

## Lab Specimen Guidelines

### SCRMC Facilities:

All specimens should be labeled with the patient's name, DOB and MRN.

Documentation is needed of initials of person collecting the sample, time and date.

This should be documented electronically unless the LIS is down. A test label will have all the required information and should be used unless the LIS is down.

**Positive patient identification** must be made prior to collection, and specimens labeled and verified against the patient's armband prior to leaving the patient bedside.

**All blood bank specimens** must have PPID documented in Epic before the lab receives the specimen or it will be rejected. If the LIS is down, two nurses must initial, date and put a time on the tube.

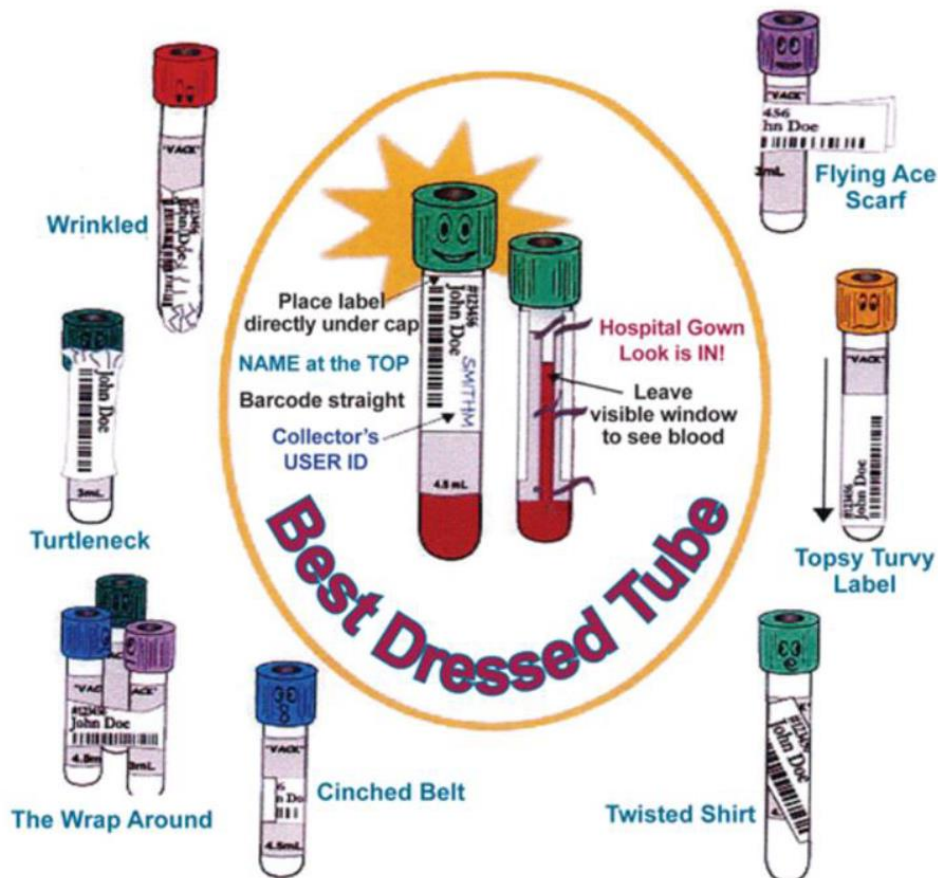
ALL in-patient specimens submitted to the laboratory for testing MUST be labeled with the test label.

Specimens submitted as "extra" to be held for any additional testing must be labeled with the extra label.

Add-on lab tests may be added to existing specimens by placing an add-on order in the EPIC computer system.

Specimen tubes must be labeled according to the "Best Dressed" diagram on the next page.

## Worst Dressed Tubes:



## Outside Organizations:

All specimens should have the patient's name, DOB, collection time, collection date and collector's initials written on the tube's manufacturer label. Don't place any extra labels on the tubes

## Test Requisitions:

Specimens from outside of the SCRMC must be accompanied by a written request from the provider. The order form must have the physician's signature along with order date and time. All information should be filled out on the form. SCRMC provides outpatient order forms.

## SCRMC Outpatient Order Requirements

**Per CMS guidelines, please see below the requirements for all outpatient orders.**

|  |                                                    |
|--|----------------------------------------------------|
|  | Patient's Name                                     |
|  | Patient's Date of Birth                            |
|  | Requested Test Marked or Written                   |
|  | Diagnosis or ICD 10 Code                           |
|  | Physician's Physical Signature                     |
|  | Date & Time Signature                              |
|  | Written Order: Must Include Date of Order          |
|  | Recurring Order: Must Include Duration & Frequency |

Once complete, please fax orders to [601-425-4769](tel:601-425-4769) or [601-426-4912](tel:601-426-4912)



| Chemistry                |                           |          |
|--------------------------|---------------------------|----------|
|                          | Test                      | Code     |
| <input type="checkbox"/> | Basic Met. Panel          | LAB15    |
| <input type="checkbox"/> | Comp. Met. Panel          | LAB17    |
| <input type="checkbox"/> | Hemoglobin A1C            | LAB90    |
| <input type="checkbox"/> | Acetone                   | LAB456   |
| <input type="checkbox"/> | Albumin                   | LAB45    |
| <input type="checkbox"/> | Alkaline Phos             | LAB112   |
| <input type="checkbox"/> | ALT (SGPT)                | LAB132   |
| <input type="checkbox"/> | Amino Acids, Plasma       | LAB811   |
| <input type="checkbox"/> | Ammonia                   | LAB47    |
| <input type="checkbox"/> | Bilirubin, Total          | LAB50    |
| <input type="checkbox"/> | Bilirubin, Neonatal       | LAB51    |
| <input type="checkbox"/> | BNP                       | LAB106   |
| <input type="checkbox"/> | C-Reactive Protein        | LAB149   |
| <input type="checkbox"/> | Calcium                   | LAB53    |
| <input type="checkbox"/> | Creatinine                | LAB383   |
| <input type="checkbox"/> | Electrolytes              | LAB16    |
| <input type="checkbox"/> | Folate                    | LAB69    |
| <input type="checkbox"/> | GGT                       | LAB85    |
| <input type="checkbox"/> | Glucose Tolerance Fasting | LAB824   |
| <input type="checkbox"/> | Glucose Tolerance 1HR     | LAB879   |
| <input type="checkbox"/> | Glucose Tolerance 2HR     | LAB169   |
| <input type="checkbox"/> | Glucose Tolerance 3HR     | LAB164   |
| <input type="checkbox"/> | HCG, Quant                | LAB143   |
| <input type="checkbox"/> | Hepatic Function          | LAB20    |
| <input type="checkbox"/> | Ionized Calcium           | LAB54    |
| <input type="checkbox"/> | Iron Studies              | LAB2340  |
| <input type="checkbox"/> | Lactate                   | LAB95    |
| <input type="checkbox"/> | Lead, Capillary           | LAB830   |
| <input type="checkbox"/> | LDH                       | LAB96    |
| <input type="checkbox"/> | Lipase                    | LAB103   |
| <input type="checkbox"/> | Lipid Panel               | LAB18    |
| <input type="checkbox"/> | Magnesium                 | LAB113   |
| <input type="checkbox"/> | Osmolality                | LAB107   |
| <input type="checkbox"/> | Phosphorus                | LAB90121 |
| <input type="checkbox"/> | Procalcitonin             | LAB118   |
| <input type="checkbox"/> | Protein, Total            | LAB19    |
| <input type="checkbox"/> | Renal Function            | LAB747   |
| <input type="checkbox"/> | Transferrin               | LAB133   |
| <input type="checkbox"/> | Troponin I                | LAB747   |

| Coag                     |                    |         |
|--------------------------|--------------------|---------|
|                          | Test               | Code    |
| <input type="checkbox"/> | APTT               | LAB325  |
| <input type="checkbox"/> | C2 Complement      | LAB153  |
| <input type="checkbox"/> | C3 Complement      | LAB152  |
| <input type="checkbox"/> | C4 Complement      | LAB151  |
| <input type="checkbox"/> | Complement Total   | LAB154  |
| <input type="checkbox"/> | D-Dimer Quant      | LAB313  |
| <input type="checkbox"/> | DIC Profile        | LAB2314 |
| <input type="checkbox"/> | DRVVT              | LAB319  |
| <input type="checkbox"/> | Factor 10 Activity | LAB758  |
| <input type="checkbox"/> | Factor V Leiden    | LAB346  |
| <input type="checkbox"/> | Fibrinogen         | LAB317  |

|                          |                         |        |
|--------------------------|-------------------------|--------|
| <input type="checkbox"/> | Heparin                 | LAB317 |
| <input type="checkbox"/> | Lupus Anticoagulant     | LAB478 |
| <input type="checkbox"/> | Platelet Function Panel | LAB318 |
| <input type="checkbox"/> | Protime/INR             | LAB320 |
| <input type="checkbox"/> | Von Willebrand Screen   | LAB331 |

| Blood Bank               |                 |         |
|--------------------------|-----------------|---------|
|                          | Test            | Code    |
| <input type="checkbox"/> | ABO/Rh          | LAB895  |
| <input type="checkbox"/> | Antibody ID     | LAB941  |
| <input type="checkbox"/> | Antibody Screen | LAB278  |
| <input type="checkbox"/> | Coombs          | LAB1282 |
| <input type="checkbox"/> | Type & Screen   | LAB276  |

| Infectious Disease       |                        |          |
|--------------------------|------------------------|----------|
|                          | Test                   | Code     |
| <input type="checkbox"/> | Hepatitis B Surface Ag | LAB471   |
| <input type="checkbox"/> | Hepatitis B Core IgM   | LAB549   |
| <input type="checkbox"/> | Hepatitis C Ab         | LAB868   |
| <input type="checkbox"/> | Hepatitis A IgM        | LAB798   |
| <input type="checkbox"/> | HSV 1 IgG              | LAB507   |
| <input type="checkbox"/> | HSV 2 IgG              | LAB508   |
| <input type="checkbox"/> | HTLV-I Ab              | LAB1238  |
| <input type="checkbox"/> | HTLV-II Ab             | LAB1239  |
| <input type="checkbox"/> | Mumps IgG Ab           | LAB160   |
| <input type="checkbox"/> | Rapid HIV 1&2 Screen   | LAB473   |
| <input type="checkbox"/> | RPR                    | LAB494   |
| <input type="checkbox"/> | Quantiferon Gold       | LAB10025 |

| Heme                     |                    |        |
|--------------------------|--------------------|--------|
|                          | Test               | Code   |
| <input type="checkbox"/> | CBC w/ Diff        | LAB293 |
| <input type="checkbox"/> | CBC w/o Diff       | LAB294 |
| <input type="checkbox"/> | H & H              | LAB753 |
| <input type="checkbox"/> | Platelet Count     | LAB301 |
| <input type="checkbox"/> | Malaria Smear      | LAB883 |
| <input type="checkbox"/> | Mono Screen        | LAB482 |
| <input type="checkbox"/> | Reticulocytes      | LAB296 |
| <input type="checkbox"/> | Sickle Cell Screen | LAB339 |

| Immunology/Serology      |                              |        |
|--------------------------|------------------------------|--------|
|                          | Test                         | Code   |
| <input type="checkbox"/> | ACE (Angiotensin Conv. Enz.) | LAB179 |
| <input type="checkbox"/> | ACTH                         | LAB511 |
| <input type="checkbox"/> | AFP, Maternal                | LAB692 |
| <input type="checkbox"/> | AFP, Marker                  | LAB559 |
| <input type="checkbox"/> | Alpha-1-Antitrypsin          | LAB810 |
| <input type="checkbox"/> | ANA                          | LAB147 |
| <input type="checkbox"/> | CA 15-3                      | LAB776 |
| <input type="checkbox"/> | CA 19-9                      | LAB777 |
| <input type="checkbox"/> | CA125                        | LAB155 |
| <input type="checkbox"/> | Calcitonin                   | LAB519 |
| <input type="checkbox"/> | Cardiolipin Ab               | LAB464 |
| <input type="checkbox"/> | CEA                          | LAB57  |
| <input type="checkbox"/> | Celiac Panel w/Reflex        | LAB821 |
| <input type="checkbox"/> | Ceruloplasmin                | LAB703 |
| <input type="checkbox"/> | Cortisol                     | LAB61  |
| <input type="checkbox"/> | DHEA                         | LAB522 |

|                          |                             |         |
|--------------------------|-----------------------------|---------|
| <input type="checkbox"/> | ENA Antibodies              | LAB2001 |
| <input type="checkbox"/> | Erythropoietin              | LAB873  |
| <input type="checkbox"/> | Estradiol                   | LAB523  |
| <input type="checkbox"/> | Ferritin                    | LAB68   |
| <input type="checkbox"/> | FSH                         | LAB86   |
| <input type="checkbox"/> | Growth Hormone              | LAB525  |
| <input type="checkbox"/> | IgG IgA IgM                 | LAB166  |
| <input type="checkbox"/> | Progesterone                | LAB529  |
| <input type="checkbox"/> | Prolactin                   | LAB531  |
| <input type="checkbox"/> | PSA                         | LAB116  |
| <input type="checkbox"/> | PTH Intact                  | LAB108  |
| <input type="checkbox"/> | LH                          | LAB87   |
| <input type="checkbox"/> | Maternal Triple Screen      | LAB701  |
| <input type="checkbox"/> | Sed Rate                    | LAB322  |
| <input type="checkbox"/> | T3                          | LAB136  |
| <input type="checkbox"/> | T3 Uptake and FTI           | LAB840  |
| <input type="checkbox"/> | T4                          | LAB126  |
| <input type="checkbox"/> | T4 Free                     | LAB127  |
| <input type="checkbox"/> | Testosterone                | LAB124  |
| <input type="checkbox"/> | Tissue Transglutaminase IgA | LAB723  |
| <input type="checkbox"/> | Tissue Transglutaminase IgG | LAB721  |
| <input type="checkbox"/> | TSH                         | LAB129  |
| <input type="checkbox"/> | Rheumatoid Factor           | LAB206  |
| <input type="checkbox"/> | Vitamin B12                 | LAB67   |
| <input type="checkbox"/> | Vitamin D 1,25-Dihydroxy    | LAB536  |
| <input type="checkbox"/> | Vitamin D 25-Hydroxy        | LAB535  |
| <input type="checkbox"/> | Allergens: (list them here) |         |

| <b>Toxicology</b>        |                          |             |
|--------------------------|--------------------------|-------------|
|                          | <b>Test</b>              | <b>Code</b> |
| <input type="checkbox"/> | Amikacin, Peak           | LAB2315     |
| <input type="checkbox"/> | Amikacin, Trough         | LAB2317     |
| <input type="checkbox"/> | Amikacin, Random         | LAB2316     |
| <input type="checkbox"/> | Gentamicin, Peak         | LAB28       |
| <input type="checkbox"/> | Gentamicin, Trough       | LAB26       |
| <input type="checkbox"/> | Gentamicin, Random       | LAB27       |
| <input type="checkbox"/> | Tobramycin, Peak         | LAB36       |
| <input type="checkbox"/> | Tobramycin, Trough       | LAB38       |
| <input type="checkbox"/> | Tobramycin, Random       | LAB37       |
| <input type="checkbox"/> | Vancomycin, Peak         | LAB41       |
| <input type="checkbox"/> | Vancomycin, Trough       | LAB39       |
| <input type="checkbox"/> | Vancomycin, Random       | LAB40       |
|                          | <b>- Therapeutics-</b>   |             |
| <input type="checkbox"/> | Acetaminophen            | LAB43       |
| <input type="checkbox"/> | Carbamazepine Level      | LAB21       |
| <input type="checkbox"/> | Digoxin Level            | LAB23       |
| <input type="checkbox"/> | Dilantin Level           | LAB32       |
| <input type="checkbox"/> | Lithium Level            | LAB29       |
| <input type="checkbox"/> | Salicylate Level         | LAB34       |
| <input type="checkbox"/> | Theophylline             | LAB35       |
| <input type="checkbox"/> | Valproic Acid Level      | LAB24       |
|                          | <b>- Drugs of Abuse-</b> |             |

|                                                     |                                                                 |                         |     |
|-----------------------------------------------------|-----------------------------------------------------------------|-------------------------|-----|
| <b>Patient Name</b><br>(Last, First, MI)            |                                                                 | DOB (M/D/YYYY)          | MRN |
| <b>Legal Sex</b> (circle one)<br>F / M / X / NB / U | <b>Add'l Identifier Type</b> (circle one)<br>Phone #      Email | <b>Add'l Identifier</b> |     |



|                          |                   |          |
|--------------------------|-------------------|----------|
| <input type="checkbox"/> | Ethanol           | LAB46    |
| <input type="checkbox"/> | Rapid Drug Screen | LAB10214 |
| <input type="checkbox"/> |                   |          |

**Urine**

| Test                                         | Code   |
|----------------------------------------------|--------|
| <input type="checkbox"/> Pregnancy, Urine    | LAB437 |
| <input type="checkbox"/> Urine Culture       | LAB749 |
| <input type="checkbox"/> Electrolytes, Urine | LAB565 |
| <input type="checkbox"/> Cytology, Urine     | LAB14  |
| <input type="checkbox"/>                     |        |
| <input type="checkbox"/>                     |        |

**Random & Timed Urines**

|                                                                        |            |
|------------------------------------------------------------------------|------------|
| <input type="checkbox"/> Random                                        |            |
| <input type="checkbox"/> Timed                                         | Start D/T: |
| <input type="checkbox"/> 24 Hour                                       | End D/T:   |
| <input type="checkbox"/> ALA [LAB356-24H]                              |            |
| <input type="checkbox"/> Amylase [LAB358-R] [LAB360-T] [LAB359-24H]    |            |
| <input type="checkbox"/> Calcium [LAB371-R] [LAB814-24H]               |            |
| <input type="checkbox"/> Catecholamine [LAB962-R] [LAB373-24H]         |            |
| <input type="checkbox"/> Chloride [LAB374-R] [LAB375-T]                |            |
| <input type="checkbox"/> Creatinine [LAB384-R] [LAB385-T] [LAB712-24H] |            |
| <input type="checkbox"/> Glucose [LAB2326-R] [LAB395-T] [LAB396-24H]   |            |
| <input type="checkbox"/> Microalbumin [LAB546-R] [LAB410-24H]          |            |
| <input type="checkbox"/> Protein [LAB439-R] [LAB440-T] [LAB441-24H]    |            |
| <input type="checkbox"/> Sodium [LAB444-R] [LAB445-T] [LAB441-24H]     |            |
| <input type="checkbox"/> Uric Acid [LAB2327-R] [LAB450-T] [LAB841-24H] |            |
| <input type="checkbox"/> VMA [LAB750-R] [LAB452-24H]                   |            |
| <input type="checkbox"/> Creatinine Clearance [LAB1765-24H]            |            |

**Other**

| Test                                         | Code   |
|----------------------------------------------|--------|
| <input type="checkbox"/> Blood Gas, Arterial | LAB76  |
| <input type="checkbox"/> Blood Gas, Venous   | LAB79  |
| <input type="checkbox"/> Pregnancy, Urine    | LAB56  |
| <input type="checkbox"/> Carboxyhemoglobin   | LAB91  |
| <input type="checkbox"/> Methemoglobin       | LAB688 |

**Micro**

| Test                                                   | Code    |
|--------------------------------------------------------|---------|
| <input type="checkbox"/> Wound Culture                 | LAB503  |
| <input type="checkbox"/> AFB Blood Culture             | LAB246  |
| <input type="checkbox"/> Blood Culture                 | LAB462  |
| <input type="checkbox"/> Cryptococcal Ag               | LAB779  |
| <input type="checkbox"/> Candida DNA                   | LAB911  |
| <input type="checkbox"/> C. Trachomatis/N. gonorrhoeae | LAB1376 |
| <input type="checkbox"/> E. coli 0157 Ag               | LAB1312 |
| <input type="checkbox"/> MRSA DNA Probe                | LAB1747 |
| <input type="checkbox"/> Ova & Parasites               | LAB258  |
| <input type="checkbox"/> Pin Worm Prep                 | LAB248  |
| <input type="checkbox"/> Rapid RSV Screen              | LAB495  |
| <input type="checkbox"/> Rapid Strep A Screen          | LAB885  |
| <input type="checkbox"/> Respiratory Panel             | LAB1900 |
| <input type="checkbox"/> Strep B Screen (VAG)          | LAB922  |
| <input type="checkbox"/> Wet Prep                      | LAB252  |
| <input type="checkbox"/> Methemoglobin                 | LAB688  |

**Misc**

**Test**

|                          |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |

Provider signature

Printed name

Date

Diagnosis

|                                                     |                                                                 |                         |            |
|-----------------------------------------------------|-----------------------------------------------------------------|-------------------------|------------|
| <b>Patient Name</b><br>(Last, First, MI)            |                                                                 | <b>DOB</b> (M/D/YYYY)   | <b>MRN</b> |
| <b>Legal Sex</b> (circle one)<br>F / M / X / NB / U | <b>Add'l Identifier Type</b> (circle one)<br>Phone #      Email | <b>Add'l Identifier</b> |            |

## Transport Within SCRMC

### Pneumatic Tube System

The hospital's pneumatic transport system may be used to transport most specimens within the facility **EXCEPT BED BUGS**. Follow current guidelines for system. Ensure that all specimens are transported in a sealed biohazard bag. If any specimen spills during pneumatic transport, refer to current facility policy and procedure for cleanup and notification of appropriate departments.

### Order of Draw

|                                                                                       | Collection tube: | <b>Invert Immediately</b>        |
|---------------------------------------------------------------------------------------|------------------|----------------------------------|
| 1   | Blood Cultures   | Invert Immediately<br>8–10 times |
| 2  | Blue             | Invert Immediately<br>3–4 times  |
| 3  | Red or Marble    | Invert Immediately<br>5 times    |
| 4  | Green            | Invert Immediately<br>8–10 times |
| 5  | Purple or Pink   | Invert Immediately<br>8–10 times |
| 6  | Gray             | Invert Immediately<br>8–10 times |

## Clean Catch Urine Specimen Instructions

1. Tear open the 5 small foil packages and remove the towelettes. Use the towelettes to completely clean the genital area.
2. From the package remove the funnel top specimen container. **Be very careful not to touch the rim or the inside of the white funnel top.**
3. Begin to urinate into toilet. While urinating, place specimen container in position so urine will collect in the container. **Do not touch the inside of the funnel top.**
4. After urine is in the container, hold the container with one hand and twist funnel top off with the other.
5. Take the screw top cover out of the bottom of the tray. **Do not touch the inside of the cover.**
6. Screw cover onto the container.
7. Put all leftover soiled items and packaging into the waste basket.
8. Give specimen container containing specimen and label to nurse.

*Note: Instructions for use are found in each clean catch kit.*

## 24-hour Urine Collection

1. Void completely and discard urine.
2. Start timing and collect all urine from this point for \_\_\_\_\_hours. (24 hours)
3. Preservative: None \_\_\_\_\_ Type \_\_\_\_\_

Additional information:

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## Collection

Instruct patient to void, then discard the specimen. Collect all urine for the next 24 hours.

*Example:* Void, next time you void says 7 AM and date, collect all urine for the next 24 hours until 7 AM the next day. Label container with the patient's name, date of birth, start time and time the collection started, plus end time and date of collection.

## Storage Instructions

Refrigerate at 2°C to 8°C or put on ice, bring back to outpatient or laboratory as soon as possible.

## Possible Rejection Criteria

- Sample not labelled
- Specimen mislabeled
- Specimen with multiple labels
- PPID not documented in Epic for Blood bank specimens
- Specimen with multiple names on specimen
- Specimen with MRN incomplete or cutoff label
- Sample drawn from wrong patient
- Specimen with possible contamination from IV fluid or anticoagulant
- Specimens broken and/or spilled in transit
- Specimens which contain exterior contamination of the container
- Specimen which are hemolyzed
- Specimens submitted in the improper container (i.e., heparinized potassium submitted in a marble top tube)
- Specimen requirements not met (i.e., patient not fasting; lactic acid not submitted on ice)
- Specimens which are clotted
- Specimen collected at the wrong time
- Specimen too old for processing

- Inpatient patient sample labeled with the hospital label
- Barcodes that are unreadable or smeared
- Wrong barcode
- Wrong test label placed on the tube

## Test Menu

| Test                                         | Container                                    | Special Instructions / Time Requirements         | Minimum Volume   | Storage   |
|----------------------------------------------|----------------------------------------------|--------------------------------------------------|------------------|-----------|
| Arterial Blood Gas                           | 1ml heparinized blood on ICE                 | Bring to lab immediately; test within 30 minutes | 1 ML             | ON ICE    |
| ABO Blood Group                              | Pink Top (or 5 mL purple for cord blood)     |                                                  | 1 ML             | 2–8°C     |
| Acetaminophen                                | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| Activated Partial Thromboplastin Time (APTT) | Blue Top                                     | Test within 4 hours of collection                | Fill to the line | 2–8°C     |
| Albumin                                      | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| Alcohol                                      | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| Alkaline Phosphatase                         | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| ALT                                          | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| Ammonia                                      | Green or marble on ICE                       | Must reach lab within 20 minutes                 | 2 ML             | ON ICE    |
| Amylase Serum                                | Green or marble                              |                                                  | 2 ML             | 2–8°C     |
| Amylase Fluid                                | Sterile container                            |                                                  | 2 ML             | 2–8°C     |
| Amylase Random Urine                         | Sterile container                            |                                                  | 2 ML             | 2–8°C     |
| Antibody ID Panel                            | Pink Top                                     |                                                  | 5 ML             | 2–8°C     |
| Antibody Screen Gel                          | Pink Top                                     |                                                  | 5 ML             | 2–8°C     |
| Aspartate Transaminase (AST / SGOT)          | Green or marble                              |                                                  | 3 ML             | 2–8°C     |
| Basic Metabolic Panel                        | Green or marble                              |                                                  | 2 ML             | 2–8°C     |
| Bacterial Antigen Test                       | CSF in sterile container                     |                                                  | 2 ML             | 2–8°C     |
| Beta Hydroxybutyrate                         | Green or marble                              |                                                  |                  | 2–8°C     |
| Bilirubin Direct                             | Green or marble                              |                                                  | 2 ML             | 2–8°C     |
| Bilirubin Total                              | Green or marble                              |                                                  | 2 ML             | 2–8°C     |
| Blood Smear Review                           | Purple Top                                   |                                                  |                  |           |
| Blood Gas – Venous                           | Full green top on ICE                        |                                                  | 4 ML             | ON ICE    |
| Blood Gas – Cord                             | 1 mL heparinized blood on ICE                |                                                  | 4 ML             | ON ICE    |
| BNP                                          | Purple Top                                   | Test within 6 hours of collection                | 1 ML             | 2–8°C     |
| Body Fluid Crystals                          | Fresh fld in sterile container or purple top |                                                  | 1 ML             | Room temp |
| Body Fluid Cell Count                        | Fresh fld in sterile container or purple top |                                                  | 1 ML             | 2–8°C     |



|                                                                                                                                                                                     |                                              |                                                                                              |                                   |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------|--------|
| <b>Body Fluid Count &amp; Differential</b>                                                                                                                                          | Fresh fld in sterile container or purple top |                                                                                              | 1 ML                              | 2-8°C  |
| <b>Bone Marrow</b>                                                                                                                                                                  | See pathology                                |                                                                                              |                                   |        |
| <b>BUN – Random Urine</b>                                                                                                                                                           | Sterile container                            |                                                                                              | 2 ML                              | 2-8°C  |
| <b>BUN</b>                                                                                                                                                                          | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>CA-125</b>                                                                                                                                                                       | Marble Top                                   |                                                                                              | 3 ML                              | 2-8°C  |
| <b>Calcium</b>                                                                                                                                                                      | Green or marble                              |                                                                                              | 3 ML                              | 2-8°C  |
| <b>Calcium Ionized</b>                                                                                                                                                              | 4 mL green top or heparinized blood on ICE   | Anaerobic test; green tube must be full with the least amount of air possible, vaccum intact | Green top-4 ML / heparinized 1 ML | ON ICE |
| <b>Carbamazepine (Tegretol)</b>                                                                                                                                                     | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>CBC w/out Diff</b>                                                                                                                                                               | Purple Top                                   |                                                                                              | 4 ML or 250 uL microtainer        | 2-8°C  |
| <b>CBC with Diff</b>                                                                                                                                                                | Purple Top                                   |                                                                                              | 4 ML or 250 uL microtainer        | 2-8°C  |
| <b>D-Dimer</b>                                                                                                                                                                      | Blue Top                                     | Test within 4 hours of collection                                                            | 1.8 ML tube                       | 2-8°C  |
| <b>Depakene (Valproic Acid)</b>                                                                                                                                                     | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Digoxin</b>                                                                                                                                                                      | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Dilantin (Phenytoin)</b>                                                                                                                                                         | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Drug Screen Urine-<br/>Amphetamine,<br/>barbiturate,<br/>benzodiazepine,<br/>buprenorphine, cocaine,<br/>fentanyl, methadone,<br/>opiate, oxycodone, PCP,<br/>THC, &amp; TCA</b> | Urine specimen                               |                                                                                              | 10 ML                             | 2-8°C  |
| <b>DU Factor</b>                                                                                                                                                                    | Pink Top                                     |                                                                                              | 1 ML                              | 2-8°C  |
| <b>Eosinophil Count</b>                                                                                                                                                             | One swab or 1 ml sputum                      |                                                                                              | 1 ML sputum                       | 2-8°C  |
| <b>ESR</b>                                                                                                                                                                          | Purple Top                                   |                                                                                              | 2 ML                              |        |
| <b>Fecal pH</b>                                                                                                                                                                     | Stool in sterile container                   |                                                                                              | 1 ML or 1 g                       | 2-8°C  |
| <b>Ferritin</b>                                                                                                                                                                     | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Fibrinogen</b>                                                                                                                                                                   | Blue Top                                     |                                                                                              | 1.8 blue top filled to capacity   | 2-8°C  |
| <b>Folate</b>                                                                                                                                                                       | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Free T4</b>                                                                                                                                                                      | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Comprehensive Metabolic Panel</b>                                                                                                                                                | Green or marble                              |                                                                                              | 3 ML                              | 2-8°C  |
| <b>Chloride Body Fluid</b>                                                                                                                                                          | Sterile container                            |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Chloride Serum</b>                                                                                                                                                               | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Chloride Random Urine</b>                                                                                                                                                        | Sterile container                            |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Cholesterol Total</b>                                                                                                                                                            | Green or marble                              |                                                                                              | 3 ML                              | 2-8°C  |
| <b>CK-MB</b>                                                                                                                                                                        | Only Green Top                               |                                                                                              | 3 ML                              | 2-8°C  |
| <b>Clostridium Difficile Molecular</b>                                                                                                                                              | Fresh Stool in Sterile Cup                   | Don't scrape off diaper. Liquid stool only                                                   | 1 ML of stool                     | 2-8°C  |
| <b>CO2</b>                                                                                                                                                                          | Green or marble                              |                                                                                              | 2 ML                              | 2-8°C  |
| <b>Combs Direct</b>                                                                                                                                                                 | Pink Top                                     |                                                                                              | 3 ML                              | 2-8°C  |

|                                              |                                                              |                               |                                    |           |
|----------------------------------------------|--------------------------------------------------------------|-------------------------------|------------------------------------|-----------|
| Combs Indirect                               | Pink Top                                                     |                               | 3 ML                               | 2-8°C     |
| Cortisol AM, PM & Stimulate                  | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| COVID-19                                     | Swab                                                         |                               |                                    | Room temp |
| CPK                                          | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| CRP                                          | Green or marble                                              |                               | 2 ML                               | 2-8°C     |
| Creatinine 24 hr Urine                       | 24 hr urine jug                                              |                               | 2 ML a liquot                      | 2-8°C     |
| Creatinine Body Fluid                        | Sterile Container                                            |                               | 2 ML                               | 2-8°C     |
| Creatinine Clearance                         | Green top, 24 hr urine container 2-8                         |                               | 2 ML blood & 24hr urine collection | 2-8°C     |
| Creatinine Random Urine                      | Urine in sterile cup                                         |                               | 2 ML                               | 2-8°C     |
| Creatinine Serum                             | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| Crossmatch                                   | Pink Top                                                     |                               | 1 ML of stool                      | 2-8°C     |
| Cultures - Acid Fast                         | Sputum, bronc wash urine, tissue or CSF in sterile container |                               |                                    | 2-8°C     |
| Cultures - Blood                             | Blood culture bottles                                        |                               | Min 5 ML- Adult / 2 ML children    | room temp |
| Culture - Fungus                             | Sterile Container                                            |                               |                                    | 2-8°C     |
| Culture - Group B                            | CSF                                                          |                               |                                    | 2-8°C     |
| Culture- Routine Other                       | Swab                                                         |                               |                                    | 2-8°C     |
| Culture - Throat                             | Swab                                                         |                               |                                    | 2-8°C     |
| Culture - Stool                              | Sterile Container                                            |                               |                                    | 2-8°C     |
| Culture - Urine                              | Sterile Container                                            |                               |                                    | 2-8°C     |
| Culture - VRE                                | Swab                                                         |                               |                                    | 2-8°C     |
| Culture - MRSA                               | Swab                                                         |                               |                                    | 2-8°C     |
| Erythropoietin                               | SST or Green                                                 |                               |                                    | 2-8°C     |
| Frozen Section                               | See pathology                                                |                               |                                    |           |
| GGT                                          | Marble                                                       |                               | 2 ML                               | 2-8°C     |
| Gastric Occult Blood                         | Sterile container                                            |                               | 1 ML                               | Room temp |
| Gentamycin                                   | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| Giardia Antigen                              | Sterile container                                            | Solid/semi-solid/liquid stool | 1 ML or 1 g                        | 2-8°C     |
| Glucose Fasting                              | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| Glucose Non-Fasting                          | Green or marble                                              |                               | 3 ML                               | 2-8°C     |
| Gram Stain                                   | Swab                                                         |                               |                                    | 2-8°C     |
| Hansel Stain                                 | Urine in sterile cup                                         |                               | 10 ML                              | 2-8°C     |
| Haptoglobin                                  | Marble                                                       |                               | 3 ML                               | 2-8°C     |
| HCG Serum (quantitive)                       | Green or Marble                                              |                               | 3 ML                               | 2-8°C     |
| HCG Urine (quantitive)                       | Urine                                                        |                               | 1 ML                               | 2-8°C     |
| Hematocrit                                   | Purple Top                                                   |                               | 4 ML or 250 ul microtainer         | 2-8°C     |
| Hematology Evaluation Consult by Pathologist | NA                                                           |                               |                                    |           |
| Hemoglobin                                   | Purple Top                                                   |                               | 4 ML or 250 ul microtainer         | 2-8°C     |



|                                       |                          |                                                                |                                   |           |
|---------------------------------------|--------------------------|----------------------------------------------------------------|-----------------------------------|-----------|
| Hemoglobin A1C                        | Purple Top               | Needs it's own purple top & can't be combined with other tests | Purple top filled to line         | 2-8°C     |
| Heparin Anti-Xa, Lovenox              | Blue Top                 |                                                                | Blue top filled to line           | 2-8°C     |
| HIV AB Screen                         | Green or marble          |                                                                | 1 ML                              | 2-8°C     |
| India Ink Prep                        | CSF in sterile container |                                                                | 1 ML                              | 2-8°C     |
| Influenza A/BAG                       | Swab                     |                                                                |                                   | Room temp |
| Iron                                  | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Iron Binding Capacity                 | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| KOH Prep                              | Sterile container        |                                                                | 1 ML                              | Room temp |
| KOH Tissue                            | Sterile container        |                                                                |                                   | Room temp |
| Lactic Acid                           | Green or marble on ICE   | Test within 15 minutes of collection                           | 2 ML                              | On Ice    |
| LDH                                   | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Lipase                                | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Lipid Panel (HDL, Trig & Cholesterol) | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Liver Function Panel                  | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Magnesium Blood                       | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Malaria Smears                        | Finger stick blood       |                                                                |                                   | 2-8°C     |
| Micro Exam Arthropod                  | Sterile container        |                                                                |                                   | Room temp |
| Microalbumin Urine                    | Sterile container        |                                                                | 3 ML                              |           |
| Microalbumin/Creatinine Ratio         | Sterile container        |                                                                | 3 ML                              | 2-8°C     |
| Mono Test                             | Purple or Green          |                                                                | 1 ML                              | 2-8°C     |
| Mycoplasma Pneumoniae Screen          | Marble                   |                                                                | 1 ML                              | 2-8°C     |
| Myoglobin Blood                       | Green Top only           |                                                                | 3 ML                              | 2-8°C     |
| OCP                                   | Stool container          |                                                                | 2 ML or 2 g                       | 2-8°C     |
| Osmolality Serum                      | Marble                   |                                                                | 2 ML                              | 2-8°C     |
| Osmolality Urine                      | Urine in sterile cup     |                                                                | 2 ML                              | 2-8°C     |
| PAP Smear                             | See Pathology            |                                                                |                                   |           |
| PH Fluids                             | Sterile container        |                                                                | 2 ML                              | 2-8°C     |
| Phenobarbital Quantitive              | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Phosphatase Alkaline                  | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Phosphorus Blood                      | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Platelet Count                        | Purple Top               |                                                                | 250 UL Microtainer / Fill to Line | 2-8°C     |
| Potassium                             | Green or marble          |                                                                | 3 ML                              | 2-8°C     |
| Potassium Random Urine                | Sterile container        |                                                                | 2 ML                              | 2-8°C     |
| Procalcitonin                         | Green Top                |                                                                | 2 ML                              | 2-8°C     |
| Prolactin                             | Green Top                |                                                                | 2 ML                              | 2-8°C     |
| Protein Total 24 hr Urine             | 24 hr urine jug          |                                                                | 24 hr urine                       | 2-8°C     |
| Protein Total Fluids                  | Sterile container        |                                                                | 2 ML                              | 2-8°C     |
| Protein Total Serum                   | Green or marble          |                                                                | 3 ML                              | 2-8°C     |

|                                       |                            |  |                                                 |           |
|---------------------------------------|----------------------------|--|-------------------------------------------------|-----------|
| PTH Interoperative                    | Green or marble            |  | 3 ML                                            | 2-8°C     |
| PTH Intact                            | Green or marble            |  | 3 ML                                            | 2-8°C     |
| PSA                                   | Marble Top                 |  | 3 ML                                            | 2-8°C     |
| PT/PTT Mixing Study                   | Blue Top                   |  | Fill to line                                    | 2-8°C     |
| Renal Panel                           | Marble Top                 |  | 3 ML                                            | 2-8°C     |
| Respiratory Panel                     | NP swab in viral media     |  |                                                 | Room temp |
| Reticulocyte Count                    | Purple Top                 |  | 3 ML                                            | 2-8°C     |
| RH Factor                             | Pink Top                   |  | 3 ML                                            | 2-8°C     |
| Rhogam Full/Mini                      | Pink Top                   |  | 3 ML                                            | 2-8°C     |
| RPR w/ Reflex to titer & confirmation | Marble Top                 |  | 3 ML                                            | 2-8°C     |
| RSV                                   | Swab                       |  |                                                 | Room temp |
| Salicylate                            | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Sensitivity for Cultures              | NA                         |  |                                                 | NA        |
| Shiga Toxin                           | Stool in sterile container |  |                                                 | 2-8°C     |
| Sodium                                | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Sodium Urine                          | Urine in sterile cup       |  |                                                 | 2-8°C     |
| SARS/Flu A/B Combo                    | Swab                       |  |                                                 | Room temp |
| Strep Antigen                         | Swab                       |  |                                                 |           |
| Strep Pneumonia Urine Ag              | Urine in sterile cup       |  | 2 ML                                            | 2-8°C     |
| Syphilis Antibodies                   | Marble Top                 |  | 4 ML                                            | 2-8°C     |
| Testosterone                          | Marble Top                 |  | 2 ML                                            | 2-8°C     |
| Theophylline                          | Green                      |  | 2 ML                                            | 2-8°C     |
| Thyroid Cascade                       | Green or marble            |  | 3 ML                                            | 2-8°C     |
| T3 Free                               | Marble or Green            |  |                                                 | 2-8°C     |
| Tobramycin trough, peak, random       | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Transferrin                           | Green or marble            |  | 4 ML                                            | 2-8°C     |
| Triglycerides                         | Green or marble            |  | 3 ML                                            |           |
| Troponin-HS                           | Green Top only             |  | 3 ML                                            | 2-8°C     |
| TSH                                   | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Type and Screen                       | Pink Top                   |  | 3 ML                                            | 2-8°C     |
| Uric Acid                             | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Urinalysis                            | Urine in sterile cup       |  | 2 ML                                            | 2-8°C     |
| Vancomycin trough, peak, random       | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Vitamin D 25-Hydroxy                  | Green or marble            |  | 3 ML                                            | 2-8°C     |
| Vitamin B12                           | Green or marble            |  | 2 ML                                            | 2-8°C     |
| Wet Prep                              | Swab in saline             |  | 1 ML                                            | Room temp |
| WBC                                   | Purple Top                 |  | Purple top filled to line or 250 UL Microtainer | 2-8°C     |
| WBC Cell Count w/ Auto Diff           | Purple Top                 |  | Purple top filled to line or 250 UL Microtainer | 2-8°C     |



## Microbiology

### ACID FAST CULTURE/AFB Stains (AFB - ACID FAST BACILLI)

#### **Specimen Requirements:**

**TB-Tuberculosis:** *An acid-fast smear always accompanies an acid-fast culture.* There is an examination of the direct specimen and the concentrate. Acid Fast Stain and fluorescent stains are performed.

All specimens are to be collected in sealed leak-proof containers. Lids should be tightly sealed, and there should be no external spillage or contamination. Place container into a sealed plastic bag and deliver to Lab promptly. If delivery is delayed, refrigerate specimen.

Smear results are reported as soon as possible. Positive smear results are called to nursing service personnel and Infection Control. Concentrated specimen with positive smears are sent to State Lab for DNA probe. Results are generally available within a few days. Negative cultures are reported at the end of eight weeks.

**Sputum:** Collect at least 5 cc preferably first morning specimen collected in a sterile container. Sputum should be a deep cough specimen. A nonproductive cough produces only saliva, which is useless.

**Gastric Contents:** Stomach contents are aspirated; stomach is flushed with saline and again aspirated. Both specimens should be submitted.

**Bronchial Washings:** Collected surgically.

**Urine:** Submit entire first morning specimen, which is more satisfactory than an aliquot of a 24-hour specimen.

**Tissue:** Specimen should be sent in saline, not formalin or any other preservative and should be transported to the Lab immediately.

**CSF:** Due to the small number of acid-fast bacilli found in CSF, at least 10 mL of CSF is required. All specimens are to be labeled with the patient's name, hospital number, room number, source, time of collection, and collector's initials.

**Patient Preparation:** None

**Turnaround Time:** Negative cultures are reported at the end of eight weeks.

## Blood Cultures

**Specimen Requirement:** Two (2) blood culture bottles are drawn with each request. One is for aerobic microorganisms and one for anaerobic microorganisms. If patient is on antibiotics, draw appropriate antibiotic bottle. The site for venipuncture is carefully cleaned with a scrub kit. This prevents contamination of the blood culture. A preliminary report is sent after full 24 hours of incubation, if no growth occurs. If there is no growth after 24 hours, the cultures are held 5 days before reporting as negative. Positive blood cultures are called immediately upon discovery. (Checked every ten minutes by automation.) Use the PF pediatric bottle for children and the FA if the patient is already on antibiotics.

Blood cultures may be drawn in a syringe, if the patient site preparation is adhered to and the transfer of the blood-to-blood culture media is done aseptically.

**Minimum Volume:** At least 5 ml blood per bottle for adults and 2 ml blood for children per culture request.

**Storage time:** Room temperature

Patient Preparation: Scrub appropriately with scrub kit

**Turnaround Time:** 5 days if negative. If positive, immediately upon growth noted.

## Clostridium Difficile Molecular (DNA Amplification Assay - Illumigene)

Direct detection of toxigenic C. difficile in human stool from pediatric and adult patients with have diarrhea suspected of having Clostridium difficile-associated disease (CDAD). Assay utilizes loop-mediated isothermal DNA amplification (LAMP)

technology to detect the pathogenicity locus of toxigenic *Clostridium difficile*. Tests for both Toxin A gene and the Toxin B gene.

**Limitations:** Does not distinguish viable and non-viable organisms. Must use patient clinical evaluation and other diagnostic procedures. Only unformed stool specimens to be tested. Colonization rates up to 50% and higher reported in infants and rates up to 32% cystic fibrosis patients. Does not differentiate the NAP1 strain from other toxigenic strains of *C. difficile*. Failure to follow instructions for collection, handling and preparations may cause incorrect results. Consent is signed upon admission. Pathologist or Micro Tech can be consulted for information, interpretation and implication of results. (601-426-4560)

**Specimen Requirement:** Fresh stool. Specimen must be received FRESH in lab.

**Minimum Volume:** 1 ml liquid specimen.

**Patient Preparation:** Random stool- *do not scrape off diaper or diaper pad.*

**Storage:** 2-8C

**Turnaround Time:** 1 Day

**Collections:** Unpreserved human stool transported and stored at 2-8 C Specimens tested as soon as possible, may be held up to 24 hrs at 21-27 C or 5 days 2-8 C. Past 5 days frozen and thawed once. Preserved in Cary-Blair-based media same as unpreserved expected frozen immediately for up to seven days.

Stools are routinely cultured for *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, *E. Coli* 157, Shiga Toxin A+B and any other predominant gram-negative rod.

### Cryptosporidium Antigen

**Specimen Requirement:** Fresh stool

**Minimum Volume:** 1 ml liquid stool or 1 gm

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

**Collection:** Collected in clean, leak-proof plastic containers. May collect in SAF, 10% formalin, MIF, CaryBlair, C&S or Stuart's transport media. PVA is not suitable. Solid, semisolid, or liquid stool are acceptable.

### Culture Aerobic

Routine cultures are performed on any source suspected of bacterial infection. Proper collection is extremely important.

Culture swabs should be collected from the red, inflamed or draining area, avoiding the surrounding area which often contains contaminating normal bacteria.

All swabs should be placed in transport media immediately after the site has been swabbed. This is done by either breaking the ampule in the bottom of the collection tube or by pushing the swab down into the media at the bottom of the tube, depending on the type of swab used.

Other specimens should be collected in dry, sterile containers.

Urine specimens should be catheterized or clean catch midstream. Voided specimens should not be sent. Blood cultures are to be collected only by –personnel who have been instructed in the proper collection of these specimens.

Sputum specimens should be early morning, deep cough, if possible. These specimens should not contain saliva.

Certain specimens, such as various fluids, CSF, cervix, etc., should only be collected by a physician or nurse practitioner.

All specimens should be transported to the lab as soon as collected. If delivery is delayed, the specimen should be refrigerated.

Any dry swab or inadequate specimen will be rejected, and a new specimen requested. Specimen lids should be secured tightly. Outside of containers should not be contaminated. Specimens should be placed in a biohazard bag and sealed.

A gram stain is to be ordered with all wound cultures and sputum's.

A colony count is performed on all urine specimens exhibiting growth.

Any source that can possibly be infected with anaerobic bacteria is cultured for these organisms when a routine culture is ordered. An anaerobic swab should be collected along with an aerobic swab for all wound specimens.

Genital sources are always cultured for *Neisseria gonorrhoeae* (GC). Gram stains on genital specimens are performed only if requested by the physician.

Stools are routinely cultured for *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, *E. Coli* 157, Shiga Toxin A+B and any other predominant gram-negative rod.

Critical values - positive blood and CSF cultures - are phoned to nursing service personnel immediately upon discovery.

Preliminary reports for nonpathogenic growth are sent at 24-36 hours or as soon as pathogenic growth is detected. Final reports are sent at 48-60 hours or as soon as completed, if prior to this. Final CSF and Blood Culture reports are sent in five days. Only a final report is sent for Strep Screens as soon as adequate growth occurs.

All specimens should be labeled with patient's name, hospital number, room number, source, time of collection and collector's initials.

**Storage:** 2-8 C

## **Fungus Culture**

All specimens are to be collected in sealed leakproof containers. Lids should be tightly sealed, and there should be no external spillage or contamination. Place container into a sealed biohazard bag and deliver to lab promptly. If delivery is delayed, refrigerate specimen.

Negative cultures are reported at the end of a maximum 6 weeks.

**Sputum:** Preferably first morning, deep cough.

**Bronchial Washing:** Collected surgically.

**CSF:** Collected aseptically by physician.

**Skin Scrapings, Nail Clippings, Hair:** Place into a dry, clean specimen cup or envelope.

**Tissue:** Specimen should be sent in saline.

**Blood:** See Blood Culture- Fungus and bacteria culture can be processed together. Be sure to order fungus culture.

**Urine:** Preferably first morning, cath or clean catch specimen.

**Throat, wound, etc.:** Swab inflamed area, break ampule in bottom of swab - dry swab will be rejected. All specimens are to be labeled with the patient's name, hospital number, room number, source, time of collection, and collector's initials.

### Giardia Antigen

**Specimen Requirement:** Fresh stool collected in clean, leak-proof plastic containers. May collect in SAF, 10% formalin, MIF, Cary-Blaire, C&S or Stuart's transport media. PVA not suitable.

Fresh samples and Stuart's media should be tested as soon as possible. If not, specimens should be refrigerated or frozen. Can only thaw once.

**Minimum Volume:** Solid, semi-solid, or liquid stool are acceptable 1 ml or gm.

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

### Gram Stain

**Specimen Requirement:** Send specimen or swab in culture tube. Dry swabs will be rejected.

**Minimum Volume:** N/A

**Patient Preparation:** None

**Turnaround Time:** 1 Day

### India Ink Prep

**Specimen Requirement:** For *Cryptococcus neoformans*. Fresh spinal fluid collected by physician.

**Minimum Volume:** 1 ml

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

### Influenza A +B Ag

**Specimen Requirement:** Flu swab from kit, Nasal Wash or Aspirate

**Minimum Volume:** One swab or 1 ml of wash or Aspirate

**Specimen Requirement:**

#### **Nasal Swab Sample**

For proper test performance use the swabs supplied in the kit obtained from lab (one swab issued for each order). To collect a nasal swab sample, insert the sterile swab into the nostril that presents the most secretion under visual inspection. Using gentle rotation, push the swab until the resistance is met at the level of the turbinates (less than one inch into the nostril). Rotate the swab a few times against the nasal wall.

#### **Nasal Wash or Aspirate Sample**

**For Older Children and Adults:** With the patient's head hyper-extended, instill about 2.5 mL of sterile, normal saline into one nostril with a syringe. To collect the wash, place a clean, dry specimen container directly under the nose with slight pressure on the upper lip. Tilt the head forward and allow the fluid to run out of the nostril into the specimen container. Repeat for the other nostril and collect the fluid into the sample specimen container.

**For Younger Children:** The child should sit in the parent's lap facing forward, with the child's back against the parent's chest. The parent should wrap one arm around the child in a manner that will restrain the child's body and arms. Fill an aspiration bulb or bulb syringe with up to 2.5 mL of sterile, normal saline (depending on the size of the child), and instill the saline into one nostril while the head is tilted back. Release the pressure on the bulb to aspirate the specimen back into the bulb. Transfer the specimen into a clean, dry specimen container. Repeat the process for the child's other nostril and transfer the specimen into the same specimen container. **Sample Transport and Storage:** Do not use any kind of transport media to store or transfer samples. Send to lab immediately. Must be complete within one hour of collection.

### Koh Prep

**Specimen Requirement:** Any source, except skin, hair, nail or CSF, suspected of fungal infection. For CSF see India Ink prep dependent upon source; use sterile technique.

**Minimum Volume:** 1 ml

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

## KOH TISSUE

**Specimen Requirement:** Skin, hair or nail

**Minimum Volume:** N/A

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

## Micro Exam Arthropod

**Specimen Requirement:** Possible arthropod

**Minimum Volume:** At least one arthropod

**Patient Preparation:** None

**Turnaround Time:** 1 Day

## Microalbumin/Creat Urine Ratio

**Specimen Requirement:** Urine in sterile cup

**Minimum Volume:** 3 ML

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

## Occult Blood, Stool

**Specimen Requirement:** Random stool

**Minimum Volume:** 1 ml or 1 gm

**Patient Preparation:** High residue, meat-free diet starting 2 days before testing and continuing through collection. Diet which includes raw or cooked vegetables, fruit, moderate amounts of peanuts, popcorn and bran cereal daily, helps to minimize false

positive reactions and provides roughage to help uncover "silent" lesions. Small amounts of chicken or tuna fish are allowed but red meat is avoided, as well as foods containing peroxidase or peroxidase-like substances (turnips and horseradish.) Tonic or vitamins containing ascorbic acid will give false negative test results. Aspirin, steroids, rauwolfia, indomethacin and colchicine discontinued 2 days before. Patient may be tested without prior preparation but if one or more tests are positive, the patient should be placed on diet and retested.

**Storage:** 2-8C

**Turnaround Time:** 1 Day

### **Ova, Cysts, And Parasites (OCP)**

**Specimen Requirement:** Stool specimen labeled with lid secured tightly to container. Outside of container should not be contaminated with specimen. Stools containing barium, oil, water or urine will be rejected. Deliver promptly. Stool should be tested within 3-4 hours of collection, if not possible refrigerated. Brushes should be processed as soon as possible. Except for liquid stools, fresh stools placed in fixative within one hour.

**Minimum Volume:** 2 ml or 2 gm

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

### **Respiratory Panel (Bio Fire Multiplexed Nucleic Acid - Molecular Panel)**

Adenovirus, Coronavirus (229E, HKU1, NL63, OC43), Human Metapneumovirus, Human Rhinovirus/Enterovirus, Infl A (H1, 1-2009, H3), Infl B, MERS-CoV, Parainfluenza Virus (1, 2, 3, 4), RSV, Bordetella parapertussis, Bordetella pertussis, Chlamydia pneumonia, Mycoplasma pneumoniae. Detection and ID of multiple respiratory viral and bacterial nucleic acids. Negative results may be due to infection with pathogens that are not

detected by this test. No consent required and patient information is in LIS. Call lab at 601-426-4560 if consultation, result interpretation or implementation.

**Specimen Requirement:** NP Swab in viral media

**Minimum Volume:** NP Swab

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

### Wet Prep

**Specimen Requirement:** Swab should be placed in special tube containing 1-2 ml sterile saline.

**Minimum Volume:** 1 ml

**Patient Preparation:** None

**Turnaround Time:** 1 Day

### Blood Bank

#### Possible Transfusion Reactions

**Specimen Requirement:** 7 ml pink top tube (DO NOT USE SST TUBE), 3 cc urine. Collect urine specimen and take to Lab with blood transfusion bag with IV set attached (no needles) and sign Report of Transfusion Reaction form. (In 6 hours collect Bilirubin 4 ml green top or 8.5 marble)

**Minimum Volume:** 5 ml blood, 3 ml urine

**Patient Preparation:** None

**Storage:** 2-8C

**Turnaround Time:** 1 Day

## Pathology

### Cytology, Pathology

**Specimen Requirement:** Pap Smear (GYN) - place in 95% alcohol on glass slides, back-to-back.

**Minimum Volume:** N/A

**Patient Preparation:** None

**Turnaround Time:** 2 working days

**Specimen Requirement:** Pap Smear (NON-GYN) Body Fluids - Send fresh to laboratory. (If unable to process, place in the refrigerator.)

**Minimum Volume:** NA

**Patient Preparation:** None

**Turnaround Time:** 2 working days

### Frozen Section

**Specimen Requirement:** Surgery specimen, fresh (no formalin)

**Minimum Volume:** N/A

**Patient Preparation:** None

**Turnaround Time:** STAT

### Tissue (Pathology)

**Specimen Requirement:** Except for frozen sections place in 10% formalin.

**Minimum Volume:** NA

**Patient Preparation:** None

**Turnaround Time:** Contact Pathology Department

## Critical Values

**Inpatient:** the technologist will report the value to the nurse in charge of the patient. SCRMC will use push notifications for all inpatients. If the nurse doesn't acknowledge the critical within 10 minutes, the tech will call the nurse.

**Outpatients and ER patients-** Techs will call all critical lab values to the ordering provider or nurse or the appropriate on call hospitalist after hours.

### After Hour Criticals (after 5pm):

**SCRMC Internal Medicine and Family Medicine Clinic-** call SCRMC's clinical coordinator. (Dial 0) The clinical coordinator will communicate the critical lab result to the on- call hospitalist.

**Other SCRMC clinic patients-** call SCRMC's clinical coordinator. (Dial 0) The clinical coordinator will contact the appropriate on-call provider for that group.

**Nursing Homes-** call the nurse at the nursing home.

**Non-SCRMC outpatient critical results-** call the number provided by the ordering facility. If unable to reach a nurse, leave a note for dayshift to call.

- All critical results require a readback from the nurse or doctor.
- Document all attempts to call the critical lab result in Epic.

Expected communication time is 15 minutes after the result is received from the instrument.



| Test                      | Critical                          |              |
|---------------------------|-----------------------------------|--------------|
| Ammonia                   | >230umol/L                        |              |
| Alcohol                   | >300 mg/dl                        |              |
| Blood Culture             | Positive                          |              |
| Calcium                   | <=6.1 mg/dl                       | >+13.9 mg/dl |
| Glucose                   | <41mg/dl                          | >499 mg/dl   |
| Glucose Tolerance Fasting | Don't give glucola if > 150 mg/dl |              |
| Glucose Tolerance         | <60 mg/dl on half hour            |              |
| Gram Stain-CSF            | Growth                            |              |
| Hemocrit                  | <15%                              | >65%         |
| Hemoglobin                | <=5.0 gm/dl                       | >=20 gm/dl   |
| INR                       | >5.5                              |              |
| Lactic Acid               | >2.2 mg/dl                        |              |
| HIV screen                | Positive                          |              |
| PH-Arterial               | <7.20                             |              |
| PCO2-Arterial             | <9 mm Hg                          | >35 mm Hg    |
| PO2-Arterial              | <40 mm HG                         | >350 MM Hg   |
| Potassium                 | <2.6 mmol/L                       | >6.0 mmol/L  |
| Phenobarbital             | >50 ug/ml                         |              |
| Phenytoin                 | >20 ug/ml                         |              |
| Platelet                  | <=20,000 10*3/ul                  |              |
| Salicylates               | >30 mg/dl                         |              |
| Sodium                    | <=110 mmol/L                      | >=170 mmol/L |
| Theophylline              | >20 ug/ml                         |              |
| Troponin-HS               | >1500 ng/L                        |              |
| Vanc Trough               | >20 ug/ml                         |              |
| Vanc Peak                 | >50 ug/ml                         |              |
| VPA                       | >100 ug/ml                        |              |



| WBC                        |                                                   |
|----------------------------|---------------------------------------------------|
| <b>Female</b>              |                                                   |
| 0 up to 14 Days            | $\leq 4.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 14 Days up to 30 Days      | $\leq 4.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 30 Days up to 60 Days      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 60 Days up to 80 Days      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 80 Days up to 1 Years      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 1 Years up to 2 Years      | $\leq 4.0$ or $\geq 18.0 \times 10^3/\mu\text{L}$ |
| 2 Years up to 4 Years      | $\leq 4.0$ or $\geq 18.0 \times 10^3/\mu\text{L}$ |
| 4 Years up to 6 Years      | $\leq 4.0$ or $\geq 16.0 \times 10^3/\mu\text{L}$ |
| 6 Years up to 8 Years      | $\leq 4.0$ or $\geq 16.0 \times 10^3/\mu\text{L}$ |
| 8 Years up to 12 Years     | $\leq 4.0$ or $\geq 15.0 \times 10^3/\mu\text{L}$ |
| 12 Years up to 13 Years    | $\leq 4.0$ or $\geq 15.0 \times 10^3/\mu\text{L}$ |
| 13 Years up to 18 Years    | $\leq 1.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 18 Years up to Unspecified | $\leq 1.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| <b>Male</b>                |                                                   |
| 0 up to 14 Days            | $\leq 4.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 14 Days up to 30 Days      | $\leq 4.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 30 Days up to 60 Days      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 60 Days up to 80 Days      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 80 Days up to 1 Years      | $\leq 4.0$ or $\geq 20.0 \times 10^3/\mu\text{L}$ |
| 1 Years up to 2 Years      | $\leq 4.0$ or $\geq 18.0 \times 10^3/\mu\text{L}$ |
| 2 Years up to 4 Years      | $\leq 4.0$ or $\geq 18.0 \times 10^3/\mu\text{L}$ |
| 4 Years up to 6 Years      | $\leq 4.0$ or $\geq 16.0 \times 10^3/\mu\text{L}$ |
| 6 Years up to 8 Years      | $\leq 4.0$ or $\geq 16.0 \times 10^3/\mu\text{L}$ |
| 8 Years up to 12 Years     | $\leq 4.0$ or $\geq 15.0 \times 10^3/\mu\text{L}$ |
| 12 Years up to 13 Years    | $\leq 4.0$ or $\geq 15.0 \times 10^3/\mu\text{L}$ |
| 13 Years up to 18 Years    | $\leq 1.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| 18 Years up to Unspecified | $\leq 1.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |
| Unspecified                | $\leq 1.0$ or $\geq 30.0 \times 10^3/\mu\text{L}$ |



## Downtime Procedure

During a downtime event, the laboratory will perform test(s) on specimens and report all critical values to the responsible provider and will document notification and result read back. Laboratory personnel will fax a copy or send results via the pneumatic tube station of all patient results with accompanying reference ranges to the specific nursing unit. The laboratory will enter the orders and results into Epic once it is again operational. Downtime order forms will be used during this time.