

# **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**