# Standard Operational Procedure

East of England Ambulance Service NHS Trust

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| **Title:** | **Drawing of bloods** |
| **SOP reference:** | SOP 6.0 |
| **Version number:** | 1.0 |
| **Owners:** | Anna Price, David Cunningham, Duncan Moore, Natalie Mudge |
| **Approved by:** | Dr Tom Davis – Medical Director |
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| **Review date:** | |
| **Applicable to:** | Clinical staff qualified to draw bloods |
| **Distribution:** | All clinical staff |
| **Linked documents:** | IPC Safe Practice Guidelines |
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## 1.0 Background

Each NHS region is coordinating its own specific arrangements to roll out antibody testing to NHS staff in response to the COVID-19 pandemic. The test is a venous blood test which will be offered to all Trust staff including those working on NHS premises but not directly employed by the NHS and those working for or on behalf of EEAST.

## 2.0 Process

Staff attending will have pre-booked an appointment, the details of which can be found in the COVID update section of EAST24 and will be asked to complete the relevant paperwork on arrival.

Clinical staff qualified to draw blood must don appropriate Personal Protection Equipment (PPE) prior to the procedure. PPE required for drawing blood: Gloves and fluid resistant surgical mask, with consideration for an apron and/ or eye protection if risk of splash.

**Equipment provided**

**Step 1 – Assemble equipment**

Collect all the equipment needed for the procedure and place it within safe and easy reach on a tray or trolley, ensuring that all the items are clearly visible. The equipment required includes:

- Vacutainer with needle
- Vacutainer Blood Sample Tube Plastic (Gold 3.5/5ml W/Gel Sst11)
- Or
- 7.5ml Sarstedt ™ blood collection tube
- Sarstedt ™ safety needles

- a tourniquet.
- alcohol hand rub.
- Clinell skin preparation wipes.
- gauze or plaster to be applied over puncture site.
- laboratory specimen labels.
- writing equipment.
- Microbiology form
- laboratory forms.
- leak-proof transportation bags and containers.
- a puncture-resistant sharps container.
- Paper towels

Ensure that the sample tubes and equipment are close to you, but away from the patient, to avoid being accidentally tipped over.

**Step 2 – Identify and prepare the patient**

- Introduce yourself to the member of staff and ask them to state their full name.
- Check that the laboratory form matches their identity (i.e. match their details with the laboratory form, to ensure accurate identification).
- Ask whether they have any allergies, phobias or have ever fainted during previous injections or blood draws.
- If they are anxious or afraid, reassure them and ask what would make them more comfortable.
- Place a clean paper towel under their arm.

**Step 3 – Select the site**

***General***

- Extend the patient's arm and inspect the antecubital fossa or forearm.
- Locate a vein of a good size that is visible, straight, and clear. The median cubital vein lies between muscles and is usually the easiest to puncture. Under the basilic vein runs an artery and a nerve, so puncturing here runs the risk of damaging the nerve or artery and is usually more painful. DO NOT insert the needle where veins are diverting, because this increases the chance of a haematoma.
- The vein should be visible without applying the tourniquet. Locating the vein will help in determining the correct size of needle.
- Apply the tourniquet about 4–5 finger widths above the venepuncture site and re-examine the vein.

**Step 4 – Perform hand hygiene and put on gloves**

- Perform hand hygiene; that is
  - If available, wash hands with soap and water, and dry with single-use towels; or
  - if hands are not visibly contaminated, clean with alcohol rub – use 3 ml of alcohol rub on the palm of the hand, and rub it into fingertips, back of hands and all over the hands until dry.
- After performing hand hygiene, put on well-fitting, non-sterile gloves.

**Step 5 – Disinfect the entry site**

- Clean the site with a Clinell skin preparation wipe for 30 seconds and allow to dry completely (30 seconds).
- Apply firm but gentle pressure. Start from the centre of the venepuncture site and work downward and outwards to cover an area of 2 cm or more.
- Allow the area to dry. Failure to allow enough contact time increases the risk of contamination.
- DO NOT touch the cleaned site; in particular, DO NOT place a finger over the vein to guide the shaft of the exposed needle. It the site is touched, repeat the disinfection.

**Step 6 – Take blood**

***Venepuncture***

Perform venepuncture as follows.

- Anchor the vein by holding the patient's arm and placing a thumb BELOW the venepuncture site.
- Ask the patient to form a fist so the veins are more prominent.
- Enter the vein swiftly at a 30-degree angle or less and continue to introduce the needle along the vein at the easiest angle of entry.
- Once sufficient blood has been collected, release the tourniquet BEFORE withdrawing the needle. Some guidelines suggest removing the tourniquet as soon as blood flow is established, and always before it has been in place for two minutes or more.
- Withdraw the needle gently and apply gentle pressure to the site with a clean gauze or plaster. Ask the individual to hold the gauze or plaster in place, with the arm extended and raised. And NOT to bend the arm, because doing so causes a haematoma.

**Step 7 – Fill the laboratory sample tubes**

- If a vacutainer and needle holder is used, once the needle is inserted in the vein the vacutainer should carefully be pressed onto the needle within the holder and the blood is automatically drawn into the sample tube by vacuum until the correct amount is collected.

- If the Sarstedt ™ blood collection system is used operators should familiarise themselves with the manufacturers user guide (appendix 1) prior to undertaking any venepuncture.

- If a syringe or winged needle set is used, best practice is to place the tube into a rack before filling the tube. To prevent needle-sticks, use one hand to fill the tube or use a needle shield between the needle and the hand holding the tube.
    - Pierce the stopper on the tube with the needle directly above the tube using slow, steady pressure. Do not press the syringe plunger because additional pressure increases the risk of haemolysis.
    - Where possible, keep the tubes in a rack and move the rack towards you. Inject downwards into the appropriate coloured stopper. DO NOT remove the stopper because it will release the vacuum.

- If the sample tube does not have a rubber stopper, inject extremely slowly into the tube as minimizing the pressure and velocity used to transfer the specimen reduces the risk of haemolysis. DO NOT recap and remove the needle.

- Before dispatch, invert the tubes containing additives for the required number of times (as specified by the local laboratory).

**Step 8 - Clean contaminated surfaces and complete patient procedure**

- Discard the used needle and syringe or blood sampling device into a puncture-resistant sharps container.
- Check the label and forms for accuracy. The label should be clearly written with the information required by the laboratory, which is typically the patient's first and last names, NHS number, date of birth, and the date and time when the blood was taken.
- Discard used items into the appropriate category of waste, category B clinical waste (Orange). Items used for phlebotomy that would not release a drop of blood if squeezed (e.g. gloves) may be discarded in the general waste, unless local regulations state otherwise.
- Perform hand hygiene again.
- Recheck the labels on the tubes and the forms before dispatch.
- Inform the individual when the procedure is over.
- Ask them how they are feeling. Check the insertion site to verify that it is not bleeding, then thank the patient and say something reassuring and encouraging before the person leaves.

**Step 9 – Complete the required documentation and prepare samples for transportation**

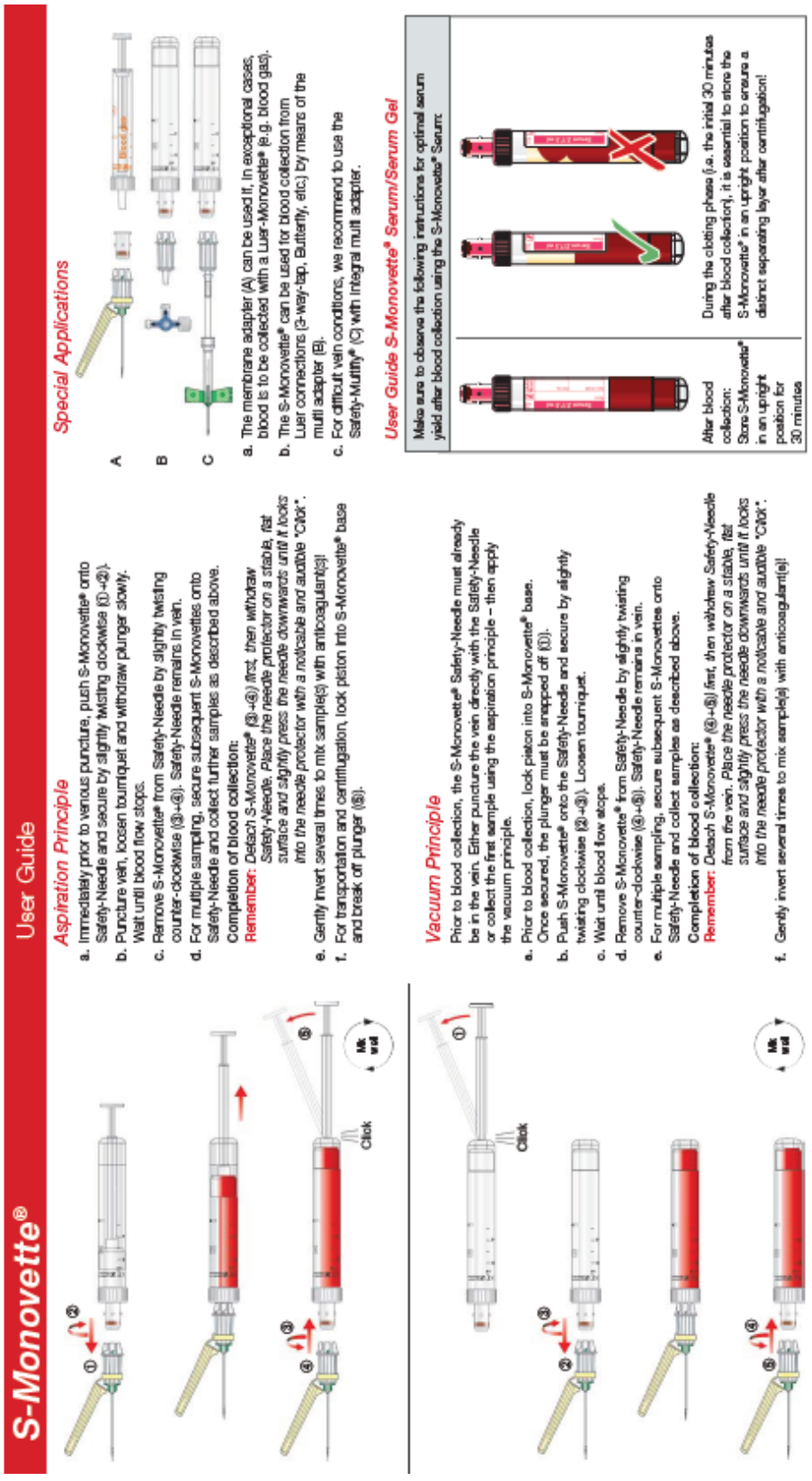
- Complete the required Microbiology form
- Ensure the following fields have been completed
  - \- Full name, DOB, hospital number/NHS no must be on the form
  - \- COVID IGG serology sample must be written
  - \- Location sample is coming from must be written
  - \- Location result sent to
  - \- Time sample collected
- Pack laboratory samples safely in a plastic leak-proof bag with an outside compartment for the laboratory request form and arrange for collection as per your area's pathway.

**Step 11 – Clean up spills of blood or body fluids**

If blood spillage has occurred (e.g. because of a laboratory sample breaking in the phlebotomy area or during transportation, or excessive bleeding during the procedure), clean it up using the Trust's approved spill kit disposing of any paraphernalia within the clinical waste bins.

In the unlikely event of any needlestick, splash back contamination incidents, please follow the Trust's Occupational Exposure Procedure and report via Datix.

**Appendix 1**


S-Monovette®
User Guide
Aspiration Principle
a. Immediately prior to venous puncture, push S-Monovette® onto Safety-Needle and secure by slightly twisting clockwise (①→②).
b. Puncture vein, loosen tourniquet and withdraw plunger slowly. Wait until blood flow stops.
c. Remove S-Monovette® from Safety-Needle by slightly twisting counter-clockwise (③→④). Safety-Needle remains in vein.
d. For multiple sampling, secure subsequent S-Monovettes onto Safety-Needle and collect further samples as described above.
Completion of blood collection:
Remember: Detach S-Monovette® (③→④) first, then withdraw Safety-Needle. Place the needle protector on a stable, flat surface and slightly press the needle downwards until it locks into the needle protector with a noticable and audible "click".
e. Gently invert several times to mix sample(s) with anticoagulant(s)!
f. For transportation and centrifugation, lock piston into S-Monovette® base and break off plunger (⑤).
Click
Mix well
Vacuum Principle
Prior to blood collection, the S-Monovette® Safety-Needle must already be in the vein. Either puncture the vein directly with the Safety-Needle or collect the first sample using the aspiration principle – then apply the vacuum principle.
a. Prior to blood collection, lock piston into S-Monovette® base.
Once secured, the plunger must be snapped off (①).
b. Push S-Monovette® onto the Safety-Needle and secure by slightly twisting clockwise (②→③). Loosen tourniquet.
c. Wait until blood flow stops.
d. Remove S-Monovette® from Safety-Needle by slightly twisting counter-clockwise (④→⑤). Safety-Needle remains in vein.
e. For multiple sampling, secure subsequent S-Monovettes onto Safety-Needle and collect samples as described above.
Completion of blood collection:
Remember: Detach S-Monovette® (④→⑤) first, then withdraw Safety-Needle from the vein. Place the needle protector on a stable, flat surface and slightly press the needle downwards until it locks into the needle protector with a noticable and audible "click".
f. Gently invert several times to mix sample(s) with anticoagulant(s)!
Click
Mix well
Special Applications
A
B
C
a. The membrane adapter (A) can be used if, in exceptional cases, blood is to be collected with a Luer-Monovette® (e.g. blood gas).
b. The S-Monovette® can be used for blood collection from Luer connections (3-way-tap, Butterfly, etc.) by means of the multi adapter (B).
c. For difficult vein conditions, we recommend to use the Safety-Multifly® (C) with integral multi adapter.
User Guide S-Monovette® Serum/Serum Gel
Make sure to observe the following instructions for optimal serum yield after blood collection using the S-Monovette® Serum:
After blood collection: Store S-Monovette® in an upright position for 30 minutes
During the clotting phase (i.e. the initial 30 minutes after blood collection), it is essential to store the S-Monovette® in an upright position to ensure a distinct separating layer after centrifugation!