



COLLECTION AND TRANSPORT OF FRESH WHOLE BLOOD SAMPLES

Responsible(s):

- **Ângela Afonso** – Sala P0-C-77; Ext. 47047/92903; email:angelaafonso@fm.ul.pt
- **João Eurico Fonseca** – Sala P2-A-18; Ext. 47221; email: jcfonseca@fm.ul.pt

AUTHOR: Ângela Afonso

APPROVAL: João Eurico Fonseca



SOP.BIO.002 – COLLECTION AND TRANSPORT OF FRESH WHOLE BLOOD SAMPLES

CONTENTS

	Pag.
1. SCOPE	3
2. DEFINITIONS	3
3. SAFETY INFORMATION	3
A. Interferences.....	3
4. EQUIPMENT / INFRASTRUCTURES REQUIRED	3
5. DESCRIPTION / PROCEDURE	3
A Specimen identification.....	3
B. Procedure	3
C. Transport to the laboratory.....	4
6. RECORDS.....	4
7. INFORMATION	5
A. Responsible(s):	5
B. Documentation:	5



SOP.BIO.002 – COLLECTION AND TRANSPORT OF FRESH WHOLE BLOOD SAMPLES

1. SCOPE

This Standard Operating Procedure defines the collection protocol and methods of transport to the laboratory of fresh whole blood samples, which will be preserved at the Biobanco-IMM.

The blood destined for Biobanco-IMM will be collected only from donors who have given their informed consent.

2. DEFINITIONS

SOP: Standard Operating Procedure

Fresh blood samples: blood samples not yet processed

3. SAFETY INFORMATION

All specimens must be treated as infectious and handled according to “standard precautions”.

Only trained staff will withdraw blood. White coat, gloves, safety glasses and other individual protection devices must always be worn while collecting and handling samples.

A. Interferences

Food intake may have impact on some serum measurements. For this reason the subject must be fasting since at least 8 hours and, if required, at rest since at least 30 minutes before the procedure.

4. EQUIPMENT / INFRASTRUCTURES REQUIRED

- Skin disinfection: 70% alcohol (isopropyl alcohol, ethanol) or 10% povidone, iodine, swabs, gauze pads, band aid;
- Disposable latex or vinyl gloves;
- Tourniquet;
- Vacuum tubes (preferably) or disposable syringes and needles.

5. DESCRIPTION / PROCEDURE

A Specimen identification

The patient’s sample must be unambiguously identified at the time of collection. Specimens should be labeled and handled in a manner that respects patient privacy according de law 12/2005, published at *Diário da República*.

Each tube must be labeled with an identifier that links it with the donor’s unique identification number; this ensures traceability of the specimen and separation of personal and clinic data.

B. Procedure

- i) Ensure that the area for blood collection is free from other samples and paperwork;
- ii) Confirm verbally the patient’s identity by checking that name and signature are correct on the consent form and that name, address and date of birth match those on the specimen request form;
- iii) Place a tourniquet above the venipuncture site;

SOP.BIO.002 – COLLECTION AND TRANSPORT OF FRESH WHOLE BLOOD SAMPLES

iv) Palpate and locate the vein. It is critical to disinfect the venipuncture site meticulously with 10% povidone iodine or 70% isopropyl alcohol by swabbing the skin concentrically from the centre of the venipuncture site outwards. Let the disinfectant evaporate. Do not re-palpate the vein again.

Perform venipuncture; withdraw at least 10 ml of whole blood from adults, up to 10-5 ml from children and up to 3 ml from infants;

v) Remove the tourniquet. Apply pressure to site until bleedings stops, and use a band aid;

vi) Use appropriate anticoagulant or additive-containing tubes. The choice of tube in which to collect blood depends on the expected downstream applications..

If DNA is to be extracted from the blood, collecting into lithium heparin is not recommended as DNA yields are less and any residual lithium heparin may interfere with PCR applications (Yokota et al. 1999). If the measuring is intracellular RNA, it is recommended that the blood is collected in a tube containing an RNA stabilization additive (PAXgene tubes);

vii) Label the tube with an identifier that links it with the donor's unique identification number;

viii) Note collection details in the Biobanco-IMM database (amount and type of tubes, anticoagulants, stabilizing additives and hour).

If the processing is not possible within 30 minutes from collection, the specimens must be temporarily preserved at 2-8 °C. The processing must be performed within 24 hours from collection, if not otherwise specified (please see the SOP03).

If the aim is DNA isolation the blood sample can be stored at -80 °C (for details see the SOP04).

C. Transport to the laboratory

Special handling requirements should be provided to couriers responsible for the transport of the specimens.

Blood tubes must be transported upright and secured in a leak-proof secondary receptacle. Cushion or suspend tubes during transport over rough terrain to prevent lyses of red cells. There should be sufficient adsorbent paper around blood tubes to soak up all liquid in case of a spill. The external container must bear the collection center identification, the person to contact in case of problems, the receiver, the inscriptions: "biological material", "handle with care" and the biohazard symbol.

6. RECORDS

Records' Identification	Indexation	Archive Responsible
FORM.BIO.001	Base de dados LIMS	Ângela Afonso
Questionares	Base de dados LIMS	Ângela Afonso



SOP.BIO.002 – COLLECTION AND TRANSPORT OF FRESH WHOLE BLOOD SAMPLES

7. INFORMATION

A. Responsible(s):

- **Ângela Afonso** – Sala P0-C-77; Ext. 47047/92903; email: angelaafonso@fm.ul.pt
- **João Eurico Fonseca** – Sala P2-A-18; Ext. 47221; email: jcfonseca@fm.ul.pt

B. Documentation:

- **SOP** – SOP.BIO.003