



Standard Operating Procedure

Procedure for Whole Blood Samples (for chemistry tests and future analysis)

I. POLICY: The Puerto Rico Clinical and Translational Research Consortium (PRCTRC) ensure the safety and well-being of laboratory personnel in the centrifugation and aliquoting of biospecimens.

II. PURPOSE: The objective of this Standard Operating Procedure (SOP) is to outline the proper centrifugation and aliquoting of samples in the Puerto Rico Clinical and Translational Research Consortium laboratory #122. This procedure also ensures that the integrity of the specimens is preserved for accurate analysis by the receiving laboratory.

III. Area(s) of Responsibility: This SOP applies to the laboratory personnel.

IV. Procedures:

1. Specimens should be sent to the laboratory as soon as possible.
 - Transportation shall be accomplished in such a way as to minimize any damage to the specimens or containers.
 - Materials must not be left at a receiving area or in an office or laboratory unless a responsible individual takes custody of the material.
 - Persons transporting, processing and/or shipping specimens will maintain training documentation as required per Institutional Biosafety Committee policy.
 - Must follow the “Packing and Shipping of Samples” SOP.
 - Always use your personal protective equipment (PPE) and observe universal precautions.
 - This procedure applies to whole blood tubes with different anticoagulants (for example: EDTA, sodium citrate, heparin, ACD, etc.).
2. Prepare your working surface with absorbent paper.
3. After blood is drawn and received in the laboratory, place the tube immediately in the centrifuge. The collection tube should not be allowed to sit at room temperature for more than 1 hour prior to centrifugation and separation of the plasma, buffy coat and red blood cells (as needed).
4. Centrifuge the collection tube for 10 minutes at 3000 RPM. After separation, the plasma should be clear and free from all blood cells.

5. Using a clean transfer pipette, collect and dispense the entire volume of plasma at 1 mL per aliquot in to the 2 mL cryovials, as many aliquots as each study protocol specifies.
6. If the protocol includes aliquots of buffy coat, using a clean transfer pipette remove it without disturbing the red blood cells. Usually gives two aliquots.
7. If the protocol includes aliquots of red blood cells, using a clean transfer pipette dispense the red blood cells at 1 mL per aliquot in to the 2 mL cryovials, as many aliquots as each study protocol specifies.
8. Secure the vials caps tightly.
9. Discard the whole blood tube and residual blood fraction in the biohazard waste container.
10. Also, discard the transfer pipettes, the absorbent paper and any other contaminated material(s) in the biohazard waste container.
11. Label each aliquot with the specimen label, participant ID number, date and type of sample (plasma, buffy coat or red blood cells), and store them at ambient; at 2-8 °C; at -20 °C; or at -80° C; until packaged for shipment to the reference laboratory for chemistry tests or for future analysis.
12. Decontaminate the centrifuge and working surface with germicidal wipes.
13. Discard the wipes in the biohazard waste container.
14. Sign the maintenance records for “Laboratory and Centrifuge Daily Maintenance”.

V. Exposure Control:

1. In the event of a spill of biological samples please refer to “Biological Spills” SOP, and/or call 787-766-3062 (OSLI-Office for Safety in Research Laboratories), and/or 787-758-2525, ext. 1054/1707 (CASSO-Occupational, Health, Safety and Environment Office).
2. If a potential exposure occurs, notify the Occupational Health Clinic, 787-758-2525, ext. 2913.