CAMbank: SST Field Processing v1

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ABSTRACT

Field processing of SST vacutainers for the Cornell Aerospace Medicine Biobank (CAMbank).

Instructions for preserving: Serum and RBC Pellets.

MATERIALS

Tube Type: BD Vacutainer® Serum Separator Tubes (SST) (BD Biosciences: #367987)

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Protocol status: Working
We use this protocol and it's working

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Perform Venipuncture

5m

1 After venipuncture, invert the tubes gently 8 to 10 times to fully mix tube anticoagulant with blood sample. 5m

Store the tube upright at room temperature until centrifugation.

Allow the blood to clot in an upright position for at least 30 minutes.
For optimal biochemical results, centrifuge and aliquot SSTs within 3 hours of venipuncture.

Centrifuge Settings

15m

2 Note: A **swing bucket** centrifuge is required. 3m

Set centrifuge:
- acceleration: 9
- deceleration: 9
- temperature: RT
- duration: 10 minutes
- speed: 1300xg

3 Place the SSTs in the centrifuge. 12m
Place a protective cover over the swing buckets in case of tube leakage.
Start the centrifuge.
Stand by the centrifuge until the centrifuge reaches max speed. Listen for signs of imbalance or compromised tube integrity.

Aliquot Serum

22m

4 Carefully remove SSTs from the centrifuge and inspect for separation of red blood vs serum layers. 2m

Transfer SSTs to a sanitized laminar flow hood.

5 Using a P1000, carefully aliquot serum into 2D barcoded tubes at **500µL each.** 20m

Return 2D tubes with serum to the rack and place in the -80C freezer.

6 Recap and freeze the SST tubes to preserve DNA in the red blood cell pellet