

COAGULATION SAMPLING GUIDELINES **FOR VENIPUNCTURISTS**

SAMPLE QUALITY IS CRITICAL FOR VALID RESULTS

- Blood must be drawn directly into sodium citrate anticoagulant and immediately inverted 8-10 times to mix (EDTA, Heparin, Serum separator and Clot activator tube samples are INVALID for coagulation assays)
- Avoid traumatic venipuncture, prolonged vessel occlusion, drawing blood into a dry syringe, incomplete blood draw, or air in vacutainer tubing because these conditions may activate, deplete, or dilute coagulation factors.

Modified from a handout by Dr. Marjory Brooks 2009

VACUTAINER METHOD

1. Use vacutainer needle or butterfly catheter to draw blood directly into a 3.2% or 3.8% citrate vacutainer tube (blue top)
2. Make sure tube is in-date and completely filled by vacuum draw
3. Blue top tube should be filled after another tube or follow a discarded volume of blood to prevent tissue coagulation factor contamination from endothelium and air contamination from dry tubing
4. Immediately invert tube 8-10 times to well mix anticoagulant and blood

SYRINGE METHOD

1. Draw an exact volume of citrate into a syringe using 1 of the following examples:
 - 0.2 ml citrate + 1.8 ml blood = 2.0 ml total sample
 - 0.3 ml citrate + 2.7 ml blood = 3.0 ml total sample
 - 0.4 ml citrate + 3.6 ml blood = 4.0 ml total sample
2. Perform venipuncture to collect total sample volume
3. Remove needle and transfer blood sample to a plastic tube (not glass)
4. Immediately invert tube 8-10 times to well mix anticoagulant and blood

PLASMA SEPARATION AND PROCESSING

1. Centrifuge blood sample immediately for 10 to 15 minutes after venipuncture
 2. Aspirate plasma using plastic pipet or syringe and transfer to a clean plastic shipping tube
 3. Store plasma frozen. Ship overnight on cold packs (or dry ice for special studies).
- DO NOT FREEZE WHOLE BLOOD**