GENERAL GUIDELINES ~ Sample Collection

1. Sample collection

1.1 Materials ~ TUD Blood collection kit
• • 1 x TUD single wing needle
• • 1 x TUD needle holder
• • 1 x Latex gloves
• • 1 x Tourniquet
• • Alcohol swipes
• • Cotton wool
• • Small plasters
• • 1 x Sharps bin for used needle or needle/holder combination

1.2 Sample tubes
• Prepare the TUD Blood Collection Tube which going to use

1.3 Bar Coded Label
• Stick the labels long ways on the tube (so the barcode can be read) and wrap the plastic strip around the label to ensure the label does not come off in the freezer)

2. Requirements prior to blood collection

• Ensure area for blood collection is clear of all specimens and paperwork.

• Confirm verbally the patient's identity by checking that name and signature are correct or that name, address and date of birth match those on the specimen request form or according to local requirements

• Ensure that a staff member is available to transfer samples promptly to the laboratory. Ensure that laboratory staff are aware of the approximate time that samples will arrive. It is preferable that this is within 30 minutes of collection so that sample degradation is limited.

• Sample tubes should be labelled with the bar-code prior to blood collection.

2.1 Details to be record

• Samples collected (i.e. blood [which tubes and how many and in which order]).
• Date and time the samples were taken (blood).
• Last time the subject consumed food/drink.

2.2 Equipment record

• Any significant variations in equipment must be recorded (e.g. blood tube number or type).
• Details of any new purchase of tubes should be recorded (e.g. lot/batch no. and expiry date).

3 Protocol for taking blood

3.1 Guidelines for venepuncture procedure
Blood taking procedure (see complete do & dont for more details of this procedure http://catalog.tud.my/Do&DONT.htm)

3.2 Label tubes with corresponding bar-coded label

3.3 Follow the complete SOP of order of draw (http://catalog.tud.my/image/order%20of%20draw.jpg)

3.4 Notes on TUD blood collection tubes

• Since the blood tubes contain chemical additives, precautions should be taken to prevent possible backflow from the tubes during blood drawing.

3.5 Venepuncture

• When the first tube is full and blood flow ceases, remove it from the holder and introduce the next TUD blood collection tube into the holder. **(Notes: The sample tubes contain additives. It is important to follow the correct order of draw to prevent contamination of samples.)**

4. Immediately following sample collection.

• It is imperative to gently invert the blood tubes at least 5-10 times (according to the tube) to reach a proper mix of additive and blood to ensure that anticoagulant or clot accelerators are distributed evenly through the sample. **(Do NOT shake.)**
(Safely discard the used needle holder and syringe into the sharps bin.)

• It is essential that all of these (name, date of birth, identity number and etc) data elements are recorded or the samples may be wasted.

• Remove the tourniquet as soon as blood appears in the first tube. This will restore normal blood flow to the arm and reduce bleeding at the puncture site. The tourniquet should remain in place no more than one minute.

• When the collection is complete, place folded gauze over the needle and gently remove the needle from the arm. Hold the gauze firmly over the venipuncture site until the bleeding has stopped. Place a bandage over the collection site.

• Engage the needle safety device and discard the needle and holder in an appropriate sharps container. Use care when discarding single winged needles and tubing. DO NOT RECAP THE NEEDLE. **(Discard all visibly contaminated tourniquets.)**

• The time of phlebotomy, processing and final storage should be logged as well as the date and any unusual conditions in the lab (failure of temperature control, etc.) or according to the local requirements

• Send all blood samples to the laboratory, ideally this process should be performed as soon as possible.

• Samples should be moved between laboratories in a sealed container.

5 Requirements

• The sample should be processed as soon as possible after blood taking and within 2 hours of the blood draw.

• The time elapsed between the taking of the blood and sample processing must be recorded for this sample or according to the local requirements

5.1 Instructions for removal of TUD Tube Cap

• Grasp the blood tube with one hand, placing the thumb under the closure. With the other hand, twist the cap while simultaneously pushing up with the thumb of the other hand, only until the tube cap is loosened.

• Move thumb away before lifting cap. Caution: Do not use thumb to push closure off tube. If the tube contains blood, an exposure hazard exists.

• Lift the cap off the tube. In the unlikely event of the rubber stopper separating from the cap , do not reassemble closure. Carefully remove rubber stopper from tube.

5.2 Procedure

• Maintain sample at room temperature (18-22 °C) throughout processing.

• The sample needs to be processed in sterile conditions using aseptic technique

• Upon arrival at the lab, centrifuge the sample at 3000-4000rpm for 10 minutes (depending on tube requirement) , at room temperature.

6. PLASMA Sample processing

• Use a sterile pastette to remove all of the plasma
(Discard the pastette safely)

7. SERUM Sample Processing

• Draw out the serum without agitating the red blood cells using a pipette.
(Discard the pastette safely)

8. Buffy Coat Processing

• Use a new sterile pastette to remove the buffy coat slowly, using a circular motion to pick up all visible buffy coat which is greyish-white in colour. Note that the buffy coat adheres to the red cell layer; some red cells and plasma will be drawn up with the buffy coat. **(Discard the pastette safely)**

9. General precautions

• For safety information please refer to your institution's or TUD risk assessment procedure

10. Sample storage ~General guidelines

• Protocol for sample storage

Whole blood (for DNA)
• Frozen at -80ºC.

Plasma / Serum
• Frozen at -80ºC.
(eventually to liquid nitrogen for long term storage.)

Buffy coat
• Frozen at -80ºC.

11. Sample transport

• Packaged appropriately with sufficient dry ice to ensure samples do not thaw and packaged in a manner that prevents breakage or leakage.

12. Technical Support

For any technical assistant for TUD products,please contact :

TUD SDN BHD
49-2,Jalan Temenggung 9/9,
Bandar Mahkota Cheras,
43200 Cheras,
Selangor,Malaysia
Tel : +603 9019 0331
Fax : +603 9019 0335
tech@tud.my