Standard Operating Procedure: Blood sampling and transportation

RATIONALE FOR TESTING

The rationale of this standard operating procedure is as follows: a) safely venesecting blood from participants in the GENIEUR (genes in irritable bowel syndrome research network) study, b) facilitating appropriate extraction and preservation of DNA for further genetic/epigenetic analysis and finally c) the safe and timely delivery of blood samples to the study centre.

REQUIREMENTS

Healthcare practitioners should have sufficient experience and training according to local research governance procedures to take written informed consent and perform the venesection procedure. Prior to the venesection procedure, participants should be allowed the read and understand the participant information sheet and allowed to ask any questions, as detailed below. Following this they should be asked to complete and sign two copies of the consent form, as detailed below.

- 2 Consent forms for patients participating in the investigation “Genetic study of IBS“
- 2 Information leaflets for patients participating in the investigation “Genetic study of IBS“

ESSENTIAL EQUIPMENT

- 2 X 7.5 ml Purple top (Ethylenediaminetetraacetic acid (EDTA)) blood tubes, *see figure 1.*
- 10 ml Syringe a green/blue needle or Vacutainer system with butterfly needle attachment
- Cotton Swab/Gauze
- Alcohol Swab
- Tourniquet
- Plastic gloves
- Royal Mail SAFEBOX for transport

Figure 1 – “Purple” EDTA Vacutainer tube – x2 of these 7.5ml vacutainers need to be filled making sure that the sample is adequately mixed with EDTA by slowing inverting the tube 8-10 times.

INSTRUCTIONS FOR VENESECTION

1. Explain the procedure clearly to participant giving time to ask any questions, ensuring the patient is comfortable about the procedure.
2. Obtain informed consent from the participant as per IBS study protocol prior to blood taking.
3. Ensure all equipment is ready to hand in a tray next to the participant.
4. Identify a good-sized vein, usually in the antecubital fossae or on the dorsum (back) of the hand.

5. Apply a tourniquet proximal to the site of venepuncture to ensure engorgement of vein with blood.
6. Prepare a 10ml syringe with either a green or blue needle depending upon the size of the vein or prepare the Vacutainer with a butterfly needle. The type of device used to extract blood is dependent upon operator's preference.
7. Clean the site of venepunture with an alcohol swab.
8. Insert needle into vein looking for blood flashback in the bevel of the syringe.
9. Gently withdraw approximately 10mls of blood into the syringe or alternatively place purple EDTA tubes into the Vacutainer to allow self-filling of blood.
10. Once enough blood has been withdrawn, undo the tourniquet with the needle still in place.
11. Take cotton swab and place over site of needle insertion (Venepuncture) and gently remove the needle.
12. Apply direct pressure with the cotton swab over the puncture site to stem any bleeding. This should be carried out for 2mins, after which the swab should be removed to ensure bleeding has stopped. If not affix the swab with gauze tape.
13. Transfer blood from syringe into purple EDTA tubes ensuring they are completely filled, either by directly puncturing the top of the EDTA tube in the centre (rubber black area) or remove the tube top and gently inject blood into the empty tube prior to replacing the cap. If a vacutainer device is used, the above would not be necessary as tube would self-fill. Carefully fill 2 purple-top EDTA tubes. Slowly invert samples 8 to 10 times to ensure the mixing of the sample and the anti-coagulant liquid inside the tube.
14. Carefully label the tubes with patient IBS study number and date and time blood sample was taken. Mark the tubes with IBS study, in order they are readily recognised as this will help with processing at the chief site.
15. Fill in the **IBS blood taking form** with all study number and details of the patient. The DNA number and will be issued by the study centre, so please leave blank.

TIMING OF SAMPLE DELIVERY

1. Samples have immediately to be stored at -80°C until shipment. If a -80°C freezer is not available, storage at -20°C is acceptable.
2. Batches of c. 50 samples are collected and ready for shipment on dry ice, please alert the Study Co-ordinator (insert name) at the study centre of their impending arrival so arrangements can be made to store the samples.

PERSONNEL

Appropriate staff to undertake venepuncture may include:

Research Nurse/ Practitioners

Clinical Research Fellows

Members of clinical staff trained to take blood, including doctors and nurses on the unit.

HEALTH AND SAFETY

1. Standard precautions are required. Always wear gloves when handling blood samples.

2. Refer to the risk assessment, hazard data sheets and the Departmental policy at your site for additional safety information.

Number	Sample Labcode	Collection Date	Collection Time	Number of aliquots	Freezing Date	Shipment date	Centre	Isolation by	Signature
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