SOP 2.5.1 Blood Collection for Plasma

SOP Number: 2.5.1
Version Number 1.0

	Name	Title	Date
Author			
Authoriser			

Effective Date	
Version Number	

Purpose

This SOP describes the procedure for blood collection for plasma.

Responsibility

It is the responsibility of the research personnel carrying out this procedure to ensure that all steps are completed both competently and safely.

Equipment/reagent requirements

- Blood collection system
- Personal protective equipment; gloves, laboratory coat, protective glasses
- Blood collection tube: EDTA, plasma separator tube (PST) with lithium heparin
- A polystyrene container with ice to maintain temperature at 4°C for processing and /or transport to processing laboratory, or alternatively use a water-bath (plus a thermometer) with iced water to maintain the temperature at 4°C or a pre-conditioned gel pack at 4°C
- Centrifuge capable of generating 1,100-1,300g at the bottom of the tube
- Refrigerator (2-4°C) if overnight sample storage is required
- Freezer -20°C/-80°C if short-term storage is required

Procedure

1. Draw blood directly into the evacuated tube. Filling the blood collection tube to the black mark on the tube label indicates that the correct amount of blood has been drawn. Under-filling or overfilling of the tube may affect laboratory results due to the incorrect blood/additive ratio.

2. The blood collection tube is appropriately labeled either with a unique study identification number and/or a bar code label generated electronically.
3. Record the time that the sample was taken in the study specific documentation or data management system.

4. Invert the tube 8–10 times immediately after collection. This helps to prevent the formation of fibrin which may affect subsequent analysis.

5. Maintain tubes at 4°C at all times following collection and during processing. Centrifuge tubes within *2 hours* of collection to separate plasma from cells. Place the blood collection tubes in a centrifuge and spin at 1,300g for 10 min at 4°C. Record the time processing was initiated in the study specific documentation or data management system.

6. Avoid mixing/agitation of PST tubes between centrifugation and separation or transport to the laboratory as this may lead to mixing and/or re-suspension of cells and platelets that were previously on or near the gel surface.

7. Using a plastic Pasteur/transfer pipette collect plasma, being sure to stay above the gel/cell layer so that no cells or portions of the gel are collected. Distribute the plasma (clear liquid) among cryostorage tube(s) maintained at 4°C which have been labeled as per point 2 above. Record the volume in each tube in the study specific documentation or data management system.

8. Transfer tubes to a -80°C freezer for storage. If there is not a -80°C freezer on site store at -20°C. If neither is available transport to the processing laboratory at 4°C in a polystyrene container on ice. The specimen should reach the -80°C freezer within 48 hours of collection. Record the time of storage in the study specific documentation or data management system.

Note: As a general rule samples should be processed and reach the appropriate storage conditions as soon as is practicable. The maximum time limits proposed are guidelines and should be read in association with a study specific protocol.

Change History

SOP Number	Effective Date	Significant Change	Previous SOP No.