Microbiology Collection & Transport Guide

Overview

Focus Diagnostics offers routine and special cultures for bacteria, viruses, mycobacteria and fungi. (Please refer to pages 9-11 for detailed information on Virology Collection and Transport procedures.) The Microbiology Department utilizes a variety of methods for identification including, but not limited to, traditional biochemicals and enzyme-based methods, serotyping, genetic probes, microscopy and High Performance Liquid Chromatography (HPLC). Antimicrobial susceptibility testing is available for bacteria, fungi and mycobacteria. Antimicrobial, antiviral, and antiretroviral drug level testing is performed with bioassay, HPLC, and spectrophotometric methods. It is the goal of the Microbiology Department to utilize the most current methods available to provide you with an accurate and rapid result.

Test Request Information

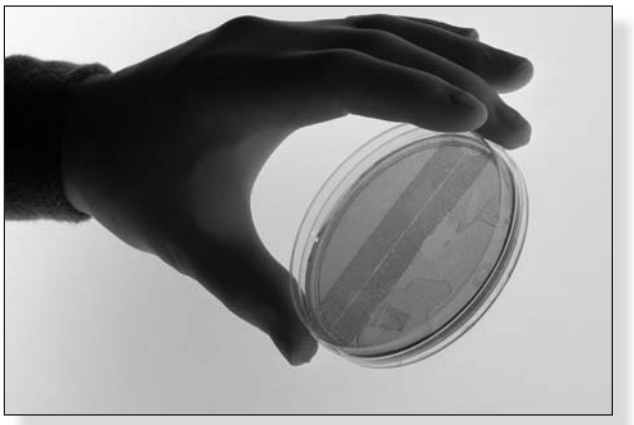
Focus' Microbiology Department requests that as much information as possible be provided. This should include source, date collected, antibiotics that the patient is currently taking, and organism identification when appropriate.

Collection, Transportation and Storage Guidelines

Specimens should be collected in the acute phase of infection. Transport all specimens to the laboratory as soon as possible, usually within 24 hours post collection. The charts included in this section describe specimen collection and optimum transport procedures by body site and by organism. This information serves as a guide only. Please do not hesitate to contact Focus' Microbiology Department for further details regarding the collection and transport of specimens.

Reporting

The availability of preliminary and final reports varies according to the type of culture.



Microbiology Specimen Collection & Transport by Organism

(See Pages 6 to 11 for Mycology, AFB, and Virology Specimens)

Organism	***Test***	***Specimen Source***	***OptimumTransport Procedure*** ***(Transport all specimens within 24 hours or overnight unless otherwise specified.)***
Acanthamoeba	Acanthamoeba Culture	Corneal scrapings, conjunctival scrapings, contact lens and contact lens fluid (recommended)	Place scrapings or tissue in sterile saline. Room Temperature
Anaerobes	Culture, Anaerobe	Deep wounds, sterile fluids, abscess material, trans-tracheal aspirates, and tissue	Anaerobic transport Room Temperature
Bartonella	Bacterial Culture, Special	Whole blood (EDTA), tissue, CSF, lymph node aspirate, or joint fluid	Blood preferred; tissue in BHI or Thioglycollate. Room Temperature
Bordetella pertussis/ parapertussis	Bordetella pertussis/ parapertussis Culture	NP swab is the preferred specimen. Other acceptable sources are bronchial or NP secretions or aspirates and transtracheal aspirates on appropriate transport swab. Use calcium alginate or Dacron-tipped NP swabs only.	Charcoal transport swab Room Temperature *Note: A PCR is strongly recommended if the specimen is not received <24h post collection. Alternatively, a DFA may be run but is less sensitive.*
Borrelia spp.	Borrelia burgdorferi (Lyme) Culture Borrelia hermsii Culture	Blood (preferred), skin biopsy at lesion periphery, CSF, joint fluid or live tick	Blood preferred. Room Temperature
Brucella	Bacterial Culture, Special	Blood, bone marrow, lymph node aspirates, synovial fluid, CSF, abscess aspirates, and liver or spleen biopsy	Room Temperature *Note: anticoagulants may affect organism viability upon prolonged storage.*
Campylobacter	Bacterial Culture, Aerobic (Stool)	Stool, rectal swab	Cary-Blair transport medium 2-8° C
E. coli	E. coli, Enterohemorrhagic E. coli, Enteroinvasive E coli, Enteropathogenic E. coli, Enterotoxigenic	Pure isolate	Room Temperature
Francisella tularensis	Bacterial Culture, Special	Lymph node aspirate, sputum, throat swab, bronchial washing, lesion biopsy	**FREEZE**, or Amies gel swab at Room Temperature.

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Microbiology Specimen Collection & Transport by Organism

Organism	*Test*	*Specimen Source*	***OptimumTransport Procedure*** ***(Transport all specimens within 24 hours or overnight unless otherwise specified.)***
Helicobacter pylori	H. pylori Culture	Gastric biopsy	20% glycerol medium (preferred), or Stuart's or Cary Blair transport medium. 2-8° C
Legionella spp.	Legionella Culture	Sputum, transtracheal aspirate, bronchoscopy specimen, biopsy, CSF, pericardial fluid, pleural fluid, peritoneal fluid	Sterile container 2-8° C
Leptospira spp.	Leptospira Culture	Blood (heparin, oxalate or citrate), CSF (first week of illness), urine (after first week of illness).	Sterile container. Neutralize urine to pH of 7.0 by adding sterile dilute acid or base. 5-20° C
Listeria monocytogenes	Bacterial Culture, Special	Blood, CSF, amniotic fluid, placenta or fetal tissue	2-8° C
Mycoplasma pneumoniae	Mycoplasma pneumoniae Culture	Throat or nasopharyngeal swab/wash, sputum, tracheal aspirate	Mycoplasma transport medium 2-8° C
Neisseria gonorrhoeae	Bacterial Culture, Special	Genital tract, urine, anal area, oropharynx, conjunctiva, Bartholin's gland, fallopian tubes, endometrium, blood, joint fluid, skin lesions, or gastric contents of neonates.	N. gonorrhoeae transport system Room Temperature
Streptobacillus moniliformis	Bacterial Culture, Special	Blood or joint fluid	Blood in non-SPS medium, ASAP, Room Temperature
Ureaplasma urealyticum/ Mycoplasma hominis	Mycoplasma Culture, Genital	Urethral, vaginal or cervical swab, urine, abscess, prostatic secretions, placenta, fetal tissue from spontaneous abortions or still births, endometrial washings or tissue biopsy, fallopian tube tissue, respiratory specimens	Mycoplasma transport medium 2-8° C
Vibrio	Bacterial Culture, Special	Stool prior to antibiotic therapy	Cary-Blair transport medium 2-8° C
Yersinia pestis	Bacterial Culture, Special	Lymph node aspirate, sputum, blood, throat swab/washings, CSF	2-8° C

Please note that this is a suggested specimen collection guide.
For specimen types that are not listed, please contact Focus' Scientific Director of Microbiology.

Bacteriology Specimen Collection & Transport by Source

Specimen Source	*Collection Procedure*	*OptimumTransport Procedure* (Transport all specimens within 24 hours or overnight unless otherwise specified.)
Abscess		
Open	Swab transport system	Room Temperature
Closed	Anaerobic transport system, ≥1mL	Room Temperature
Bite Wound – See Abscess		
Blood Culture	Blood culture bottle Adult, 10-20mL/set Infant, 1-2mL/set	Room Temperature
Catheter	Sterile screw-cap tube	2-8° C
Cellulitis	Sterile tube, tissue or agar gel swab transport	Room Temperature
CSF	>1mL in sterile screw-cap tube	Room Temperature
Decubitis ulcer	Swab transport or anaerobic system	Room Temperature
Dental Culture Gingival, periodontal, periapical, Vincent's stomatitis	Anaerobic transport system	Room Temperature
Ear		
Inner	Sterile tube, swab transport medium or anaerobic system	Room Temperature
Outer	Swab transport	Room Temperature
Eye		
Conjunctiva	Swab transport medium	Room Temperature
Corneal scrapings		Room Temperature
Fistula- See Abscess		
Fluids Abdominal, ascites, bile, joint, pericardial, peritoneal, pleural, synovial	Sterile screw-cap tube or anaerobic transport system >1mL	Room Temperature
Gangrenous tissue- See Abscess		
Gastric Wash or lavage fluid	Sterile, leakproof container	Room Temperature
Genital: female		
Amniotic	Anaerobic transport system, >1mL	Room Temperature
Bartholin	Anaerobic transport system, >1mL	Room Temperature
Cervix	Swab transport	Room Temperature
Cul-de-sac	Anaerobic transport system, >1mL	Room Temperature
Endometrium	Anaerobic transport system, >1mL	Room Temperature
Products of conception	Sterile tube or anaerobic transport system	Room Temperature
Urethra	Swab transport	Room Temperature
Vagina	Swab transport	Room Temperature

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Bacteriology Specimen Collection & Transport by Source

Specimen Source	*Collection Procedure*	*OptimumTransport Procedure* *(Transport all specimens within 24 hours or overnight unless otherwise specified.)*
Genital: male		
Prostate	Swab transport or sterile tube	Room Temperature
Urethra	Swab transport	Room Temperature
Pilonidal cyst – See Abscess		
Respiratory tract – lower BAL, lung biopsy, bronchial brushing/washing, tracheal aspirate	Sterile container, >1mL	2-8° C
Respiratory tract-upper		
Oral	Swab transport	Room Temperature
Nasal	Swab transport	Room Temperature
Nasopharynx	Swab transport	Room Temperature
Throat	Swab transport	Room Temperature
Sputum		
Expectorated or Induced	Sterile container, >1mL	2-8° C
Stool		
Routine culture	>2g in sterile, leakproof container or enteric transport system	2-8° C Enteric transport: <48h, Room Temperature
Clostridium difficile culture	>5mL in sterile, anaerobic, leakproof container	2-8° C >24h, **FROZEN**
Escherichia coli	>2mL in sterile, leakproof container or enteric transport system	Room Temperature Enteric transport: Room Temperature
Rectal swab	Swab transport	2-8° C
Tissue		
Aerobic	Swab Transport System or sterile container with sterile saline	Room Temperature
Anaerobic	Anaerobic Transport System	Room Temperature
Urine		
Female, midsteam	Sterile leakproof container, >1mL or urine transport kit	Unpreserved: 2-8° C Preserved: Room Temperature
Male, midstream	Sterile leakproof container, >1mL or urine transport kit	Unpreserved: 2-8° C Preserved: Room Temperature
Straight catheter	Sterile leakproof container	Unpreserved: 2-8° C Preserved: Room Temperature
Indwelling catheter	Sterile leakproof container	Unpreserved: 2-8° C Preserved; Room Temperature
Wound (See abscess)		

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For specimen types that are not listed, please contact Focus' Scientific Director of Microbiology

Mycology Specimen Selection by Organism

Superficial Fungal Infections

Fungus	*Specimen Source*
Dermatophytes	Hair, nails, skin

Systemic Fungal Infections

Fungus	*Specimen Source*
Aspergillus spp.	Respiratory secretions, lung, skin, bone, oropharyngeal ulcers, prostate, tissue biopsy, nasal sinus
Blastomyces dermatitidis	Respiratory secretions, lung, skin, bone, oropharyngeal ulcers, prostate, tissue biopsy, urine
Candida spp.	Respiratory secretions, blood, stool, transtracheal aspiration, CSF, bone, peritoneal fluid, urine, skin
Coccidioides immitis	Respiratory secretions, lung, skin, bone, CSF, synovial fluid, urine, tissue biopsy, blood
Cryptococcus neoformans	Respiratory secretions, lung, skin, bone, CSF, synovial fluid, urine, blood
Fusarium spp.	Skin, respiratory secretions, eye, nasal sinus
Histoplasma capsulatum	Respiratory secretions, lung, bone marrow, blood, urine, skin, CSF, eye, pleural fluid, liver, tissue biopsy, lymph node
Mucor spp.	Respiratory secretions, lung, skin, nose, brain, stool, wounds, ear, exudates, eye, nasal sinus
Nocardia spp.	Respiratory secretions, lung, skin, blood, brain, conjunctiva, bone, CSF
Paracoccidioides brasiliensis	Respiratory secretions, lung, biopsy, pus, skin
Rhizopus spp.	Respiratory secretions, skin, nose, brain, stool, eye, wounds, nasal sinus
Scedosporium apiospermum (*Pseudallescheria boydii*)	Respiratory secretions, skin, eye, bone, brain, CSF, nasal sinus
Sporothrix schenckii	Respiratory secretions, skin, subcutaneous tissue, sinuses, blood, bone marrow, CSF, synovial fluid, lymph nodes

Mycology Specimen Collection & Transport by Source

Specimen Source	*Collection Procedure*	*Optimum Transport Procedure*
Blood	8 mL in a yellow top (ACD) tube or Isolator tube.	Room Temperature
Bone Marrow	5-10 mL in a green top (Heparin) tube.	Room Temperature
CSF	Sterile container.	2-8° C
Eye	Corneal scrapings, intraocular fluid or biopsy.	2-8° C
Hair	Select infected area. Remove at least 10 hairs. Entire hair shaft is necessary.	Room Temperature Place hairs between two clean glass slides or in a clean envelope labeled with the patient's data.
Nails	Clean nail with 70% alcohol, scrape away the outer portion and obtain scrapings from the deeper infected areas.	Room Temperature
Nose	Necrotic material or biopsy.	2-8° C
Respiratory	Induced sputum, tracheal aspirate, lung biopsy, bronchoscopy specimens.	2-8° C
Skin and interspaces	Clean skin with 70% alcohol. Scrape the entire lesion(s) and both sides of interspaces.	Room Temperature
Tissue Biopsy	Collect tissue aseptically from the center and edge of the lesion. Place specimens between moist gauze squares, add a small amount of sterile water or saline to keep tissue from drying out.	2-8° C
Urine	Catheterized specimen is preferred. Early morning clean-catch is also acceptable.	2-8° C

Acid-Fast Bacilli Specimen Collection & Transport by Source

Specimen Source	*Collection Procedure*	*OptimumTransport Procedure* *(Transport all specimens within 24 hours or overnight unless otherwise specified.)*
Aspirate	Sterile container	2-8° C
Blood	5-10 mL in ACD or Heparin	Room Temperature
Body Fluids	Sterile container	2-8° C
Bone Marrow	Collect in sterile tube or Heparin tube	Room Temperature
Bronchoalveolar lavage, bronchial washings, bronchial brushings	Sterile container	2-8° C
CSF	Sterile container	2-8° C
Gastric Lavage	Sterile container. Specimen pH adjusted to 7.0 if transport to lab is >1 hour post collection.	2-8° C
Sputum	Sterile container	2-8° C
Stool	2 gm in sterile container	2-8° C
Tissue	1 gm in sterile container. Keep moist with sterile saline.	2-8° C
Urine	Sterile container	2-8° C