SOP 2.5.3 Blood Collection for DNA extraction

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Version Number 1.0

	Name	Title	Date
Author			
Authoriser			

Effective Date	
Version Number	

Purpose

This SOP describes the procedure for blood collection for extraction of DNA.

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.
- **Note:** Lithium heparin is not recommended for blood collection for DNA extraction as the heparin co-purifies with the DNA and can interfere with enzymatic reactions.
- 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 with iced water to maintain the temperature at 4°C (plus a thermometer) or a pre-conditioned gel pack at 4°C
- 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 up 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 can affect 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. Invert the tube 8-10 times to avoid the formation of microclots.

4. Record the time that the sample was taken in the study specific documentation or data management system.

5. Maintain the tubes at 4°C in a refrigerator / polystyrene container with ice. Transport tubes to the processing laboratory as soon as is practicable or within a maximum of 48 hours for immediate processing of DNA or for direct storage at -80°C. Tubes should be transported at 4°C in a polystyrene container on ice. Record date and time of processing of DNA and the data/time that DNA is frozen in the study specific documentation or data management system.

6. If a sample for DNA is frozen locally at -20°C then the sample should be transported frozen, using dry ice to the processing laboratory. Vacutainers should be tested to ensure that they can withstand storage temperature and re-thaw. If a sample is thawed DNAse enzymes break down the DNA rapidly.

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.