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دائرة المختبرات الطبيه و علم الأمراض
Department of Laboratory Medicine and Pathology

Lab Guide – 2018

Microbiology Section Lab Guide

MICROBIOLOGY LAB – HGH SPECIMEN GUIDELINES

Critical value (CRIV) in Microbiology

Microbiology Test	Critical Result (Record the time of Identification)
Gram Stain	Positive result from: Blood cultures Fluids / Tissues and Abscess from sterile body sites
Bacterial Antigen Test	Positive result from CSF
Cryptococcal antigen	Positive result from CSF
Mycobacteriology (TB) Test	Critical Result (Record the time of Identification)
Acid Fast Bacilli smear	Smear positive result from direct specimen in TB Lab
First GeneXpert PCR test	First GeneXpert positive result, where smear results are negative
First TB Culture	First culture positive result from direct specimens in TB lab, where GeneXpert and smear results are negative

STAT LIST:

- CSF
- Pericardial fluid and sterile body fluids.
- Eye specimen from cases of corneal abscess, corneal scrapings and endophthalmitis.
- Eye swab from neonates 28 days old.
- Specimens for suspected gas (wet) gangrene and necrotizing fasciitis for clostridium species.
- Throat swab or nasopharyngeal swab for diphtheria.

For Collection guideline

- CLINICAL MICROBIOLOGY SPECIMEN COLLECTION GUIDE

Abscesses and aspirates for bacterial culture

ITEM	PROCESS
Specimen	• Pus aspirate send in sterile leak proof in a sealed plastic bag with biohazard label. • Pus aspirate is always superior to a swab specimen. • Specify anatomic Site • If pus aspirate cannot be sent; Swab in Amies transport medium can be used
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily.
Turnaround time	**Routine microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy**: Gram stain **Culture:** Aerobic and Anaerobic.
Reference Value	**Microscopy**: No WBC's, No organisms seen **Culture**: No growth; presence of skin flora / normal flora
Interpretation	**Microscopy**: Semi-quantitative report of WBC's, types of bacteria, fungi seen. All STAT Gram stains called to physician, if positive. **Culture**: For significant isolates, susceptibility testing is performed.
Rejection Criteria	• Aspirate received in syringe with needle.
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Abscesses and aspirates for AFB culture

ITEM	PROCESS
Specimen	• Pus aspirate sent in sterile leak proof without fixative • Pus aspirate is always superior to a swab specimen. **Specify anatomic Site**
Transport Temperature	≤2 hrs at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Average number of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Abscesses and aspirates for fungal culture

ITEM	PROCESS
Specimen	• Pus aspirate send in sterile leak proof without fixative • Pus aspirate is always superior to a swab specimen. **Specify anatomic Site**
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent. **Culture:** Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells, Yeast cells or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Abscesses and aspirates for ova and parasite

ITEM	PROCESS
Specimen	Minimum 0.5 ml of aspirate in sterile, leak proof container **Specify anatomic Site**
Transport Temperature	≤15 min at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	**Microscopy:** Same day
Method	**Microscopy:** Wet mount, concentration, permanent stain
Reference Value	No ova or parasites seen
Interpretation	Ova or parasites seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047/ 1647

Air Sampling culture (Environmental)

ITEM	PROCESS
Specimen	Air sample using Samplair Lite Machine or by settle plates. Prior approval of specimen collection with Infection Control and Microbiology lab is a must. Air Sampling culture is performed from operation theaters and high risk areas (Hematology/ Oncology and bone marrow transplant unit).
Transport Temperature	≤2 hrs. Room Temperature
Days test is performed	Sunday to Thursday - (only in the morning after arrangement with Infection Control and Microbiology lab)
Turnaround time	**Culture:** 48 hrs. for bacterial culture. 5 days for fungal culture
Method	**Culture:** Aerobic
Reference Value	**Culture:** No growth.
Interpretation	**Culture:** Air sampling culture positive results (colony count, CFU) are reported to Infection Control Practitioners. Culture is performed as per Infection Control Policies.
Rejection Criteria	1. Samples not sent in coordination with Infection Control Practitioners. 2. Duplicate specimens within 48hrs. 3. Improperly filled request form. 4. Unlabeled mislabeled or mismatched specimen**.**
Performing Lab Location	Microbiology lab (Tel # 40256068/44392038)

Anal / rectal swab, scotch tape for ova and parasites

ITEM	PROCESS
Specimen	• Tape fixed on a glass slide and transported as soon as possible • Rectal Swab in a transport medium
Transport Temperature	≤ 2 hrs at Room Temperature
Days test is performed	Sunday-Thursday 7am – 3pm
Turnaround time	**Microscopy:** same day
Method	**Microscopy:** Wet mount
Reference Value	No ova or parasites seen
Interpretation	E.vermicularis ova seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047/1647

Aspergillus Galactomannan Antigen Test

ITEM	PROCESS
Specimen	5-7 ml of blood in sterile, plain (red top) or gel activator (yellow) tube BAL 10ml in sterile container
Transport Temperature	< 2 hours at room temperature
Days test is performed	Every Wednesday
Turnaround time	Same day
Method	Enzyme Immuno Assay (EIA)
Reference Value	Negative
Interpretation	Positive
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 40256068

Blood culture- aerobic and anaerobic / pediatric

ITEM	PROCESS
Specimen	**Adult-** Obtain 20 mL of blood per culture. (One culture set consists of one bottle of aerobic culture medium and one bottle of anaerobic culture medium or two aerobic bottles) If less than 20 mL but more than 10 ml is obtained for the first set of bottles, divide the blood evenly into the aerobic and anaerobic bottle. If less than 10 mL is obtained for the second set of bottles, inject the entire volume into one bottle. **Pediatric patients-** Weight < 30 Kg, obtain as much blood as practical (1-4 mL minimum) and use pediatric culture system. For pediatric patients of weight > 30 Kg and or age of > 12 yrs, recommended volume is 10 mL and inoculate in to aerobic bottle. **Specify venipuncture / anatomic site / Central line** **Note: Endocarditis-** 2 to 3 sets in a 24 hrs.
Transport Temperature	≤ 2 hrs. At Room Temperature. **Do not refrigerate**
Days test is performed	Daily
Turnaround time	**Microscopy:** 1 hr after positivity. **Culture: Preliminary report:** 24-48 hrs. **Positive :** 24- 48 hrs. (after positive blood culture) **Final Negative :** 5 days
Method	Blood cultures incubated in automated blood culture system- Bactec FX. **For positive culture:** **Microscopy**: Gram stain **Identification:** MALDI-TOF and PCR **Culture:** Aerobic and Anaerobic bacterial culture
Reference Value	Negative after 5 days.
Interpretation	**Microscopy**: All organisms reported All Gram Stains called to physician. **Culture:** • All isolates are identified.

	• Susceptibility results are reported when appropriate. • All positive results are called to the physician.
Rejection Criteria	• Patient labels covering the barcode labels of the culture bottles • Labels attached to blood culture bottles and or the blood bottles visually stained with patient's blood Note**:** Place the patient label on each bottle & label each Culture bottle with the site of specimen collection. When applying patient identification labels, do not cover the bar code label on the blood culture bottles.
Performing Lab Location	Microbiology lab (Tel # 1047)

Body fluids for bacterial culture

ITEM	PROCESS
Specimen	Aspirate fluid in a sterile leak proof container. **Specify anatomic site** Minimum 1.0 ml
Transport Temperature	≤ 2 hrs. at room temperature If transport is delayed more than 2 hrs. Please refrigerate (2-8^{o}C), do not freeze.
Days test is performed	Daily
Turnaround time	**STAT Microscopy:** 1 hr **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic & Anaerobic
Reference Value	**Microscopy:** No Organism Seen, No WBC seen **Culture:** No Growth
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. All STAT Gram stains called to physician, if positive. **Culture:** All isolates are identified, susceptibility testing is performed. All positive results are called to the physician.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Body Fluids for AFB culture

ITEM	PROCESS
Specimen	Aspirate fluid in a sterile leak proof container. **Specify anatomic site** Minimum 10-15 ml
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Body fluids for fungal culture

ITEM	PROCESS
Specimen	Aspirate fluid in a sterile leak proof container. **Specify anatomic site** Minimum 1.0 ml
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent **Culture:** 2 set in Aerobic condition: 37˚C and 26˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Bone marrow for bacterial culture

ITEM	PROCESS
Specimen	Specimen in pediatric blood culture bottles for aerobic. An additional specimen may be collected in sterile tube with heparin (>1 ml) for fungal and parasitic workup.
Transport Temperature	≤ 2 hrs. At Room Temperature. **Do not refrigerate**
Days test is performed	Daily
Turnaround time	**Microscopy:** 1 hr after positivity. **Culture: Preliminary report:** 48 hrs. **Positive:** 24- 48 hrs. (after positive blood culture) **Final Negative :** 5 days
Method	Blood cultures incubated in automated blood culture system- Bactec FX. **For positive culture:** **Microscopy**: Gram stain **Culture:** Aerobic and anaerobic bacterial culture
Reference Value	Negative after 5 days.
Interpretation	**Microscopy**: All Organisms reported All STAT Gram stains called to physician, if positive. **Culture:** • All isolates are identified. • Susceptibility results are reported when appropriate.
Rejection Criteria	• Patient labels covering the barcode labels of the culture bottles • Labels attached to blood culture bottles and or the blood bottles visually stained with patient's blood Note**:** Place the patient label on each bottle & label each Culture bottle with the site of specimen collection. When applying patient identification labels, do not cover the bar code label on the blood culture bottles.
Performing Lab Location	Microbiology lab (Tel # 1047)

Bone marrow for AFB culture

ITEM	PROCESS
Specimen	In sterile leak proof container with sodium polyanethol sulfonate (SPS)
Transport Temperature	≤ 2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Bone marrow specimen sent in unsterile tube
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Bone marrow for fungal culture

ITEM	PROCESS
Specimen	0.5- 1 ml tube with SPS or Heparin.
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 14 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent. **Culture:** Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells, Yeast cells or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	• Bone marrow specimen sent in unsterile tube
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Bone marrow for parasitic investigation

ITEM	PROCESS
Specimen	0.5- 1 ml tube with SPS or Heparin
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm.
Turnaround time	**Microscopy:** 24 hrs.
Method	**Microscopy:** Giemsa stain
Reference Value	Negative for ova / parasite
Interpretation	Positive for ova / parasite
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Bronchoscopy specimens for bacterial culture

ITEM	PROCESS
Specimen	Broncho-alveolar lavage / bronchial wash / bronchial brush in a sterile screw capped container. 5- 10 ml
Transport Temperature	≤ 2 hrs. at room temperature > 2 hrs. store at 4-8 ^{0}C
Days test is performed	Daily
Turnaround time	**Microscopy :**Same day **Culture :** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic,
Reference Value	**Microscopy:** No WBCs; No organism seen. **Culture:** No growth / Normal upper respiratory flora
Interpretation	**Microscopy:** Semi quantitative report of WBC's, type of bacteria, fungus seen **Culture:** Significant isolates reported along with Susceptibility result when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory, Ext.2038

Catheter tip for culture

ITEM	PROCESS
Specimen	Arterial Tip, Balloon Tip, Broviac, Hickman, PICC, Central venous, Double-lumen, Hemodialysis, Subclavian, Swan Ganz, Triple Lumen, Umbilical catheter, CSF Shunt Tip 5 cm distal end of the catheter tip in sterile container
Transport Temperature	≤ 2 hrs. at room temperature > 2 hrs. store at 4-8 ^{0}C
Days test is performed	Daily
Turnaround time	**Culture :** 48-72hrs
Method	**Culture:** Aerobic,
Reference Value	**Culture:** No growth
Interpretation	**Culture:** Significant isolates reported along with Susceptibility result when appropriate.
Rejection Criteria	Catheter tip samples sent as a routine (on removal) without collecting blood culture.
Performing Lab Location	Microbiology Laboratory, Ext.2038

Cerebrospinal fluid (CSF) for Bacterial culture

ITEM	PROCESS
Specimen	Collect CSF into Sterile leak-proof tubes. Submit the sterile tube with CSF to Microbiology as soon as possible ≥1 ml
Transport Temperature	≤2 hrs at room temperature. Do not refrigerate
Days test is performed	Daily
Turnaround time	**STAT Microscopy:** 1 hr **CSF bacterial latex Agglutination Test:** Positive Latex results relayed within 1 hr. **Culture:** Preliminary within 24 hrs. Final: 48-72 hrs
Method	**Microscopy**: Gram stain and India Ink **Bacterial Antigen Latex:** CSF bacterial latex Agglutination Test performed when WBC count is abnormal. **Culture:** Aerobic
Reference Value	**Microscopy**: No organism seen **CSF bacterial latex Agglutination Test:** Negative **Culture:** No Growth
Interpretation	**Microscopy**: Types of bacteria, fungus seen. All Positive Gram Stains informed to physician. **CSF bacterial latex Agglutination Test:** Positive results informed to physician. **Culture:** All isolates are completely identified. Susceptibility results are reported when appropriate. All positive results are informed to the physician.
Rejection Criteria	• Duplicate specimen collected within 48hrs in patients with shunts, EVD, Omaya etc. **and not** **from Lumbar puncture**
Performing Lab Location	Microbiology lab (Tel # 1047/2038)

Cerebrospinal fluid (CSF) for AFB culture

ITEM	PROCESS
Specimen	Collect CSF into Sterile leak-proof sterile tubes. 2 to 3 ml, optimal is upto10 ml
Transport Temperature	≤ 2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Specimen sent in unsterile tube
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Cerebrospinal fluid (CSF) for fungal culture

ITEM	PROCESS
Specimen	CSF into sterile leak-proof container 2-3 ml
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy Stat**: 1 hr after positivity. **Cryptococcal antigen Detection**: 1 hr after positivity. **Culture:** 72 hrs. – 10 days **Note:** when culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent and India ink if requested. **Cryptococcal latex antigen** **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Cryptococcal latex antigen-** Negative **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Cryptococcal latex antigen-** Positive **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Cerebrospinal fluid (CSF) for parasites

ITEM	PROCESS
Specimen	CSF into sterile leak-proof container 0≥1 ml
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm.
Turnaround time	**Microscopy:** 24 hrs. for Giemsa
Method	**Microscopy:** Giemsa Culture when available
Reference Value	Negative for Acanthamoeba / Naegleria / Balamuthia Species
Interpretation	Detection of Acanthamoeba / Naegleria / Balamuthia Species
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Cervical / Urethral swabs for bacterial culture

ITEM	PROCESS
Specimen	Swab in Amies transport medium It is preferable to send two swabs, one for culture and one for microscopy.
Transport Temperature	Room temperature. Swabs for suspected case of gonorrhea, should be transported within 2 hrs.
Days test is performed	Daily
Turnaround time	**Microscopy :** same day **Culture:** 48-72 hrs.
Method	**Microscopy**: • Wet mount. • Gram stain. **Culture:** Aerobic.
Reference Value	**Wet mount:** Trichomonas vaginalis not seen **Gram Stain**: No diplococci seen **Culture:** No Growth / Normal perineal flora isolated / Growth of coliforms
Interpretation	**Microscopy:** **Wet mount:** Trichomonas vaginalis seen **Gram stain**: Gram Negative Diplococci (intracellular / Extracellular) seen. **Culture**: Significant isolates reported along with susceptibility result when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Chlamydia trachomatis direct antigen detection

ITEM	PROCESS
Specimen	For adults- urethral, cervical, rectal swabs, For Pediatrics- ocular and nasopharyngeal swabs, collected on sterile swab
Transport Temperature	≤ 2 hrs. at room temperature
Days test is performed	Sunday to Thursday in the morning Specimens accepted on all days
Turnaround time	Same Day, except weekend
Method	**DFA:** Qualitative direct immunofluorescence test
Reference Value	DFA Chlamydia: Negative
Interpretation	DFA Chlamydia: Positive Significant results are called to the physician
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Corneal abscess swab / ulcer scrapings for bacterial culture

ITEM	PROCESS
Specimen	Specimen in sterile container or directly inoculated Blood agar plate, Chocolate agar plate.
Transport Temperature	≤ 2 hrs. At Room Temperature
Days test is performed	Daily
Turnaround time	**STAT Microscopy:** 1 hr **Microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain, Giemsa stain (if specimen received on slides) **Culture:** Aerobic
Reference Value	**Microscopy:** No organism seen, No WBC seen **Culture:** No Growth
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. All STAT Gram stains called to physician, if positive. **Culture:** All significant organisms, susceptibility testing performed. Significant results are informed to the physician
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038 / 1047)

Corneal abscess swab / ulcer scrapings for fungal culture

ITEM	PROCESS
Specimen	Specimen in sterile container or directly inoculated Sabroud's agar (SDA).
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days Note: when culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain (if specimen received and not inoculated plates) **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Corneal abscess swab / ulcer scrapings / Contact lens and fluid for parasitic examination

ITEM	PROCESS
Specimen	Corneal abscess swab / ulcer scrapings / contact lens and fluid, submitted to the laboratory as soon as possible after collection.
Transport Temperature	≤ 30 min at room temperature
Days test is performed	Sunday-Thursday- 7am – 3pm
Turnaround time	**Microscopy:** 24 hrs. for Giemsa
Method	**Microscopy:** Giemsa Stain Culture when available
Reference Value	Negative for Acanthamoeba cysts and trophozoites
Interpretation	Detection of Acanthamoeba cysts and trophozoites
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Diphtheria culture

ITEM	PROCESS
Specimen	Throat swab, nasopharyngeal, laryngeal and wound swabs in Amies transport medium If cutaneous diphtheria is suspected, collect skin, throat, and nasopharynx specimens.
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	STAT Microscopy: 1 hr. Culture: 24-48 hours
Method	Microscopy: Gram stain, Albert's Stain Culture: Aerobic
Reference Value	Microscopy: Gram positive bacilli with metachromatic granules not seen. Culture: Corynebacterium diphtheriae not isolated.
Interpretation	Microscopy: Gram positive bacilli with metachromatic granules seen. Culture: Growth of Corynebacterium diphtheria along with antimicrobial susceptibility result. Note- All positive results are called to the physician within 1 hour from the time of detection.
Rejection Criteria	-
Performing Lab Location	HMC Microbiology Laboratory Ext. # 2038 / 1047

Duodenal Aspirate for ova and parasites

ITEM	PROCESS
Specimen	Specimen collected in screw capped container.
Transport Temperature	≤ 2 hrs. at Room Temperature
Days test is performed	Sunday-Thursday- 7am – 3pm
Turnaround time	**Microscopy:** Same day
Method	**Microscopy:** Wet mount, Concentration, Trichrome stain
Reference Value	No ova or parasites seen
Interpretation	Ova or parasites seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Ear swabs- middle ear / external ear for bacterial culture

ITEM	PROCESS
Specimen	Swab in Amies transport medium.
Transport Temperature	≤ 2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day **Culture :** 48-72 hours
Method	**Microscopy:** Gram stain **Culture:** Aerobic & Anaerobic
Reference Value	No growth / Normal skin flora isolated. Normal skin flora including coliforms.
Interpretation	**Microscopy:** Semi quantitative report of WBC's, types of bacteria, fungus seen. **Culture:** All significant isolates identified, susceptibility testing performed.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext.#2038

Ear swabs- middle ear / external ear for fungal culture

ITEM	PROCESS
Specimen	Specimen in sterile container / swab in Amies transport medium.
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** In many cases swabs are not suitable for direct microscopy. **Culture:** 48hrs. up to 5 days Note: When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain (if specimen received and not inoculated plates) **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Endometrial tissue / swab for culture

ITEM	PROCESS
Specimen	Collect specimens aseptically in sterile container / endometrial swab in amies medium **Tissue specimens are superior to swabs.**
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Routine Microscopy:** Same day **Culture:** 48 hours-10 days
Method	**Microscopy:** Gram Stain **Culture:** Aerobic and Anaerobic
Reference Value	**Microscopy:** No organisms seen. **Culture:** No growth
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. **Culture:** All significant organisms, susceptibility testing performed. Significant pathogens will be phoned to physicians.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Endotracheal secretions for bacterial culture

ITEM	PROCESS
Specimen	Collect into sterile leak proof wide mouth container. Minimum of 2 ml.
Transport Temperature	≤ 2 hours at room temperature Specimens may be refrigerated for up to 2 hr
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic
Reference Value	**Microscopy:** Normal respiratory flora **Culture:** No growth / Normal respiratory flora
Interpretation	**Microscopy**: Semi-quantitative report of WBCs, predominant type of bacteria, and fungus seen. **Note:** Culture performed only if the quality of the specimen is good (WBC > Epi Cells) otherwise the specimen is considered to be contaminated with oropharyngeal flora. **Culture :** Significant isolates reported along with Susceptibility result when appropriate.
Rejection Criteria	• Endotracheal tubes (tip) • Endotracheal or tracheal secretion swab, except sputum swab from CF patients and PCD patients
Performing Lab Location	Microbiology Laboratory Ext.2038/1047

Endotracheal secretions for fungal culture

ITEM	PROCESS
Specimen	Specimen in sterile container
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain (if specimen received and not inoculated plates) **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Environmental specimens for culture

ITEM	PROCESS
Specimen	Environmental swabs in Amies medium, fluids in sterile container. Prior approval of specimen collection with Infection Unit is must
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Sunday to Thursday - (only in the morning after arrangement with Medical Microbiologist)
Turnaround time	**Culture:** 48-72 hrs. for Bacterial culture. 5 Days for Fungal culture.
Method	**Culture:** Aerobic conditions.
Reference Value	**Culture:** No growth.
Interpretation	**Culture:** Environmental sampling culture positive results are reported to Infection Control Practitioners. Culture is performed under guidelines of Infection Control Policies and coordination with Infection Control Practitioners.
Rejection Criteria	• Samples not sent in coordination with Infection Control Practitioners.
Performing Lab Location	Microbiology lab (Tel # 2038/ 40256068)

Eye - Conjunctiva, Eyelid (blepharitis) swab for bacterial culture

ITEM	PROCESS
Specimen	Swab in Amies transport medium or directly inoculated on Blood agar plate and Chocolate agar
Transport Temperature	≤ 2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**STAT Microscopy:** 1 hr (for neonates) **Microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic
Reference Value	**Microscopy:** No Organism Seen, No WBC seen **Culture:** No Growth or Normal skin flora
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. **Note:** All STAT Gram stains (neonate) called to physician, if positive. **Culture:** All significant organisms, susceptibility testing performed. Significant Results are called to the physician
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Gastric wash or lavage for AFB culture

ITEM	PROCESS
Specimen	Collect in early morning before patients eat and while they are still in bed. Perform lavage with 25 to 50 mL of chilled, sterile distilled water. Recover sample and place in a leak-proof sterile container such as a 50-mL conical tube. 25 to 50 mL
Transport Temperature	≤1 hrs at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Gastric lavage sent on swab
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Hair for fungal culture

ITEM	PROCESS
Specimen	Collect at least 10-12 affected hairs taken in a sterile Petri dish, or Sterile glossy paper with the base of the shaft intact and placed in clean container. (Refer to section 5.9)
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 7 days – 21 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain. **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Fungal elements seen. **Culture:** Significant fungus isolates reported when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

High vaginal swabs for culture

ITEM	PROCESS
Specimen	High vaginal swab in Amies transport medium It is preferable to send two swabs- one for culture and one for microscopy.
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy**: Same day **Culture:** 48-72 hrs.
Method	**Microscopy**: • Wet mount. • Gram stain. **Culture:** Aerobic
Reference Value	**Wet mount-** Trichomonas vaginalis not seen **Gram Stain** - Normal vaginal flora **Culture**- Normal Vaginal flora
Interpretation	**Microscopy**: **Wet mount**: Trichomonas vaginalis seen **Gram stain:** • Yeast with or without hyphal filaments • Evidence of vaginosis: Gram Stain smear suggestive of bacterial vaginosis **Culture:** Significant isolates reported when appropriate.
Rejection Criteria	• Low vaginal swab
Performing Lab Location	Microbiology lab (Tel # 2038)

Insect / adult worm or proglotid for identification

ITEM	PROCESS
Specimen	• Passed / voided specimen in isotonic saline in clean sterile container. • Do not use ethanol or formalin to preserve the specimen • Insect in sterile container.
Transport Temperature	≤ 2 hrs at Room Temperature
Days test is performed	Sunday-Thursday 7am – 3pm
Turnaround time	Same day
Method	Macroscopic / Microscopic Evaluation
Reference Value	-
Interpretation	Identification of appropriate species
Rejection Criteria	Veterinary specimens
Performing Lab Location	Microbiology Laboratory (Ext. # 2038 / 1047)

Intra-uterine contraceptive device (IUCD) culture

ITEM	PROCESS
Specimen	IUCD in a sterile leak proof container.
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** same day **Culture :** Preliminary report: 48-72 hrs. Final report: 10 days
Method	**Microscopy**: Gram stain **Culture:** Anaerobic conditions.
Reference Value	**Microscopy**- No organisms resembling Actinomyces seen on Gram stain **Culture-** No growth / Normal vaginal flora
Interpretation	**Microscopy:** Report the presence of branching Gram positive bacilli resembling Actinomyces. **Culture:** Actinomyces species reported along with susceptibility result when appropriate.
Rejection Criteria	• Specimen sent in formalin
Performing Lab Location	Microbiology lab (Tel # 2038)

Nail scrapings for fungal culture

ITEM	PROCESS
Specimen	Specimen taken in a sterile Petri dish, or Sterile glossy paper
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 7 days – 21 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain. **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Nasal swabs for MRSA Screening

ITEM	PROCESS
Specimen	Cepheid Collection Device, Copan double plastic swab (red cap) Nasal Swabs for MRSA screening will be accepted from patient as per corporate infection MRSA policy (CL 7252).
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	2-4 Hrs.
Method	GenXpert MRSA assay
Reference Value	GeneXpert MRSA assay- Negative for MRSA DNA GeneXpert MRSA assay- Positive for MRSA DNA
Interpretation	GeneXpert MRSA assay - Positive for MRSA DNA Results are reported to Infection Control Practitioners.
Rejection Criteria	• Routine screening of patients for MRSA is not done. Please refer to Infection control policy CL 7252 for selection of patients.
Performing Lab Location	Microbiology lab (Tel # 40256068)

Nasal swabs for MRSA/MSSA Specific PCR

ITEM	PROCESS
Specimen	Cepheid Collection Device, Copan double plastic swab (red cap) Nasal Swabs for MRSA/SA screening will be accepted from patient as per corporate infection MRSA policy (CL 7252).
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	2-4 Hr.
Method	GeneXpert SA Nasal complete assay
Reference Value	GeneXpert SA Nasal complete assay - Negative for MRSA DNA - Negative for SA DNA GeneXpert SA Nasal complete assay - Positive for MRSA DNA - Positive for SA DNA GeneXpert SA Nasal complete assay - Negative for MRSA DNA - Positive for SA DNA
Interpretation	GeneXpert SA Nasal complete assay - Positive for MRSA DNA GeneXpert SA Nasal complete assay - Positive for SA DNA Results are reported to Infection Control Practitioners
Rejection Criteria	• Routine screening of patients for MRSA is not done. Please refer to Infection control policy CL 7252 for selection of patients.
Performing Lab Location	Microbiology lab (Tel # 40256068)

Nasopharyngeal aspirate for B. pertusis

ITEM	PROCESS
Specimen	Nasopharyngeal aspirate (secretion) Pernasal swab, and nasopharyngeal swab in **charcoal-based** transport medium (Regan-Lowe)
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** NA **Culture: Preliminary report**: 48 hrs. **Final report :** 12 days
Method	**Microscopy:** Gram stain **Culture:** Aerobic
Reference Value	**Microscopy:** No gram negative coccobacilli seen. **Culture:** Negative for Bordetella species
Interpretation	**Microscopy-** Gram negative coccobacilli seen. **Culture-** Culture positive for Bordetella species
Rejection Criteria	• Cough plates should not be used as they are not sensitive. • Rayon or cotton swabs should be avoided.
Performing Lab Location	HMC Microbiology Laboratory Ext.#2038/1047

Placental tissue for culture

ITEM	PROCESS
Specimen	Collect specimens aseptically in sterile container
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy Stat:** 1-2 hours **Routine Microscopy:** same day **Culture:** 48 hours-10 days
Method	**Microscopy:** Gram Stain **Culture:** Aerobic and Anaerobic
Reference Value	**Microscopy:** No organisms seen. **Culture:** No growth
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. **Culture:** All significant organisms, susceptibility testing performed. Significant pathogens will be phoned to physicians.
Rejection Criteria	• Placental swabs
Performing Lab Location	Microbiology lab (Tel # 2038)

Rectal swabs for Vancomycin resistant Enterococci (VRE)

ITEM	PROCESS
Specimen	Rectal swab in Amies transport medium. Prior approval of specimen collection with Infection control is must
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Sunday to Thursday - (only in the morning after arrangement with Medical Microbiologist)
Turnaround time	**Culture:** 48-72 hrs.
Method	**Culture:** Aerobic
Reference Value	**Culture:** No VRE isolated
Interpretation	**Culture:** VRE positive results are reported to Infection Control Practitioners. Culture is performed under guidelines of Infection Control Policies and in coordination with Infection Control Practitioners.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Respiratory specimens for AFB culture

ITEM	PROCESS
Specimen	Sputum (for 2 consecutive days), Endo-tracheal secretions, BAL / BW in a sterile, wide mouth disposable container (preferably 50 ml falcon tube). **Note-** • For follow up of patients on therapy, collect at weekly intervals only for AFB staining, beginning at 2 weeks after initiation of therapy until 2 consecutive smear negative results are obtained. If first smear negative result is obtained the second smear should be repeated on following day. • Second Culture is done for two consecutive samples after 2 months of therapy. • Third Culture of another two consecutive samples is done at end of therapy. Collect 5-10 ml (min 3ml**)** early-morning specimen
Transport Temperature	≤ 2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive.
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Salivary sputum except for patient on therapy in the TB unit and induced sputum • Third consecutive sputum and other pulmonary samples from same patient • Pooled sputum specimens • Swabs are not recommended for the culture of Mycobacterium, since they provide limited material.

Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Respiratory specimens for AFB PCR

ITEM	PROCESS
Specimen	Sputum Endo-tracheal secretions, BAL / BW in a sterile, wide mouth disposable container (preferably 50 ml falcon tube). **Note-** • Test should be ordered along with culture and smear for new patients suspected of TB Collect 5-10 ml (min 3ml**)** early-morning specimen
Transport Temperature	≤ 2 hrs at room temperature
Days test is performed	Daily
Turnaround time	Next day, Positive PCR- one hour after detection time.
Method	**GeneXpert TB PCR**
Reference Value	**AFB PCR:** Positive/Negative **MTB DNA:** Detected /Not Detected **Rifampicin(RIF) Resistant:** Detected/Not Detected
Interpretation	• Positive, MTB DNA Detected Rif resistance Detected • Positive, MTB DNA Detected Rif resistance Not Detected • Negative, MTB DNA Not Detected • Please Note: As documented by WHO, RIF resistance is rarely encountered by itself, and usually indicates resistance to a number of other anti-TB drugs. It is most commonly seen in multi-drug resistant strains and has a reported frequency of greater than 95 % in such isolates • A negative TB PCR result alone is not enough to rule out TB diagnosis. This test should be run in conjunction with TB Culture • GeneXpert Real Time PCR is not approved by FDA for extra pulmonary samples.
Rejection Criteria	• Salivary sputum except for patient on therapy in the TB unit and induced sputum • Third consecutive sputum and other pulmonary samples from same patient • Pooled sputum specimens • Swabs are not recommended for the culture of Mycobacterium, since they provide limited material.

	• Test is already performed on other pulmonary specimen
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Respiratory tract specimens for P. jirovecii

ITEM	PROCESS
Specimen	Sputum / Endotracheal secretions / Bronchoscopy specimen in sterile screw capped container. ≥ 5 ml
Transport Temperature	≤ 2 hrs at room temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	**Microscopy:** 8-24hrs
Method	**Microscopy**: **DFA**- Direct Fluorescent antigen assay **GMS**- Gomori methinamine silver stain
Reference Value	**Microscopy:** **DFA**- Negative **GMS Stain**- Negative
Interpretation	**Microscopy**: **DFA**- Negative **GMS Stain**- Negative
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Respiratory specimens for fungal culture

ITEM	PROCESS
Specimen	Sputum / Endotracheal secretions / Bronchoscopy specimen in sterile screw capped container. ≥ 1 ml.
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain. **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with Susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Respiratory Specimens for Ova & parasite

ITEM	PROCESS
Specimen	Sputum / Sputum, induced / Endotracheal secretions / Bronchoscopy specimen in sterile screw capped container. For the diagnosis of Paragonimus westermani eggs, *Strongyloides stercoralis*, *Acaris lumbricoides* and hookworm larvae. ≥ 1 ml
Transport Temperature	≤15 min at Room Temperature
Days test is performed	Sunday-Thursday- 7am – 3pm
Turnaround time	**Microscopy:** same day
Method	**Microscopy:** Wet Mount **Culture:** Axenic culture for Strongyloides / hookworm larvae
Reference Value	**Microscopy:** No ova / parasite seen **Culture:** negative for Strongyloides / hookworm larvae
Interpretation	**Microscopy:** ova / parasite seen **Culture:** Strongyloides larvae / hookworm detected
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Semen, prostatic secretion for bacterial culture

ITEM	PROCESS
Specimen	Collect the specimen in a Sterile leak proof container. **Note:** More relevant results may be obtained by giving a urine specimen collected immediately before and after massage along with the **Prostatic secretion** to indicate urethral and bladder organisms.
Transport Temperature	≤ 2 hours at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy –** Same day **Culture:** 48-72 hrs.
Method	**Microscopy**: Gram stain. **Culture:** Aerobic conditions.
Reference Value	No organisms seen, normal genital flora
Interpretation	**Microscopy :** Semi-quantitative report of WBCs, types of bacteria, fungi seen **Culture:** Significant isolates reported along with susceptibility result when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Sigmoidoscopy material for ova & parasite

ITEM	PROCESS
Specimen	Sigmoidoscopy specimen in a screw capped container
Transport Temperature	≤ 30 min at Room Temperature
Days test is performed	Sunday-Thursday / 7am – 3pm
Turnaround time	**Microscopy:** Same day
Method	**Microscopy:** Wet mount, Concentration, Permanent stain
Reference Value	No ova or parasites seen
Interpretation	ova or parasites seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Skin scraping for fungal culture

ITEM	PROCESS
Specimen	Specimen taken in a sterile petri dish, or sterile glossy paper.
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day; when smear is positive one hour after detection time. **Culture:** 7 days – 21 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent stain. **Culture:** 2 set in Aerobic condition: 37˚C and 25˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Sputum for bacterial culture

ITEM	PROCESS
Specimen	Collect into sterile leak proof wide mouth container. ≥ 2 ml
Transport Temperature	≤ 2 hours at room temperature Specimens may be refrigerated for up to 8 hr
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic
Reference Value	**Microscopy:** Normal respiratory flora **Culture:** No growth / Normal respiratory flora
Interpretation	**Microscopy**: Semi-quantitative report of WBCs, predominant type of bacteria, and fungus seen. **Note:** Culture performed only if the quality of the specimen is good (WBC> Epi Cells) otherwise the specimen is considered to be contaminated with oropharyngeal flora. **Culture :** Significant isolates reported along with susceptibility result when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext.2038/1047

Stool for routine culture

ITEM	PROCESS
Specimen	Clean leak proof wide mouth container 10-20 gm
Transport Temperature	≤ 1 hr at room temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	**Culture:** 48-72hrs
Method	**Culture:** Aerobic and microaerophilic **Campy antigen test**
Reference Value	**Culture:** No Salmonella-Shigella, Campylobacter spp, Enteropathogenic E. coli and Enterohemorrhagic E. coli isolated **Campy antigen test-** Negative
Interpretation	**Culture:** Following significant isolates will be identified at species level and susceptibility will be performed- • Salmonella spp. group ___ isolated • Shigella spp. isolated • Enteropathogenic E. coli isolated. Poly group__ • Enterohemorrhagic E. coli isolated • Campylobacter spp. Isolated
Rejection Criteria	• More than two specimens/patient without prior consultation with Microbiology • Specimens from inpatients after the third hospital day, without prior consultation with Microbiology
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Stool for AFB culture

ITEM	PROCESS
Specimen	Stool specimen in clean leak proof wide mouth container. **Note-** Utility of culturing stool for acid-fast bacilli remains controversial and should be discouraged; however, stool samples from immunocompromised patients may be submitted, mainly to detect MOTT. 10-20 gm
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Stool for Ova and Parasite

ITEM	PROCESS
Specimen	Specimen collected in screw capped container. If possible, three specimens passed at intervals of 2-3 days should be examined over a period of 1 week. 10-20 gm.
Transport Temperature	≤ 2 hrs at Room Temperature
Days test is performed	Sunday-Thursday- 7am – 3pm Specimens accepted on all days.
Turnaround time	Same day
Method	**Microscopy:** Wet mount, concentration, permanent stain
Reference Value	No ova or parasites seen
Interpretation	ova or parasites seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Stool for Adenovirus and Rotavirus

ITEM	PROCESS
Specimen	Clean leak proof wide mouth container 10-20 g.
Transport Temperature	≤1 hr at room temperature
Days test is performed	Sunday-Thursday- 7am – 3pm Specimens accepted on all days.
Turnaround time	Same day
Method	Chromatographic immunoassay technique
Reference Value	Adenovirus: Negative Rotavirus: Negative
Interpretation	Adenovirus: Positive Rotavirus: Positive
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Stool for Clostridium difficile toxin

ITEM	PROCESS
Specimen	Stool in sterile leak proof wide mouth container ≥ 5ml
Transport Temperature	≤1 hr at room temperature or ≤ 24h at $4^{O}C$
Days test is performed	Daily
Turnaround time	Same day
Method	1. C. diff Quik Chek Complete- Immunochromatography 2. Xpert *C. difficile* Assay- PCR
Reference Value	Clostridium difficile Toxin A&B: Negative
Interpretation	Clostridium difficile Toxin A&B: Positive Positive results are called to the physician and informed to Infection Control Practitioners
Rejection Criteria	• Formed/Hard stools • Infant < 1 year • Patients with previous negative results within a week • Patients with positive tests should not have repeated testing for cure before 28 days • Specimens that have been preservative
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Stool for Shiga Toxin / Verotoxin (Enterohaemorrhagic E. coli) assay

ITEM	PROCESS
Specimen	Stool in sterile leak proof wide mouth container Bloody or liquid stools collected within 6 days of onset from patients with abdominal cramps have the highest yield.
Transport Temperature	≤1 hr at room temperature or ≤ 24h at $4^{O}C$
Days test is performed	Specimens accepted on all days. Test performed once a week.
Turnaround time	Daily
Method	Enzyme Immunoassay
Reference Value	Shiga Toxin (I/II) - Negative
Interpretation	Shiga Toxin (I/II) – Positive
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Stool for Helicobacter pylori antigens

ITEM	PROCESS
Specimen	Stool in sterile leak proof wide mouth container Test also can be used for treatment effectiveness, relapse or eradication.
Transport Temperature	≤1 hr at room temperature or ≤ 72h at 2-8^{O}C
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	Same day
Method	Chromatographic immunoassay technique
Reference Value	Helicobacter pylori Antigen – Negative
Interpretation	Helicobacter pylori Antigen – Positive
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Stool for occult blood

ITEM	PROCESS
Specimen	Stool specimen in sterile screw cap container. Avoid iron supplements, red meat, vitamin C, barium meal for 3days, if the recommended dietary preparation is not followed, it can cause analytical false positives.
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	Same day
Method	Guaiac test (Hema screen kit)
Reference Value	Negative
Interpretation	Positive
Rejection Criteria	-
Performing Lab Location	Microbiology lab- #1047 or # 2038

Throat swab for routine culture

ITEM	PROCESS
Specimen	Throat swab in Amies transport medium
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Culture:** 24-48 hrs.
Method	**Culture:** Aerobic / Anaerobic conditions
Reference Value	**Culture:** No growth or growth of normal upper respiratory flora.
Interpretation	Streptococcus Group A, C, G, and Arcanobacterium haemolyticum isolated. **NOTE:** Gonococcal pharyngitis, Vincent's angina and screening for Meningococcal carriers will be done upon request.
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory (# 2038)

Tissue / biopsy for bacterial culture

ITEM	PROCESS
Specimen	Collect specimens aseptically in sterile container. Any tissue requiring cultures should be sent fresh and not in formalin. Send a piece of necrotic tissue (and not the whole tissue removed during surgery).
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy Stat:** 1- **Routine Microscopy:** Same day **Culture:** 48 hours-10 days
Method	**Microscopy:** Gram Stain **Culture:** Aerobic and Anaerobic
Reference Value	**Microscopy:** No organisms seen. **Culture:** No growth
Interpretation	**Microscopy:** Semi-quantitative report of WBCs, types of bacteria, fungus seen. All STAT Gram stains called to physician, if positive. **Culture:** All significant organisms, susceptibility testing performed. Significant pathogens will be phoned to physicians.
Rejection Criteria	• Specimen sent in formalin • Large piece of tissue removed during surgery
Performing Lab Location	Microbiology lab (Tel # 2038)

Tissue / biopsy for AFB culture

ITEM	PROCESS
Specimen	Aseptically collected tissues in sterile containers without fixatives or preservatives. **Specify anatomic site** >1g
Transport Temperature	≤2 hrs. at Room Temperature If delay is anticipated, specimen should be protected from drying by adding sterile saline and maintaining a temperature of 2–8 °C.
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Tissue specimen sent in fixatives
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Tissue / biopsy for fungal culture

ITEM	PROCESS
Specimen	Collect specimens aseptically in sterile container
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy**: Same day; when smear is positive one hour after detection time. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent **Culture:** 2 sets in Aerobic condition: 37˚C and 26˚C
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	• Tissue specimen sent in fixatives
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Tissue / biopsy for ova and parasite examination

ITEM	PROCESS
Specimen	Tissue / biopsy in sterile leak proof container **Specify anatomic Site**
Transport Temperature	≤15 min at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	**Microscopy:** Same day
Method	**Microscopy:** Impression smear, H/E, Trichrome stain
Reference Value	No ova or parasites seen
Interpretation	Ova or parasites seen
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Tongue / oral cavity swab for fungal culture

ITEM	PROCESS
Specimen	Collect specimens aseptically in sterile container
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** Same day. **Culture:** Not performed routinely, only on special request
Method	**Microscopy:** Blankophor P Fluorescent **Culture:** Aerobic condition: 37˚C and 26˚C
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038

Urine Microscopy/reflex culture

ITEM	PROCESS
Specimen	Mid-stream urine specimen in sterile container. Specify method of collection (Midstream, catheter, nephrostomy urine, cystoscopy urine, suprapubic bladder aspirate, etc.). > 5ml If collected in Boric acid container- 20 ml minimum
Transport Temperature	At room temperature. (Any delay, refrigeration 2-8^{0}C is essential.) For > 2hrs delay, Boric acid container at room temperature (up to 24 hrs.)
Days test is performed	Daily.
Turnaround time	**Microscopy:** Same day **Culture:** 24-48 hrs.
Method	**Microscopy**- IRIS Automated Urine Microscopy Analyzer **Culture.** Semi-quantitative aerobic
Reference Value	**Microscopy.** <10 WBCs / µL < 3 RBCs / µL Cast & Crystals- not seen Estimate the range of WBCs and RBCs.(per µL) Record casts and crystals if present and state type. **Culture:** No growth.
Interpretation	**Microscopy.** • Quantitative analysis of WBCs and RBCs • Casts and crystals if present and state type **Culture:** Significant isolates reported along with Susceptibility result when appropriate.
Rejection Criteria	• Urine collected from bag • Foley catheter tips • 24hr urine specimens and urine from the bag of catheterized patients are unacceptable. • Delayed specimen more than 24hrs in Boric acid container or more than 2hrs in plain container without refrigeration.
Performing Lab Location	Microbiology lab (Tel # 2038)

Urine for AFB culture

ITEM	PROCESS
Specimen	First morning specimen in sterile container (midstream is never advised). Collect urine specimen on 2 consecutive days. 10-15 ml (prefer up to 40 ml)
Transport Temperature	≤2 hrs. at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or growth of MOTT
Rejection Criteria	• 24 h pooled specimen • Urine from bag. • Urine received in Boric acid container.
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Urine for ova and parasites

ITEM	PROCESS
Specimen	Collect urine in sterile container without Boric acid. For Schistostoma hematobium, collect urine specimen between- noon to 3 pm.
Transport Temperature	≤ 2 hrs at Room Temperature
Days test is performed	Sunday to Thursday 7am-3 pm Specimens accepted on all days.
Turnaround time	**Microscopy:** same day
Method	**Microscopy:** Wet mount
Reference Value	No ova / parasite seen
Interpretation	Ova / parasite seen
Rejection Criteria	• Request for more than three specimens for single episode • Received Boric acid container
Performing Lab Location	Microbiology Laboratory Ext. # 2038 / 1047

Urine for Legionella Antigen

ITEM	PROCESS
Specimen	Urine in Sterile wide-mouth container
Transport Temperature	< 2 hrs. at room temperature or at 4-8^{O}C for > 2hrs.
Days test is performed	Sunday to Thursday 7am-3 pm. Specimens accepted on all days.
Turnaround time	Same day
Method	Immunochromatographic card test
Reference Value	Legionella Antigen Detection: Negative
Interpretation	Legionella Antigen Detection: Positive Significant Results are called to the physician
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Vulval swab for culture

ITEM	PROCESS
Specimen	Vulval swab in Amies transport medium It is preferable to send two swabs- one for culture and one for microscopy.
Transport Temperature	≤2 hrs at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy**: Same day **Culture:** 48-72 hrs.
Method	**Microscopy**: Gram stain. **Culture:** Aerobic
Reference Value	**Gram Stain** - Normal vaginal flora **Culture**- Normal Vaginal flora
Interpretation	**Microscopy**: **Gram stain:** • Yeast with or without hyphal filaments • Evidence of vaginitis- WBC's and organisms seen • Culture: Significant isolates reported when appropriate.
Rejection Criteria	-
Performing Lab Location	Microbiology lab (Tel # 2038)

Wound specimen for bacterial culture

ITEM	PROCESS
Specimen	Wound swab in Amies transport medium. **Tissue or pus aspirate** in Sterile leak proof container, are always superior to a swab specimen; **Specify anatomic site**
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily.
Turnaround time	**Microscopy:** Same day **Culture:** 48-72hrs
Method	**Microscopy:** Gram stain **Culture:** Aerobic / Anaerobic
Reference Value	**Microscopy:** No pus cells, No organisms seen **Culture:** No growth; presence of skin flora, or fecal flora.
Interpretation	**Microscopy:** Semi-quantitative report of WBCS, types of bacteria, fungi seen. **Culture:** Significant isolates, susceptibly testing performed. Significant results are informed to physician Superficial wound swabs are not cultured for anaerobes.
Rejection Criteria	• Aspirate received in syringe.
Performing Lab Location	Microbiology lab (Tel # 2038/1047)

Wound specimen for AFB culture

ITEM	PROCESS
Specimen	Tissue or pus aspirate in sterile leak proof container without fixative or preservative Collect aseptically, and avoid indigenous microbiota. Select caseous portion if available as the majority of organisms will be found in the periphery of a caseous lesion. Freezing decreases yield. If specimen received is Swabs, only Microscopy will be done. Tissue or pus aspirate are always superior to a swab specimen (Specimen collected should be as large as possible) **Specify anatomic site** > 1 ml or > 1 gm
Transport Temperature	≤2 hrs at Room Temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** For positive smear- one hour after detection time. **Culture**: 42 days; when culture becomes positive the preliminary report is released within 24 hours of detection time.
Method	**Microscopy**: Auramine O and Ziehl-Neelsen **Culture:** BACTEC MGIT
Reference Value	**Microscopy**: No AFB seen. **Culture:** No growth / Culture contaminated / Unable to get pure culture / Fail to survive
Interpretation	**Microscopy**: Report Average no. of AFB / 100 fields **Culture**: Growth of MTB complex with susceptibility to primary drugs SIRE or Growth of MOTT
Rejection Criteria	• Specimens in fixatives or preservatives e.g. tissue Specimen submitted in formalin • Specimen for culture, submitted in un-sterile containers. • One swab for multiple requests, for example, for various organisms (bacteria, AFB, Fungi, Virus etc)
Performing Lab Location	Microbiology Laboratory Ext. # 6671 / 6675

Wound swabs for fungal culture

ITEM	PROCESS
Specimen	Wound swab in Amies transport medium. **Tissue or pus aspirate** in Sterile leak proof container, are always superior to a swab specimen; **Specify anatomic site**
Transport Temperature	≤2 hrs. at room temperature
Days test is performed	Daily
Turnaround time	**Microscopy:** In many cases swabs are not suitable for direct microscopy. **Culture:** 72 hrs. – 10 days **Note:** When culture becomes positive the preliminary report is released as early as the presumptive identification is available.
Method	**Microscopy:** Blankophor P Fluorescent **Culture:** 2 set in Aerobic condition: 37˚C and 26˚C.
Reference Value	**Microscopy:** No Fungal elements seen. **Culture:** No fungus isolated
Interpretation	**Microscopy:** Yeast like-cells seen, Yeast cells seen or fungal elements seen. **Culture:** Significant fungus isolates reported along with susceptibility results (for Candida only) when appropriate. Significant fungal pathogens will be phoned to physicians
Rejection Criteria	-
Performing Lab Location	Microbiology Laboratory Ext. # 2038