PROCEDURE: HEMOCULTURE (BLOOD CULTURE)

Medical Supplies

- 1 hemoculture aerobic;
- 1 hemoculture anaerobic;
- 1 tourniquet;
- 1 hemoculture gauge;
- Gloves;
- Chlorhexidine swabs;
- Alcohol swabs;
- Adhesive strip or tape;
- Gauze;
- Biohazard bag;
- Needle;
- Sharps container;
- Biohazard container (biological substances);
- Requesition;
- All other necessary materials;

Preparation

1) This procedure implies that you are familiar with specimen collection techniques;
2) Specimens must be collected, prepared (if required) and stored correctly in order to ensure their stability.

Collection

1) Prepare all the documents related to the analysis. Make sure that:
   - To understand the requisition;
   - To have all the documents pertinent to this request;
   - The following information must appear clearly on the requisition:
     - First and last name of the patient;
     - Date of birth;
     - Identification number (medicare number);
     - The name of the doctor requesting the tests and/or clinic;
     - The requested tests;
Clinical information.
- Indicate the phlebotomist’s name or initials on the requisition and include the specimen collection date and time.

2) Prepare the necessary medical supplies (consult the CDL catalogue or contact the laboratory for test information);

3) Call the patient by their first and last name.
- Introduce yourself (name);
- Verify the patient identification:
  - His/her name;
  - His/her date of birth;
- Ask the patient if he or she agrees to proceed with the sample collection (legal aspect).

4) Inform and reassure the patient
- Explain the procedure;
- Check to see if the patient has had any adverse reactions (e.g., fainting) with previous phlebotomies
- Inform the patient of the possibility of experiencing some discomfort during the specimen collection process.
- Do not provide technical information to the patient regarding diagnostic testing. For any technical information, refer to a technician.

5) Ensure that the requirements for the analysis are followed:
- Special dietary instructions (fasting, special diet restrictions, etc.);
- Sample collection at specific time or interval;
- Special indications.

6) Wash your hands and put on gloves;

7) Seat the patient comfortably in the phlebotomy chair;

8) Take off the protective cover of each bottle without contaminating

9) – Attention: When you have two hemocultures to draw; it’s important to take 2 different puncture sites. Wait at least 30 minutes between each blood draw.

10) Upon opening the bottle if it’s contaminated, disinfect the rubber cap with alcohol swab. Let it dry at least 30 seconds.
11) Place the butterfly needle on the hemoculture gauge

12) Assess the puncture site;
13) Place the tourniquet 10cm above the puncture site
14) Attention: After 60 seconds take off the tourniquet to identify the vein. After this delay, a consecutive hemolysis compression of the vein can occur and alter the results. You must wait 2 minutes before putting on the tourniquet again.
15) Choose the vein;
16) Disinfect the puncture site with a chlorhexidine swab in a circular motion from the center moving outwardly. Let completely dry at least 30 seconds without moving the hand, blowing on the site or wipe the site with a gauze.

17) Perform the blood draw with the aerobic and then the anaerobic hemoculture
18) Remove the tourniquet as soon as blood starts to flow
19) Lower the bottle under the puncture site making sure it’s in a upright position to visualise the among of blood.
20) Make sure the is at least 10ml full
21) Remove the needle

22) Cover the venipuncture site with a clean gauze pad, apply a Band-Aid or tape to the site, and tell the patient to apply pressure to the site for 1-2 minutes;
23) Throw away all contaminated supplies used for the venipuncture in a biohazard waste container or sharp container;
24) Mix the contents of the bottles by inversions as soon as the procedure is complete
25) In front of the patient, identify the sample with the following information:
   - First and last name;
   - Date of birth and/or Medicare number.

Note: Any specimen that is not properly identified will not be accepted by the laboratory.

26) Handle tubes according to the requirements for preparation and storage (e.g., conservation, etc.).
27) Place the specimens in the biohazard bag and seal;
28) Insert the requisition in the side pocket of the biohazard bag;
29) Take off your gloves and wash your hands;
30) Send all samples to the laboratory as soon as possible.

**Additional Information**

In children and in certain diseases where involvement of anaerobic germs are exceptionnal, we usually limit ourselves to one flask of pediatric aerobic with 4ml of blood.

One hemoculture corresponds to a pair of flasks (1 aerobic and 1 anaerobic).

When 2 hemocultures has to be done, it is important to take 2 separate ponction sites as well as 30 minutes intervalles between each blood sample.

A strict asepsis as to be followed to prevent the contamination of samples by bacteria from the microbial flora, present on the skin of the client during blood draw.

In some situations, the draw can be done using 20ml syringe and 21 gauge needle 2.5cm. It is then necessary to take 20ml of blood and inject 10ml in each of the two bottles, starting with the aerobic bottle, injecting first a small quantity of air.

However this method can encounter several manipulations that may contaminate the sample and increase the risks of accidental needle stick injuries with the used needle.