

## **WHOLE BLOOD PROCESSING**

**Responsible(s):**

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**SOP.BIO.003 – WHOLE BLOOD PROCESSING**

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## SOP.BIO.003 – WHOLE BLOOD PROCESSING

### 1. SCOPE

This Standard Operating Procedure defines the handling, processing and freezing protocols of whole blood samples, which will be preserved at Biobanco-IMM.

### 2. SAFETY INFORMATION

All specimens should be treated as infectious and handled according to “standard precautions”. Blood must be processed only by trained staff. White coat, gloves, safety glasses and other individual protection devices must always be worn while collecting and handling samples.

#### A. Interferences

In order to avoid any alteration of the sample, the sample should be processed as soon as possible and preferably within 30-60 minutes from collection. During this time, blood specimens must be preserved at 2-8 °C.

The samples must be processed within 24 hours from collection if not otherwise specified

### 3. EQUIPMENT / INFRASTRUCTURES REQUIRED

- Centrifuge with sealed buckets or sealed rotor;
- -80 °C freezer
- 1 ml pipette;
- Sterile tips;
- Sterile cryovials 1.5 ml;
- Rack for cryovials.

### 4. DESCRIPTION / PROCEDURE

#### A. Specimen identification

The patient's specimen must be unambiguously identified at the time of collection.

Each specimen must be labeled with an identifier that links it with the donor's unique identification number, ensuring traceability of the specimen and separation of personal and clinic data.

If the documentation or accompanying labels are incomplete, illegible or mismatched they will be put on “stand-by”. However the Biobanco-IMM reserves the right to reject and discard the specimens. In this case it will be necessary to record the “no conformity” in the Biobanco-IMM database.

#### B. Processing

- i) Check that all specimens and relative documentation are available; if something is missing, contact the collection center. In case of missing documentation, discard the specimen according to the regulations and record in the Biobanco-IMM database, indicating the “not conformity” motive.
- ii) Register the samples in the Biobanco-IMM database; data of each specimen must be recorded in electronic and paper archive.
- iii) Processing and freezing, according to the sample specific requirements

#### C. Separation and freezing of serum

Draw 5 ml of whole blood for each 2 ml of serum need.

When using a serum separator tube, invert the tube gently no more five times; further inversion may cause alterations in sample integrity.

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Do not centrifuge immediately after drawing blood. Allow the blood to clot in an upright position for at least 30 minutes but not longer than 1 hour at room temperature before centrifugation.

Ensure that the centrifuge is in good conditions and that the tubes are properly closed and balanced to avoid breakage and spilling. Spin centrifuge at 1500 g for 10(±2) minutes at room temperature with brake turned on.

Remove the tubes carefully from the centrifuge.

Recover the serum aseptically using a pipette and disposable sterile tips. Transfer the serum into labeled 1.5 ml sterile screw cap cryovials in 500 µl aliquots; secure the cap tightly and transfer into -80 °C freezer as soon as possible after processing. If immediate freezing is not possible, preserve specimens at 2-8 °C (it's preferable that all samples are cryopreserved not >24 h after collection).

### **D. Backup**

It is recommended to split stored biospecimens into two sets of aliquots, each set stored in a different location; this strategy will avoid loss in case of adverse events in one location. Two out of every six aliquots will be stored at the backup site.

## **5. RECORDS**

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

## **6. INFORMATION**

### **A. Responsible(s):**

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### **B. Documentation:**

- **SOP** – SOP.BIO.002