Collection Instructions for Platelet Factor 4

The reliability of platelet marker assay results is dependent upon the quality of the sample collection. The CTAD tube is a mixture of buffered sodium citrate, theophylline, adenosine and dipyridamole and is used to minimize in vitro platelet activation. Contact client services for the CTAD special collection tube.

1. Break the vacuum of the tube containing the special anticoagulant by removing the stopper before sample collection.

2. Using a loosely tied tourniquet only for locating the vein, perform the venipuncture using preferably a 19g butterfly needle set, but a needle no smaller than a 21g.

3. Start the venipuncture, removing the tourniquet as soon as the first drops of blood appear in the butterfly tubing. Using a two-syringe draw technique, the sample is collected by first drawing and discarding the first 2 mL of blood either in a syringe or a red top tube. Collect the next 5 mL of blood into a syringe.

4. After completing the blood draw, discard the butterfly tubing and place in a sharps container. Using the syringe, gently express 4.5 mL of sample collected down the side of the special collection CTAD tube. Too vigorous transfer into the CTAD tube may activate the platelets. Cap the tube and invert gently three times.

5. Within 1 hour, centrifuge the sample at 2500 x g for 20 minutes.

6. When centrifugation is complete, collect one-third the volume of the plasma supernatant from the middle region of the plasma portion of the CTAD sample using a plastic pipette and transfer into a polypropylene transfer tube. Take care not to aspirate from neither near the top surface nor the red cell layer at the bottom, as platelets will enter the specimen.

7. Centrifuge the aliquot a second time at 2500 x g for 20 minutes to obtain platelet poor plasma. Collect one third of the supernatant as above.

8. Follow specimen identification and labeling procedures as outlined. The transfer tube should be clearly marked as CTAD plasma.