteria (AFB/TB):

AFB/TB stain on concentrate: Specimens received before 0900 hours Monday — Saturday, reported within 6 hours. Positive smear results are phoned.

Smear positive specimens from respiratory secretions (e.g., bronchoscopy specimens, expectorated and induced sputum specimens) will have RNA amplification for *M. tuberculosis* performed the following day. The test takes approximately 6 hours.

Note: RNA amplification is not available on weekends or statutory holidays nor will it be performed on smear negative specimens unless cleared by the Medical Microbiologist.

Molecular testing on non-respiratory specimens requires special approval by the Medical Microbiologist.

Cultures are incubated for 8 weeks. Growth is reported as soon as it is detected and probed for *M. avium/intracellulare* and/or *M. tuberculosis* within 24 hours of detection.

Additional comments:

If you have any questions about a particular culture, please contact us.

INTERPRETATION AND GRADING OF SMEARS & CULTURES

Organisms isolated from blood or stools are not graded. The following is used to grade the number of organisms on Gram stains and culture plates.

Occasional - few +1 - light +2 - moderate +3 - heavy

From broth only - organism was isolated from a broth culture only.

Urines - Organisms are graded as the number present/Litre of specimen e.g. 60×10^6 CFU/L Coliforms (CFU = colony forming units) or 60,000 colony forming units/mL of urine

I.V. Catheter tips - the number of colonies isolated are counted. Growth greater than 15 colonies is reported as >15 colonies.

REPORTING OF CRITICAL AND URGENT RESULTS

The following results are reported to the ward and/or clinician as soon as they are verified. A hard copy of the report is also sent to the ward printer.

- Any smear or result requested STAT
- Any smear from a sterile site in which organisms are seen*
- Growth from a sterile site (blood, cerebrospinal fluid, joint, pleural or pericardial fluid)
- Positive acid-fast smear*
- Positive acid-fast culture*
- Pneumocystis (carinii) jiroveci stain results
- Positive CSF including smear*, culture, cryptococcal antigen*, India Ink
- Positive blood culture (smear and/or culture)*
- Positive group B Streptococcal antigens on babies
- Methicillin resistant Staphylococcus aureus*
- Vancomycin resistant Enterococcus*
- Carbapenemase producing organism*
- Enteric pathogens*
- Any result considered significant by Microbiology or requested to be phoned/sent by the ward or clinician
- * May also be reported to PHC Infection Prevention and Control and/or the Vancouver Coastal Health Communicable Disease Control as required by Provincial law. (Refer to the list of Reportable Communicable Diseases in BC on the following pages or view the list at www.bccdc.org.)

SPECIMEN REJECTION CRITERIA

All specimens must be collected, labelled, stored and transported according to procedure. If the appropriate criteria are not met, the specimen may be rejected or the test cancelled. The following represent some reasons for specimen rejection or test cancellation:

- Delay between specimen collection and arrival in the laboratory
- Improper specimen storage
- Inappropriate or unsuitable specimen type for the test requested
- Insufficient volume for analysis
- Improper or damaged/leaking container
- No specimen source provided
- Specimens for culture submitted in any preservative (e.g. formalin)
- Specimens sent in incorrect or expired transport media
- Specimens without an accompanying electronic test request or a requisition
- Unlabelled/mislabelled or improperly labelled specimens
- Duplicate specimens received within a defined time period

Note: If the unsuitable specimen is "irreplaceable" (e.g. CSF, O.R. specimen), every attempt will be made to contact the physician and/or nurse who collected the specimen or were present during the procedure. They will be asked to come to the Laboratory to verify the identification for the specimen and this will be recorded on the report.

LIST OF REPORTABLE COMMUNICABLE DISEASES IN BC (January 2018)

Schedule A: Reportable by all sources, including Laboratories

Hantavirus Pulmonary Syndrome

Hemorrhagic Viral Fevers

Hemolytic Uremic Syndrome (HUS) Acquired Immune Deficiency Syndrome Hepatitis Viral: Anthrax Hepatitis A, B,C,E **Botulism** Other Viral Hepatitis Brucellosis Human Immunodeficiency Virus Infection Chancroid Leprosy Cholera Lyme Disease Congenital Infections: Measles Toxoplasmosis Meningitis: All causes Rubella (i) Bacterial: Cytomegalovirus Haemophilus Herpes Simplex Pneumococcal Varicella-Zoster Other Hepatitis B Virus (ii) Viral Listeriosis and any other congenital Meningococcal Disease: infection All Invasive Creutzfeldt-Jacob Disease Including "Primary Meningococcal Cryptococcal infection Pneumonia" and "Primary Meningococcal Cryptosporidiosis Conjunctivitis" Cydospora infection Mumps Diffuse Lamellar Keratitis Neonatal Group B Streptococcal Infection Diphtheria: Paralytic Shellfish Poisoning (PSP) Cases Pertussis (Whooping Cough) Carriers Plague **Encephalitis:** Poliomyelitis Post-infectious Rabies Subacute sclerosing panencephalitis Reye Syndrome Vaccine-related Rubella Viral Severe Acute Respiratory Syndrome (SARS) Foodbome illness: **Smallpox** All causes Streptococcus pneumoniae Infection, Invasive Gastroenteritis epidemic: **Syphilis Bacterial Tetanus Parasitic** Transfusion Transmitted Infection Viral Tuberculosis Genital Chlamydia Infection Tularemia Giardiasis Typhoid Fever and Paratyphoid Fever Gonorrhea – all sites Waterborne Illness Group A Streptococcal Disease, Invasive All causes Haemophilus influenzae Disease: West Nile Virus Infection All Invasive, by Type

Yellow Fever

LIST OF REPORTABLE COMMUNICABLE DISEASES IN BC (January 2018) Schedule B: Reportable by Laboratories only

All specific bacterial and viral stool pathogens:

(i) Bacterial:

Campylobacter Salmonella Shigella Yersinia

(ii) Viral Amoebiasis

Borrelia burgdorferi infection

Cerebrospinal Fluid Micro-organisms

Chlamydial Diseases, including Psittacosis

Creutzfeldt-Jacob Disease

Cryptococcal Infection

Herpes Genitalis

Human Immunodeficiency Virus Infection

Influenza virus, including the H5 and H7 strains

Legionellosis

Leptospirosis

Listeriosis

Malaria

Q Fever

Rickettsial Diseases

Severe Acute Respiratory Syndrome (SARS)

Smallpox Tularemia

West Nile Virus Infection

Source:

British Columbia Centre for Disease Control

INFORMATION REQUIRED FOR SPECIMEN SUBMISSION

SPECIMEN LABELLING:

All specimens must be clearly labelled with:

- MINIMUM of 2 Patient Identifiers Full name, PHN, MRN, DOB
- Source of specimen (include a brief description if applicable, e.g., upper/lower, left/right etc.)
- Date and time of collection
- Unlabelled specimens will not be processed.

Note: Please do not obscure the container contents with the specimen identification label.

SUNRISE CLINICAL MANAGER:

Specimen information may be submitted through Sunrise Clinical Manager. Please provide all requested information so that the specimen can be properly processed. Electronic test ordering, where available, should be the primary means of submitting laboratory requests within PHC.

ADD-ON TESTS:

Follow the SCM procedure or handwrite the appropriate requisition to request additional tests on an already submitted specimen. (Refer to the index of tests to determine which requisition to use.) Give specimen details (specimen type, date & time of collection).

COMPLETION OF REQUISITIONS:

If the patient identification stamp is used, it **must** be stamped in the correct area of the requisition and be **legible.** The requisition must also be filled out completely and correctly.

The following information is required on **all** requisitions:

- Patient's full name and birth date
- Patient's chart number (in-patient locations)
- Patient's PHN number (out-patient locations)
- Ward or location
- Doctor's full name (or Doctor's surname and at least two initials). Because there are several
 doctors with the same name, inclusion of a billing number will ensure that patient reports are
 delivered to the correct doctor.
- Test to be performed including any special requests.
- Source of specimen (except blood)
- Date and time of collection. Time of refrigeration also required for urine C & S requests.)
- · Clinical diagnosis

The following information is strongly encouraged:

- Information on antimicrobial therapy (required for C & S)
- Information on other drugs if it may interfere with the test requested.

Note: The BCCDC (Provincial Laboratory) require that the patient's birth date be included on all requisitions and that a patient history be included when requested. The Laboratory may refuse to process specimens submitted without complete information.

REMINDER: BCCDC will **not** divide specimens. Submit a separate specimen and the appropriate requisition for each request whenever possible. (See Sample requisitions)

IMPORTANT - Ensure that the name on the specimen and accompanying requisition match. If there is any mismatch, the submitter of the specimen will be asked to come down to the Laboratory to identify the specimen.

EXAMPLES OF REQUISITIONS

Microbiology requisition (for in-house testing. Order form LA 086 from printing.)

- Gram stains are preformed when appropriate (See Summary of Test Procedures)
- Use this requisition for ordering mycobacteria (AFB/MAI/TB), fungus and other microbiology investigations that are performed at Providence Health Care Microbiology.
- If the test you want is not listed, a different requisition may be required.

Providence HEALTH CARE Holy Family Hospital St. Vincent's Hospital Brock Fahmi Langara Youville Residence	Patient Identification Label
LABORATORY REQUISITION MICROBIOLOGY Telephone Inquiries: 504-806-8810 Refer to the on-line "Microbiology Policies and Manuals" for in Specimen must be labelled with the patient's name and the sylindicate pertinent clinical details, special requests, etc., in the	ecimen site/source. area provided.
Antibiotics (specify):	TESTING REQUESTED C&S (culture and sensitivities) Gram stain Cryptococcal antigen C. difficile toxin (faeces only) Group B streptococci GC (N. gonorrhoeae) Mycobacteriology (AFB, TB, MAC) Mycology (fungus) MRSA screen (nares, perineum, open would very series (rectum) Other (specify) Special request(s)/other information:
	The state of the s
☐ Throat Tissue/biopsy: ☐ Specify source	_
Tissue/biopsy: Specify source Urine: Midstream Foley	MPLE ONLY O NOT USE

REFERRED OUT TESTS:

- Collection instructions are on the reverse of the requisition
- Testing is referred to the British Columbia Centre for Disease Control (Provincial Laboratory)
- Print requisitions from http://www.bccdc.ca/PHSALaboratories/LaboratoryTestsandRequisitionForms/diagnostictesting.htm

Serology Screening

PHSA Labora	atories							
Public Health Microbiolog	gy & Referer	ice Laboratory			Serology Scr	eening Requi	sition	
C Centre for Disease Control, 655	West 12th Avenu	ue, Vancouver, BCV5Z 4R4	www.phsa.ca/bccdcpubl	ichealthlab				
section 1 - Patient Info	ormation	and Physician In	formation					
PERSONAL HEALTH NUMB		,	OLLECTED	TIME COLLECTED	ORDERING PHYSICIAN (Provide MSCII) Name and address of report delivery			
PATIENT SURNAME		PATIENT FIRST AND MIDDL						
		erup.						
DOB (DD/MMM/YYYY)		GEND	ек	□ UNK	I do not require a cop	· · · · · · · · · · · · · · · · · · ·		
ADDRESS					ADDITIONAL COPIES TO 1.	D: (Address/MSC#)		
CITY / TOWN			POSTAL CO	DE	2.			
SAMPLE REFERENCE		_			_			
ection 2 - Clinica		S	AMPLE	ONLY	•			
Clinical Informatio		Г	TON OC	IISE				
Asymptomatic		L		USL		ICK		
Headache / Stiff n		Copilatory symptoms	C STD symptoms	- Immigration		_	Convalescent	
Rash symptoms Fever	_	TD contact ther, specify:	STD symptoms	☐ Prenatal ☐ Follow-up		Outbreak/Cluster/Even Other, specify:		
Recent Travel (Date/Location)	Onset Date DD/MN	IMAYYY	History				
ection 3 - Test(s) Requ	de la				200.319			
PRENATAL SCREEN			ATITIS	OTHER SEROLO				
HIV Nominal Reporting	HIV	Acute - undefined	and the second second		nmunity	Acut	50 ac-ac	
HIV Non-Nominal Reporting HBsAg	HBVP	HBsAg, Anti-HBcTo Anti-HBs, Anti-HC Anti-HAV IgM	tal, HEPS CV,	Measles IgG (Rubeola)	MIG	Measles IgM (Rubeola)	MIM	
Rubella IgG	RUBIG		- 110111771	Mumps IgG	MUIG	Mumps IgM	MUIM	
Syphilis Screen	□TPS	Chronic - undefine	Contract Contract of	Parvo B19 IgG	☐ PARVG	Parvo B19 IgM	PARVM	
Other Tests, specify:		HBsAg, Anti-HBcTo Anti-HBs, Anti-HC	tal HEPCH HBVSAG	Rubella IgG	RUBIG	Rubella IgM	RUBIM	
outer reses, speciny.		Hepatitis B Screen HBsAq, Anti-HBs,	□HBVSAG	EBV IgG	EBGS	EBV IgM	EBMS	
EDC:		Anti-HBc Total		CMVIgG	CMVIG	CMV IgM	CMVIM	
Hospital of Delivery :		Specific Hepatitis	Markers	Varicella IgG	☐ VZIG	HTLV1/II	AHTLV	
SYPHILIS (Non Pres	natal)	Anti-hepatitis A Tota (Immune Status)	al HAVT	HSVIgG	HSVIG	H. pylori IgG	HPGS	
Syphilis Screen	☐ TPS	Anti-hepatitis A IgN	HAVIM	Mycopiasma IgM	☐ MPIM			
Syphilis Confirmatory	□ TPSC	(Acute Infection)	STATE OF THE PARTY OF	OTHER TESTS (S	Specify)			
History (Required for confi testing):	irmatory	Anti-HBs (Immune Status)	□HBVSAB		**************************************			
		Anti-HBc Total (Natural Infection)	HBCT					
HIV (Non Prenat	tal)	Anti-HBc IgM (Acute Infection)	□HBCIM	COMMENTS				
Note: Patient has legal right to nominal or non-nominal reportive HIV to MHO	o choose	HBeAg (Therapeutic Monito	HEBEAG					
HIV Nominal Reporting	HIV	Anti-HBe	□невеав					
HIV Non-Nominal	HIV	(Therapeutic Monito Anti-HCV	ring)	For other available	e tests and additional in & Reference Laboratory's	formation, consult the Po	ublic Health Micro-	
Reporting		AIIG-HCV	LIHEPC	Diology (dcpublichealthlab	rei Prees all	
		ase call the Central Pr				Form CPSE 100 1001F		

Parasitology

	Parasito	logy Requisition
ublic Health Microbiology & Reference Labo	pratory	3,
Centre for Disease Control, 655 West 12th Avenue, Vancou	ver, BC V5Z 4R4 www.phsa.ca/bccdcpublichealthlab	
ection 1 - Patient Information		
PERSONAL HEALTH NUMBER (or out-of province Health	h Number and DOB (DD/MMM/YYYY) GENDER M F UNIT	DATE RECEIVED
PATIENT SURNAME	PATIENT FIRST AND MIDDLE NAME	
ATTENT SORIVAINE	PATIENT PIRST AND MIDDLE NAME	
ADDRESS	SAMPLE ONLY	LABORATORIES USE ONLY
action 2. Health con	SAMPLE UNLY	OSE ONE!
ection 2 - Healthcan	DO NOT USE	
DRDERING PHYSICIAN (Pro Jame and address of report deliver)		
	1.	
I do not require a copy of the report		SAMPLE REF. NO.
LINIC OR HOSPITAL lame and address of report delivery	2.	DATE COLLECTED
	3.	(DD/MMM/YYYY)
PHSA CLIENT NO.		TIME COLLECTED (HHMM)
ection 3 - Test(s) Requested		
OVA & PARASITES	BLOOD & TISSUE PARASITES	PARASITE IDENTIFICATION
ample	Microscopic Examination Request For	Sample
Feces Urine	Malaria Diagnosis Confirmation	☐ Worm ☐ Proglottid
Igns / Symptoms	Other, specify:	Other, specify:
Asymptomatic	Referring Lab Test Results For Malaria	
Diarrhea Fever Other	Positive Thin and/or Thick smear Negative Thin and/or Thick smear	
Duration:days	Positive dipstick (Rapid Test) Negative dipstick (Rapid Test)	☐ Tick
High Risk Setting (see reverse)	Dipstick (Rapid Test) not done	Sources Of Tick
Immigration (specify below)		☐ Human ☐ Dog ☐ Cat
Travel within past 12 months, specify below:	Sample	Other, specify:
	Thick & Thin blood smear(s) Thick blood smear(s)	
	EDTA blood Thin blood smear(s)	
SPECIAL TESTS	Tissue/Biopsy, specify:	Name of Pet / Owner (IF NOT noted as the
*Consultation required (604) 707-2629	Body fluid, specify:	patient above)
Strongyloides Concentration / Isolation*	Other, specify:	
ELISA (Amoebiasis)	Culture For	Signs / Symptoms
Schistosoma Hatch Test (Viability)*	☐ Acanthamoeba species ☐ Leishmania species	Asymptomatic Fever
PINWORM	Other, specify:	Rash (type)
ample	Signs / Symptoms	
Sticky paddle (preferred)	Asymptomatic Fever Skin lesion Eye	Other, specify:
☐ Anal swab	Other, specify:	
Transparent scotch tape	☐ Immigration, specify below	
For other available tests and additional informa- tion, consult the Public Health Microbiology & Reference Laboratory's Guide to Programs and Services at www.phsa.ca/bccdcpublichealthlab	☐ Travel within past 12 months, specify below:	Travel within past 12 months, specify below:

SPECIMEN CONTAINERS

CONTAINER	DESCRIPTION	USAGE	AVAILABLE FROM
BONE MARROW KIT	Plastic bag containing C&S container, blood culture media, petri dish, requisitions and collection instructions	Bone marrow aspirate and biopsy	Microbiology
BORDETELLA COLLECTION KIT	Kit containing one dacron swab, a vial with Amies charcoal media, glass slides, requisition and instructions	Bordetella pertussis PCR test and culture	Microbiology
BLOOD CULTURE BOTTLES	 ◇ BacT/Alert® - FA Plus aerobic and FN Plus anaerobic ◇ BacT/Alert® -PF Plus (paediatric) aerobic ◇ BD BACTEC™ Myco/F Lytic ◇ Wampole Isolator® tube 	 ♦ Blood cultures ♦ Blood cultures including fungi ♦ Paediatric blood cultures ♦ Blood and bone marrow cultures for Mycobacteria ♦ Blood cultures for fungi and Bartonella 	Available from the central warehouse or stores top up Available from Laboratory Accessioning or Microbiology
C&S CONTAINER	Plain, sterile screw cap plastic container	Most specimens for culture. [Fluids, sputum, tissues, stool, urine etc.]	Central warehouse or stores top up
C&S SWAB	See swab		
CHLAMYDIA NAT COLLECTION KIT	Package containing two swabs, a white cap tube and collection instructions	Genital specimens for Chlamydia / GC NAT	Laboratory Accessioning
CORNEAL SCRAPING KIT	Kit with culture tubes and petri dishes containing various media, glass slides, requisition and collection instructions	Corneal scrapings	Microbiology
DARK FIELD KIT (Syphilis examination)	Provincial Laboratory DF kit containing capillary tubes, sealer, glass slides, requisition and instructions	Microscopic examination for syphilis	Microbiology
ENTERIC PATHOGEN TRANSPORT	Capped plastic vial with scoop	Submission of stool for food poisoning investigation Submission of out patient stool for C&S	Laboratory

SPECIMEN CONTAINERS

CONTAINER	DESCRIPTION	USAGE	AVAILABLE FROM
FOOD POISONING INVESTIGATION KIT	Kit containing screw-cap glass jar with requisitions, instructions and collection recommendations	Food poisoning investigation or outbreak	Microbiology
GLASS SLIDES	Glass microscope slides (in plastic holder)	Bedside smears	Microbiology
GONORRHEA (GC) NAT COLLECTION KIT	Package containing two swabs, a white cap tube and collection instructions	Genital specimens for Chlamydia /GC NAT	Laboratory Accessioning
LUNG BIOPSY KIT	Plastic bag holding a sterile C&S container with formalin, anaerobic transporter, requisitions and collection instructions.	Lung biopsies	Microbiology
MSU KIT	Midstream urine collection kit with collection jar, funnel, wipes, labels and instructions	Midstream urine collection	Stores top up
PINWORM COLLECTION KIT	Sticky paddle pinworm collector and requisition	Pinworm investigation	Microbiology
RED TOP TUBE (Serology tube)	7mL plain sterile Vacutainer® red top tube	Serological tests other than cryptococcal antigen	Laboratory Accessioning
SCABIES COLLECTION KIT	Kit containing glass microscope slides (in plastic holder), scalpel, mineral oil and specimen collection instructions	Submission of skin scrapings for scabies investigation	PHC Microbiology or MSJ Laboratory
STOOL O & P	Capped plastic vial with scoop, containing SAF fixative	Submission of stool for Ova and Parasite investigation	Stores top up
SWAB (C&S swab)	2 cotton tipped swabs with plastic transporter containing Amies clear gel media, in a see through package	Routine cultures of all kinds. (Nose, throat, eye, ear, wounds, etc.)	Stores top up
SWAB (C&S Thin wire swab)	mini-tipped wire shaft swab with plastic transporter containing Amies clear gel media, in a see through package	Urethral specimens for GC (males) Nasopharyngeal, ear & eye specimens	Microbiology
SWAB (Viral)	Virology swab and transport vial	Viral NAT	Laboratory Accessioning

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
ABSCESS CULTURE	C&S container or C&S swab	Microbiology	Include PUS along with a portion of the wall of the abscess. If profuse, use the C&S container. If a capped syringe is submitted, the needle must be removed prior to transport.
ACANTHAMOEBA	Specially prepared plates	BCCDC Parasitology	Contact the Microbiology Department for instructions prior to collecting the culture. 48 hours notice is required for the preparation of the plates (The test is referred out.)
ACTINOMYCES	C&S container or C&S swab	Microbiology	See ANAEROBES
AFB STAIN (ACID-FAST BACILLI, T.B. STAIN)	C&S container	Microbiology	STAT AFB requests are not offered on a routine basis and will only be considered after consultation with the Medical Microbiologist. Smears on concentrated specimens are processed Monday-Saturday (except statutory holidays) at approximately 0900 hours. See also TB CULTURE
AEROMONAS			See STOOL CULTURE
AIDS SEROLOGY			See VIROLOGY services
AMOEBAE EXAMINATION	C&S container Stool O & P	Microbiology BCCDC Parasitology	Specimen must be freshly passed and rushed to microbiology while still warm. DO NOT REFRIGERATE. Also submit a separate specimen in SAF fixative. See PARASITES.
AMIKACIN LEVEL			See BIOCHEMISTRY services
ANAEROBES	C&S container or C7S swab	Microbiology	If the specimen is profuse, use the C&S container. If a capped syringe is submitted, the needle must be removed prior to transport. See also ABSCESS CULTURE or WOUND CULTURE
ANTIBIOTIC LEVELS	Red Top tube	Therapeutic drug level	Use this requisition for the following requests: AMIKACIN, GENTAMICIN, TOBRAMYCIN and VANCOMYCIN. Refer to the BIOCHEMISTRY services or contact Laboratory Accessioning (Local 62741) for collection.
	Red Top Tube	Microbiology	Contact Microbiology for all other requests. Consult with the Medical Microbiologist before ordering the test. Include the following information with all requests: a) All antibiotic therapy for the last 48 hours. a) The time of the last dose of the antibiotic to be measured. a) Anything that could affect antibiotic level e.g. The patient has liver disease, renal failure or is on dialysis. For PRE-DOSE (Trough Level) collect blood 5-10 minutes before the antibiotic is administered. For POST-DOSE (Peak Level): a) I.M.: collect 1 hour after dose a) Oral: collect 2 hours after dose a) I.V.: collect 30 minutes after dose See also SERUM CIDAL LEVELS
ARTHROPOD ID (Lice, Mites, Ticks, etc)	C&S container	BCCDC Parasitology	Submit in a clean dry container or, if dead, in 70% alcohol. If submitting a live tick, include a dampened cotton ball in the container to keep moist. State travel history or other pertinent information. Live ticks are required for <i>Borellia</i> culture.
ASCITIC FLUID			See BODY FLUIDS

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
ASPERGILLUS Culture precipitins	Red top tube	Microbiology	See FUNGUS CULTURE 5-10 mL clotted blood
ATYPICAL MYCOBACTERIA			See T.B. CULTURE
AUTOCLAVE STERILITY TEST		Microbiology	Deliver Biological Indicators to Laboratory as soon as possible. Indicate date & time of test.
BACTERIAL VAGINOSIS	C&S swab	Microbiology	The diagnosis is made from a Gram stained smear of a vaginal specimen. Culture is not performed.
BARTONELLA • culture • serology			See LYSIS CENTRIFUGATION See SEROLOGICAL TESTS
BIOPSY SPECIMENS Fungi Routine Culture (Aerobes & Anaerobes) Mycobacteria, (T.B, AFB, Atypical, Mycobacteria, M.avium, MAI)	C&S container C&S container or C&S swab C&S container	Microbiology	Submit as large a piece of tissue as possible, particularly if multiples tests are ordered. If there is only a small amount of material, it may be submitted for all the tests listed, in a single C&S container with ~ 1 mL of sterile saline to prevent drying. The Doctor must however, prioritize the culture requests. T.B. & fungus cultures are routinely done if there is sufficient specimen Submit a separate specimen for Histopathology. (See Histology services of the manual) Note: There are special instructions for bone marrow and lung biopsies. Please refer to the instructions in the Kits for these specimens. See also BONE MARROW CULTURE and LUNG BIOPSY CULTURE
BLASTOMYCES			See FUNGUS CULTURE
BLOOD CULTURES • Brucella	Blood culture bottles BacT/Alert ® FA Plus aerobic & FN	Microbiology	General Information: Contact Laboratory Accessioning for pick-up (Local 62741) Draw cultures from peripheral veins. Blood should not be taken through an indwelling catheter unless it cannot be obtained by venipuncture. Information concerning antibiotic therapy MUST be stated. A clinical diagnosis is very helpful If specific organisms are suspected, please indicate this {e.g., N. Gonorrhoeae (GC)" Collection Information: For specific instructions on venipuncture technique and media to be used refer to "CRITERIA FOR BLOOD SPECIMEN COLLECTION: in the SPECIMEN COLLECTION AND PROCESSING document. (Refer also to STAT and Timed requests) Please indicate that Brucella is suspected. A culture for this organism is incubated for a longer time.
CMV PCR (Buffy coat or CMV Antigenemia	Plus anaerobic	Virology	See VIROLOGY services

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
Blood cultures continued • Fungi	BacT/Alert® aerobic FA Plus vial or Wampole Isolator® tube	Microbiology	Please indicate a special request for fungi Only one lysis centrifugation culture (Isolator® tube) will be processed. See also LYSIS CENTRIFUGATION
Mycobacteria, (T.B, AFB, Atypical, Mycobacteria, M.avium, MAI)	BD BACTEC™ Myco/F Lytic bottle	Microbiology	Up to 2 cultures may be submitted
STAT request	BacT/Aert ® FA Plus aerobic & FN Plus anaerobic culture vials	Microbiology	The physician must specify how many blood cultures are to be drawn. Unless otherwise specified, the phlebotomist will draw 2 cultures from separate venipuncture sites during one visit. Each culture consists of an aerobic and anaerobic culture
Timed request	BacT/Aert ® FA Plus aerobic & FN Plus anaerobic culture vials	Microbiology	 The physician must specify how many blood cultures are to be drawn. Typical orders are "blood culture x2" or "blood culture x 3". Two cultures are recommended 3 cultures are acceptable. More than 3 cultures in a 24-hour period require approval by the Medical Microbiologist. Each culture consists of an aerobic and an anaerobic culture.
BODY FLUIDS CULTURE (NOT CSF)- • Routine culture	C&S container	Microbiology	Do not submit citrated specimens for culture. Submit as large a volume as possible in a C&S container or in a capped syringe (without the needle eg. vitreous/aqueous eye fluids; transport media used for other ocular samples) if this has been used for collection. Transport immediately to the Laboratory.
Fungi			If the specimen is likely to form a clot, inoculate a portion of the fluid into a pediatric blood culture vial (available from Microbiology) immediately after collection
			Dialysates, pleural fluid and any specimen that may be contaminated with fecal flora should be refrigerated if collected after hours Indicate additional or special requests.
Mycobacteria, (T.B, AFB, Atypical, Mycobacteria, M.avium, MAI)	C&S container	Microbiology	See also CEREBROSPINAL FLUID, DIALYSATE and JOINT FLUID CULTURE
BONE MARROW			Follow instructions with collection kit.
Aspirate	C&S container & BacT/Aert ® Aerobic blood	Microbiology	Indicate additional or special requests (e.g. culture for special organisms such as Brucella).
• Biopsy	culture vial Special container with collection kit		Place the specimen in the bottle containing the agar. DO NOT press into the agar. T.B. and fungi are routinely done if there is sufficient specimen. If there is only a small amount of specimen, the doctor must prioritize the requests.

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
BORDETELLA (Pertussis, Whooping Cough) • PCR and culture	Bordetella Collection Kit	BCCDC Requisition with kit	Special Provincial Laboratory kits are required for this test. Obtain from PHC or MSJ Laboratory.
BORRELIA SEROLOGY (Lyme disease, Relapsing fever)	Red top tube	BCCDC Non-viral Serological Tests	An accurate patient history, including any exposure to ticks or lice, and travel information, especially noting any outdoor activity, must be submitted This test is only performed on CSF if a serum sample is also submitted for testing. (Refer to Arthropod ID for information on submitting a live tick for investigation.)
BOTULISM INVESTIGATION	4 Red top tubes (15 mL serum) Stool: Enteric Pathogen Transport Other: C&S container	BCCDC Food Poisoning Investigation Part A (Available from Microbiology)	Contact the PHC on call Medical Microbiologist through the hospital switchboard. Collect the blood BEFORE any antitoxin is administered. Submit at least 100 grams of Stool. Vomited material or remains of any food consumed may also be submitted. Refrigerate the specimen. Include information about the patient's food and history & symptoms on the requisition. See also FOOD POSONING
BRONCHOSCOPY	C&S container or suction trap	Microbiology	Indicate any special requests such as <i>Pneumocystis, Legionella</i> , T.B. Fungus, etc. Routinely cultured for anaerobes. See also <i>LEGIONELLA</i> , <i>PNEUMOCYSTIS</i> , T.B./FUNGUS CULTURE
BRUCELLA • Culture	BacT/Alert® Aerobic & Anaerobic culture vials	Microbiology	Specify "Investigate for <i>Brucella</i> ". Blood cultures are incubated for 3 weeks. See also BLOOD CULTURES
• Serology	Red top tube	BCCDC Non-viral Serological Tests	Include patient history See SEROLOGY TESTS
CAMPYLOBACTER			See STOOL CULTURE
CANDIDA			See FUNGUS CULTURE
CATHETER TIPS CULTURE	C&S container	Microbiology	Do not add saline to the container. Deliver as soon as possible. Foley catheter tips are inappropriate for culture
CEREBROSPINAL FLUID Routine culture	Sterile centrifuge tube(s) in LP set	Microbiology	Deliver all tubes and requisitions to the Laboratory Accessioning Department. The specimen will be divided and aliquots transported to other areas of the Lab. This is a STAT PROCEDURE. Hand the specimen directly to a Laboratory Technologist.
Fungus culture		Microbiology	Indicate special request such as cryptococcal antigen.
Serology (non viral)			Serological testing for Toxoplasmosis and Lyme disease requires that a serum specimen be submitted at the same time, so blood work must also be ordered.
Syphilis T.B. / MAI		BCCDC Syphilis (Tests) Microbiology	See also FUNGUS, T.B. CULTURE, SYPHILIS
Virus NAT/virus serology		Virology	See VIROLOGY services

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
CHLAMYDIA TRACHOMATIS NAT	Chlamydia Collection Kit	Microbiology	Obtain collection instructions and kits from Laboratory Accessioning
CHLAMYDIA PNEUMONIAE	Red top tube	BCCDC Non-viral Serological Tests	See SEROLOGY TESTS
CLOSTRIDIUM DIFFICILE Toxin NAT assay	C&S container	Microbiology	The same specimen submitted for routine fecal culture can be used. Request "C.difficile toxin". Only one specimen/day or up to three specimens within 10 day will be tested. Positive patients may be re-tested after 10 days. Deliver promptly to Laboratory. See also STOOL CULTURE
CORNEAL SCRAPINGS	Corneal scraping kit		Also for Conjunctival Scrapings. Follow the instructions with the collection kit. See also EYE CULTURE
CMV (Cytomegalovirus)			See VIROLOGY services
COCCIDIOIDES			See FUNGUS CULTURE, FUNGUS SEROLOGY.
CPO (Carbapenemase producing organism)	C&S swab	Microbiology	Refer to the Infection Control manual for instructions.
CRYPTOCOCCUS • Culture	C&S container or C&S swab Tube from LP Set	Microbiology	For all specimens request "Cryptococcus" or "Cryptococcal antigen". See also CEREBROSPINAL FLUID
Antigen	for CSF.red top tube for serum	Microbiology	
CRYPTOSPORIDIUM	Stool O&P	BCCDC Parasitology	Request "Cryptosporidium"
CSF			See CEREBROSPINAL FLUID
DIALYSATE	C&S container (minimum 70 mLs)	Microbiology	Bring the specimen to the lab as soon as possible after collection. Refrigerate the specimen if it cannot be transported to the Laboratory immediately.
EAR CULTURE	C&S swab or C&S thin wire swab	Microbiology	Specify any fungal requests
ENVIRONMENTAL CULTURE	C&S swab	Microbiology	Consult the Medical Microbiologist for approval. Moisten the swab with sterile saline before taking the culture
ESCHERICHIA COLI 0157:H7	Microbiology	Microbiology	Specimens must be submitted during the first four days of illness or false negative results may occur. See STOOL CULTURE
EYE CULTURE	C&S thin wire swab	Microbiology	Swabs taken prior to the application of medication (eg. topical anaesthetic) See also CORNEAL SCRAPINGS
FAECES			See STOOL CULTURE
5-FLUOROCYTOSINE LEVEL			Consult Medical Microbiologist for approval.
FLUIDS			See BODY FLUIDS CULTURE
FLUCONAZOLE LEVEL			Consult Medical Microbiologist for approval.

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
FOOD POISONING	Stool Enteric Pathogen transport Other: C&S container	BCCDC Food Poisoning Investigation part A	Collect at least 100 grams of material (emesis/stool/food) and REFRIGERATE. Notify the Medical Microbiologist at PHC. (Contact through the hospital switchboard.) Include information on patient's recent food history. A food poisoning investigation kit is available from the Microbiology Laboratory. See also BOTULISM INVESTIGATION
FUNGUS CULTURE	C&S container or C&S swab – See Instructions/Other Information	Microbiology	Either a C&S container or a C&S swab may be used for most specimens. For scrapings: Submit specimens in a dry C&S container. KOH preparation may be requested. Hair, nails: - Place clippings in a dry C&S container. KOH preparations may be requested. Sputum, pus other fluid: submit in a C&S container. The type of fungus suspected should be indicated since culture methods vary for different fungi. State any pertinent information such as travel history etc. See also BLOOD CULTURES, BIOSPY SPECIMENS, BODY FLUIDS, BONE MARROW, CEREBROSPINAL FLUID, LYSIS CENTRIFUGATION
FUNGUS SEROLOGY	Red top tube	BCCDC Non-viral Serological Tests	Specifically request the fungus suspected. Note: Hemolyzed blood is not suitable for testing . See SEROLOGY TEST, <i>ASPERGILLUS</i> PRECIPITIN
G.C. (Neisseria gonorrhoeae) Genital Throat Rectal (anal) NAT (Genital and Rectal ONLY)	C&S swab Chlamydia / GC NAT Collection Kit	Microbiology	DO NOT REFRIGERATE SPECIMENS. Deliver promptly to the Laboratory. Specify investigation for this organism on the requisition. See also BLOOD, GENITAL, RECTAL, THROAT CULTURES
GASTRIC WASHING			See T.B. CULTURE
GENITAL CULTURES Cervix Vagina Vaginal- rectal Rectal (anal) Urethra, Penis	Swab – See Instructions/Other Information	Microbiology	Do not refrigerate specimens. Female: A cervical swab is the recommended specimen for diagnosis of GC. A vaginal swab is processed for bacterial vaginosis and Candida. Trichomonas examination by request. A vaginal-rectal swab is the recommended specimen for Group B Streptococcus (GBS) screen. Male: Urethra is routinely processed for GC. Use a thin wire swab in Amies transport medium for sample collection. (Available from PHC Microbiology.) Specimens are not routinely cultured for anaerobes. Indicate if investigation for specific organism(s) is requested [e.g. yeast (Candida]. See also CHLAMYDIA, SYPHILIS, TRICHOMONAS
GENTAMICIN LEVEL			See BIOCHEMISTRY services
GIARDIA	Stool O & P	BCCDC Parasitology	A duodenal aspirate is the best specimen to submit. A stool sample may also be investigated. Use the C&S container for the aspirate and the Stool O&P container for the stool specimen.
HELICOBACTER PYLORI Culture Serology			Contact Nuclear Medicine (68008) for breath test. Contact the Microbiology Department See SEROLOGICAL TESTING

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
HAEMOPHILUS DUCREYI			If possible, the patient should be sent to the S.T.D. Clinic at the Provincial Laboratory. If this is not possible, contact the Medical Microbiologist before taking the specimen.
HEPATITIS			See VIROLOGY services
HERPES			See VIROLOGY services
HISTOPLASMA			See FUNGUS CULTURE, FUNGUS SEROLOGY
HIV (Human Immunodeficiency Virus)			See VIROLOGY services
HTLV I, HTLV II			See VIROLOGY services
INDIA INK		Microbiology	This test is no longer used. It has been replaced by the cryptococcal antigen test which is more sensitive. See also CEREBROSPINAL FLUID
IUD CULTURE	C&S container	Microbiology	Routinely screened for genital pathogens and Actinomyces. Deliver promptly.
ISOLATOR			See LYSIS CENTRIFUGATION
JOINT FLUID CULTURE	C&S container or Syringe	Microbiology	If a capped syringe is submitted, the needle must be removed prior to transport. Transport promptly to the laboratory. See also BODY FLUIDS CULTURE
KOH PREPARATION			See FUNGUS CULTURE
LEGIONELLA Culture Direct Fluorescence Antigen detection Serology	C&S container C&S container Red top tube	Microbiology BCCDC Non-viral Serological tests	Indicate that an investigation from this organism is required. Fluorescent antibody staining is available on consultation with the Medical Microbiologist. Antigen detection is performed on urine. Submit specimen during the acute stage. A random serum specimen may be submitted. Paired sera are not necessary.
LICE			See ARTHROPOD ID
LUNG BIOPSY CULTURE	Lung biopsy kit	Microbiology	Follow the instructions with the collection kit. See Also BIOPSY SPECIMENS
LYME DISEASE			See BORRELIA SEROLOGY
LYMPH NODE CULTURE			See BIOPSY SPECIMENS
LYSIS CENTRIFUGATION	Wampole Isolator® tube	Microbiology	For fungi and Bartonella. Only one lysis centrifugation culture will be processed.
MALARIA			See HAEMATOLOGY services
METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS	C&S swab	Microbiology	Refer to the Infection Control manual for instructions.

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
MINIMUM INHIBITORY or BACTERICIDAL CONCENTRATION	N/A	Microbiology	Minimum inhibitory & bacterial concentrations are performed on consultation with the Medical Microbiologist. This test requires a specific organism that has been isolated from the patient. Include information on the isolate (e.g., Blood culture isolate of April 4, 2003) also specify which antibiotic is to be tested.
MITES			See ARTHROPOD ID
MOUTH	C&S swab	Microbiology	Routinely investigated for Candida.
MRSA, /MRSA SCREEN			See METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS
MYCOBACTERIUM CULTURE	C&S container	Microbiology	See. T.B. Culture. Specify Mycobacterium species if other than <i>M. Tuberculosis</i> is suspected.
MYCOLOGY	C&S container or C&S swab	Microbiology	See FUNGUS CULTURE
MYCOPLASMA Serology	Red top tube	Virology	Submit both an acute and a convalescent serum sample for <i>Mycoplasma pneumoniae</i> investigation. See SEROLOGICAL TESTS
NOCARDIA	C&S container or C&S swab	Microbiology	Indicate that an investigation for this organism is required
NOSE CULTURE	C&S swab	Microbiology	If investigation is for <i>Staphylococcus aureus</i> carrier state or MRSA screen, indicate this and swab the anterior nares. See also METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS
OVA AND PARASITES			See PARASITES
P24 ANTIGEN			See VIROLOGY services
PARASITES			
Amoebae			See AMOEBAE EXAMINATION
Cryptosporidium			See CRYPTOSPORIDIUM
Giardia			See GIARDIA
Malaria			See HAEMATOLOGY services
Microfilaria			See HAEMATOLOGY services
Pinworm	Sticky paddle kit	BCCDC Parasitology	Optimal recovery of <i>E. vermicularis</i> eggs from the anal-rectal canal is achieved by collecting the specimen in the early morning, as the female worm lays her eggs during the night. See SCABIES
• Scabies		50050	
Schistosomiasis	C&S container	BCCDC Parasitology	S. hematobium: Submit an afternoon voided URINE specimen or biopsy material from the bladder mucosa. Eggs are more often present in the last few drops rather than the first portion of a voided specimen. Other Schistosoma_species – submit stool or scrapings from rectum.
• Stool	Stool O & P	BCCDC Parasitology	DO not contaminate with urine or water. Within 30 minutes of collection, transfer into SAF fixative. If patient hospitalized >4 days, consult Medical Microbiologist. (O & P Kit available from Microbiology). Note: Specimens submitted in fixative cannot be used for culture. Submit a separate specimen if culture is required.
• worms	C&S container or	BCCDC Described and	Submit worms for identification in 70% alcohol.
	Stool O & P	Parasitology	Stool specimens containing worms should be submitted in the Stool O & P container.

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
PARASITE SEROLOGY	Red top tube	BCCDC Non-viral Serological Tests	State travel history, clinical findings and other pertinent information.
PLEURAL FLUID	C&S container	Microbiology	See BODY FLUIDS CULTURE
PNEUMOCYSTIS	C&S container or Suction trap and glass slide	Microbiology	Bronchoalveolar lavage is the preferred specimen. Notify lab to expect the specimen. Test takes approximately 24-36 hours.
RECTAL CULTURE C&S GC VRE	C&S swab	Microbiology	C&S specimen is processed for enteric pathogens. If abscess indicated, routine aerobic and anaerobic cultures are performed. See ABSCESS CULTURE See GC CULTURE For surveillance culture
RUBELLA			See VIROLOGY services
SALMONELLA AND SHIGELLA CULTURE			See STOOL CULTURE
SARS			See VIROLOGY services
SCABIES	Scabies kit	Microbiology	Submit skin scrapings sandwiched between two glass slides or in a dry C&S containter.
SEROLOGY TESTS (NON-VIRAL)	Red top tube	BCCDC Non-viral Serological Tests	Specify the test required. Contact the lab if unsure whether a particular test is available. Submit both "ACUTE" and "CONVALESCENT" serum samples. Allow approximately 7-18 days between samples. The patient's complete clinical history must be submitted. See BORDETELLA, BORRELIA SEROLOGY, BRUCELLA, FUNGUS SEROLOGY, LEGIONELLA, MYCOPLASMA, SYPHILIS. See also VIROLOGY services
SERUM CIDAL LEVEL	Red top tube	Microbiology	Consult with the Medical Microbiologist before ordering this test.
SKIN TEST			See Medication Policy and Procedure manual "Types of Skin Tests and General Information."
SPUTUM CULTURE	C&S container	Microbiology	Only fresh specimens resulting from a deep cough should be submitted. DO NOT submit saliva. Send to Microbiology as soon as possible. Request "STAT" if a STAT Gram stain is requested. Indicate special request such as Legionella. This specimen is unsuitable for anaerobic culture.
AFB/T.B. requests		Microbiology	Refer to T.B CULTURE. for collection instructions Specimens are concentrated and processed Monday through Saturday (except statutory holidays) at approximately 0900 hours. STAT AFB requests are not offered on a routine basis and will only be considered after consultation with the Medical Microbiologist. See also STAT REQUESTS T.B./FUNGUS/LEGIONELLA CULTURE
STOOL Routine culture	C&S container	Microbiology	Choose portions of fecal samples with mucous or blood. DO not contaminate with urine or water. If patient hospitalized >3 days, testing is restricted; consult Medical Microbiologist.
			Routine stool culture consists of investigation for the following organisms: Aeromonas, Campylobacter, E.coli 0157:H7 Salmonella, Shigella and Yersinia. Investigation for the following must be specifically requested: C.difficile toxin NAT assay, Vibrio, Yeast. See also CRYPTOSPORIDIUM, PARASITE, T.B. CULTURE

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
SYNERGY TEST			Consult with the Medical Microbiologist before ordering this test.
SYNOVIAL FLUID CULTURE			See JOINT FLUID CULTURE.
SYPHILIS			
Dark field examination	Dark field kit See	BCCDC Syphilis (Tests)	Follow the instructions with the kit.
 Serology 	Instructions/Other		Blood: Collect in a Red top tube. Submit a full tube of blood.
	information		CSF: Submit 1 mL of cerebrospinal fluid in a sterile tube. See CEREBROSPINAL FLUID
T.B. CULTURE	Use a sealed leak- proof C&S container unless otherwise instructed. Do not submit specimens on a	Use a Microbiology requisition for all specimens	The information in this section also refers to specimens being submitted for investigation of other Mycobacterium species (e.g., <i>M. avium</i> , Atypical mycobacteria, etc)
			SMEARS: Sputum specimens are concentrated for smears Monday - Saturday (except statutory holidays) at approximately 0900hours. Acid-fast smears are NOT done on blood specimens or performed after hours. See also AFB STAIN, MYCOBACTERIA
	swab.		Deliver promptly to laboratory.
Bone Marrow	See instructions/ Other Information		Submit aspirate or biopsy material. Place the specimen in the bottle containing the agar. DO NOT press into the agar. T.B. is routinely done if there is sufficient specimen See BONE MARROW CULTURE
Biopsy specimens			Add about 1 mL of sterile saline to container to prevent drying. See BIOPSY SPECIMENS.
• Blood	Bactec® Myco/F Lytic culture vial		Inoculate the vial with up to 5 mL of blood. Up to 2 cultures may be submitted.
Bronchoscopy	Suction trap or C&S container		
Gastric Washing	KB "TREATED" container		This container holds a buffer to neutralize stomach acid. Optimal time for collection is early in the morning <u>before</u> meals. Submit no more than 100 mL of 3 fasting specimens collected on consecutive days. Refrigerate after collection.
Sputum			Collect an early morning specimen on 3 consecutive days or, for infection control purposes, 3 specimens within 24 hours with a minimum time span of 8 hours between collections. Submit each specimen separately.
			DO NOT submit 24-hour sputum collection. DO NOT split one specimen into three containers. Refrigerate until transported to the laboratory. See SPUTUM CULTURE
Pleural Fluid			
• Stool			Mycobacterium avium (MAI) must be requested. Culture is done only if the smear is positive for aci –fast bacilli.
Urine			Collect early morning specimens taken on three consecutive days. Submit each specimen separately.
			DO NOT submit 24-hour urine collections. DO NOT send several specimens collected on the same day. DO NOT split one specimen into 3 containers. STAT acid-ast screening smears are not done on urine specimens.
THROAT CULTURE	C&S swab	Microbiology	A Gram stain is not performed on throat specimens. Specify if investigation for <i>N. gonorrhoeae</i> is required.

INVESTIGATION	CONTAINER	REQUISITION	INSTRUCTIONS/OTHER INFORMATION
THRUSH			See FUNGUS CULTURE
TOBRAMICIN LEVEL			See BIOCHEMISTRY services
TOXOPLASMOSIS • Serology	Red top tube	BCCDC Non-viral Serological tests	Submit serum. This test is only performed on CSF if a serum sample is also submitted for testing. See SEROLOGY TESTS
TREPONEMA PALLIDUM			See SYPHILIS
TRICHOMONAS	Aptima Multitest NAT swab	Microbiology	Obtain collection instructions and kits from Laboratory Accessioning
URINE CULTURE	C&S container or container with MSU collection kit or catheterization tray	Microbiology	If using the MSU Kit, follow the collection instructions in the kit. All specimens must be submitted in a sterile C&S container within 24 hours of collection, and refrigerated immediately if there will be any delay in transporting it to the laboratory. Specimens more than 24 hours old on receipt in the laboratory will not be processed (See also T.B. CULTURE)
			Reporting of Results: No growth – reported the following day after culture. Significant growth – an interim report is sent out the following day after culture. Identification and sensitivity of isolate(s) can usually be reported by the second day following culture.
VAGINAL			See GENITAL CULTURE
VANCOMYCIN LEVEL			See BIOCHEMISTRY services
VANCOMYCIN RESISTANT ENTEROCOCCI	C&S swab	Microbiology	Refer to the Infection Control manual for instructions.
VINCENT'S ORGANISMS "VINCENT'S ANGINA"	C&S swab	Microbiology	Specimens should be taken from ulcerative gum, mouth or pharyngeal lesions. Request "Vincent's organisms" on the requisitions. Bedside – made smears of the lesion(s) can also be submitted.
VIRUS CULTURE			See VIROLOGY services See also BLOOD CULTURES (CMV culture, CMV antigenemia)
VIRUS SEROLOGY			See VIROLOGY services See SEROLOGY TESTING
VORICONAZOLE LEVEL			Consult Medical Microbiologist for approval.
VRE/VRE SCREEN			Refer to the Infection Control manual for instructions.
WORM ID			See PARASITOLOGY
WOUND CULTURE	C&S swab	Microbiology	Specimens from deep wounds may also be submitted in an anaerobic transporter. See also ABSCESS CULTURE, ANAEROBES
YEAST CULTURE			See FUNGUS CULTURE
YERSINIA CULTURE			See STOOL CULTURE