

## Specimen Collection and Processing for Coagulation Specimens

Laboratory hours: Monday-Friday: 7 am – 6 pm; Saturday: 10 am – 2 pm.

For consultation, contact the special coagulation physician at (612) 273-4797.

Please follow the tips below to maintain specimen integrity and ensure valid coagulation results.

### Sample Collection Tips

The blood sample should be obtained from a clean venipuncture. Traumatic collections may result in an activated or clotted specimen. Avoid using needles smaller than 23 gauge. Avoid leaving the tourniquet on the patient's arm for an extended period prior to the collection.

Do not use the first 2 mL of blood collected for coagulation testing.

Fill light blue-top tubes as far as vacuum will allow and mix by gentle inversion.

When tube cannot be filled by vacuum, for correct anticoagulant to blood ratio, fill to indicator line on tube (2.7 mL blood in 3.0 mL tube, or 1.8 mL blood in 2.0 mL tube). It is critical that the tube be filled to indicator line for proper plasma to anticoagulant ratio.

Collect samples from patients with hematocrit values greater than 55% in a special tube, obtained from the laboratory.

Direct thrombin inhibitors interfere with **all clotting** assays. Stop therapy 12-24 hours prior to collection—if safe to do so.

If the patient is on heparin, the laboratory will treat the sample with hepzyme to remove heparin prior to testing—except for heparin monitoring tests.

**After Care:** If the patient has a coagulation abnormality, apply direct pressure to the puncture site for 10 minutes; apply a pressure dressing. Instruct the patient to leave the bandage on for 12 hours.

### Sample Processing Tips

Check tubes for gross clots by inverting the tube.

If the volume in the tube is less than 1.8 mL in a 2 mL tube or less than 2.7 mL in a 3 mL tube, note the volume, process the specimen, send to Special Coagulation. Indicate on the lab request form that the tube was underfilled and record the volume contained in the vacutainer tube.

A low hematocrit may give enough plasma for the proper anticoagulant to plasma ratio, so the sample may be acceptable. However, re-collection is recommended.

Centrifuge for 30 minutes, remove clear, lipid-free, platelet-poor plasma, and aliquot in 3-4 polypropylene tubes (if sufficient sample). Immediately place on dry ice or in -70 C freezer.

### UMMC Internal Use

UMMC Outpatient and Acute Care Laboratories: During lab hours, send whole blood samples to PTS #07. After hours, send to University Acute Care Laboratory to process samples and immediately place on dry ice or in -70 C freezer.

Specimen Management: During lab hours place processed sample in Special Coag container. After hours, immediately place on dry ice or in -70 C freezer.

Notify Special Coag if: 1) unprocessed specimen is received that was collected beyond the recommend time, or 2) whole blood is received frozen.

Samples that are received frozen should be kept on dry ice or at -70 C until tested.