HEMOSTASIS/THROMBOSIS SPECIMEN COLLECTION

HEMOSTASIS/THROMBOSIS TESTS AND FACTOR ASSAYS

In order to produce valid results for hemostasis/thrombosis tests and factor assays, specimen integrity is crucial and must be maintained. All specimens sent for testing must be collected and shipped in the following manner:

1. Obtain venous blood by clean venipuncture. Avoid slow flowing draws and/or traumatic venipuncture, as either of these may result in an activated or clotted sample. Do not use needles smaller than 22 gauge.

2. Fill light blue top tubes as far as vacuum will allow (an exact ratio of 9 parts blood to 1 part anticoagulant must be maintained); mix by gentle inversion, 3-4 times.

3. For platelet function screen, the specimen should be sent unspun within 3-4 hours of draw. This draw should be performed using a 21-gauge needle; see #2 filling/mixing guidelines.

4. Immediately centrifuge the capped specimen at no less than 1700 x g (RCF) for 15 minutes. The centrifugation time may be shortened when using a high-speed centrifuge. The main objective is creation of platelet-poor plasma. **Hemolyzed specimens are not acceptable.** Test plasma for residual platelets (if possible); if plasma-platelet count is >10,000/cmm, re-spin and recount until platelet count falls below 10,000/cmm. If plasma platelet count is unavailable, use recommended centrifugation (above) and remove only the top two-thirds of the plasma for freezing.

5. Immediately remove the platelet-poor plasma from the sample using a plastic transfer pipet (use of glass transfer pipets may result in activation and/or clotting of the plasma). Perform plasma platelet count. Place the plasma in a properly-labeled plastic screw cap vial and clearly mark the vial contents as PLASMA. **Glass vials are not acceptable.** **Push-on caps are not acceptable.** Quick-freeze the plasma samples using a dry ice and acetone bath* or in a –60°C to –70°C freezer when available. Each assay requested must be submitted in separate plastic vial(s). **Use permanent marker to directly label the tubes.** Stick-on labels will be illegible after freezing – do not use!

6. Ship samples surrounded by a sufficient amount of dry ice to ensure that specimens remain frozen.

7. Some assays may be performed on a priority basis if a medical emergency exists. Contact the Coagulation Department (1-800-639-3309, ext. 7626, or 207-973-7626) to make any necessary special arrangements.

8. All requests for thrombophilia testing must include a brief patient history and other pertinent clinical information (i.e., medications, blood products, etc.). **NOTE:** Samples containing supertherapeutic levels of heparin should not be used for thrombophilia testing. If possible, redraw samples when heparin levels are therapeutic (PTT is within therapeutic range). Heparin interferes with some assays.

9. Coagulation interpretation is available for both bleeding and thrombophilia assessment panels. Contact the Coagulation Department for information. Because of the complexity and nature of these panels, a pathologist’s interpretation may be provided. There is a charge for interpretation; therefore the interpretation may be declined upon request of the ordering provider.

*To make dry ice/acetone slurry:* Place several pieces of dry ice in a plastic or metal container. Add acetone until the dry ice begins to melt (there should still be small dry ice pieces remaining). Immerse only the bottom of the plastic tube containing the plasma specimen in the slurry until frozen. Do not allow the tube to “float” in the slurry, since the acetone can penetrate around the screw-top threads. Dry tubes and then store on dry ice.

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