Hunterdon Health

Hunterdon Medical Center Laboratory

SPECIMEN COLLECTION AND HANDLING PROCEDURES

POLICY: The Laboratory must make every effort to assure that all specimens collected for analysis meet acceptable standards to ensure the reporting of accurate results.

PATIENT PREPARATION

Preparation of the patient is necessary for selected diagnostic tests.

Patients should be in fasting state whenever feasible for most chemistry tests. This is critical for glucose determination, glucose tolerance and lipid studies. Refer to the HMC Test catalog for specific test requirements.

PATIENT AND SPECIMEN IDENTIFICATION

In compliance with Joint Commission Standards and the HMC Administrative Policy regarding patient identification, all patients will be identified using two identifiers prior to collection of blood.

Inpatients:

- Ask the patient to state their first and last name.
- Verify name and medical record number in the patient armband
- Verify that the information matches the labels.

Outpatients:

- Ask the patient to state their first and last name
- Verify birthdate
- Verify that the information matches the requisition and the labels.

All specimens must be labeled at the patient's bedside or before the patient leaves the collection area (outpatients). Record date and time of draw and initial of phlebotomist on all tubes.

COLLECTIONS REQUIRING SPECIAL TIMING:

Information regarding special collection times is available in the HMC Test Catalog. Peak and trough therapeutic drug levels require collection at specific times. Refer to specific TDM for timing protocol.

CONTAINER TYPE AND ADDITIVES

Test tubes come in various sizes (2,3,5,7,10 mL) and various stopper colors. The color of the stopper is defined by the additive in the tube. Information regarding the chemical nature of the additives is available in the laboratory. To assure patient and staff safety the laboratory uses plastic tubes for most venipuncture collections. The laboratory also uses slow draw/small volume tubes for most collections to decrease hemolysis and to decrease the volume of blood collected from our patients.

HMC LABORATORY TUBE TYPE AND ORDER OF DRAW

The order of draw is designed to avoid possible contamination of the blood specimen due to carryover from the tube additives. This contamination can be a source of test error.

Stopper Color	Additive	Inversions at Collection	Common Use
Blood Culture Bottles (See Microbiology Collection Containers)	Broth for culturing, anticoagulants to prevent clots and resin beads to absorb antibiotics.	2-3	Blood Cultures
 Blue	Buffered Sodium Citrate 0.109M	3-4	Coagulation studies. Note: Tube must be filled
Gold/Tiger (SST) 	Clot activator and gel for serum separation	5	Chemistry and serology testing. Acceptable for Pro-BNP.
 Red	None	0	Referred therapeutic drugs. See HMC Test Catalog for specific TDM.
Mint Green/ PST 	Lithium heparin and gel for plasma separation.	8-10	Most chemistry studies at HMC. Includes Troponin T, HS and Pro-BNP. See catalog for specific tests.
 Green Top	Lithium heparin	8-10	Referred testing
 Lavender	Spray coated K_2EDTA	8-10	Hematology studies, Ammonia (on ICE), PTH, A1c
 Pink 6mL	Spray coated K_2EDTA	8-10	Blood Bank, Lyme and Tick Borne Disease testing
 White / PPT	Spray coated K_2EDTA and gel	8-10	Referred testing. May be used for Pro-BNP
 Dark Blue	Sodium Heparin	8-10	Trace Metals
Black top/Blue Center	Sodium Citrate 0.129M	3-4	Sed Rate (ESR) Inpatients
 Grey	Potassium oxalate/Sodium fluoride	8-10	Lactic Acid- On Ice

SPECIMEN PROCESSING

1. After collection tubes should be stored in an upright position in a rack as soon as the mixing of the specimen is complete. This is critical for gel tubes (SST and PST) as it can interfere with the integrity of the gel plug and cause RBC's to be caught in the plug.
2. Serum tubes (SST and Red Top) should be allowed to clot completely, usually at least 30 minutes, before centrifugation.
3. PST (Mint Green) tubes can be centrifuged immediately since the specimen is plasma.
4. Centrifuges with horizontal rotors are supplied by the laboratory. This method of centrifugation is preferred over rotors that are fixed. Fixed rotors do not allow the tubes to swing into a horizontal position during centrifugation. The speed of the centrifuge and the horizontal position of the rotor are necessary for the gel separator to form a proper seal between the plasma/serum and the RBC's.
   Note: Do not remove caps from the tubes before centrifugation and allow the centrifuge to stop completely before removing tubes.
5. Specimens should be centrifuged for 10 minutes and then stored in a rack upright and stoppered.
6. Do **not** centrifuge more than once.