TÍTULO: **BLOOD SERUM COLLECTION, PROCESSING AND STORAGE**		
ARCHIVADO: PNT_8.4.001_v1.3_EN_SERUM_COLLECTION_PROCESSING_STORAGE		**Nº DE CÓDIGO:** 8.4.001
VERSIÓN: 1.3	**FECHA DE EDICIÓN:** 26/07/2017 12:07:00 O7/P7	**PÁG.** 1 DE 3

REVISADO POR: Laura Vidaña, Estefanía Piñero, Victor Miguel Galvez, Daniel Pons **FECHA:** 24/07/2017	**FIRMA:**
APROBADO POR: Cristina Villena **FECHA**: 26/07/2017	**FIRMA:**

1. OBJETIVE

The aim of this procedure is to guarantee safety, timely and efficient blood serum sample preservation from patients that have signed the informed consent form and agree with the participation in the Pulmonary Biobank Consortium.

2. SCOPE

This procedure describes how to collect, to process and to store blood serum samples.
This procedure does not detail occupational safety and health regarding biohazard material and/or chemicals processes. It is recommended that the staff follows the established Health and Safety rules of each center.

3. RELATED DOCUMENTS

Not applicable

4. ROLES AND RESPONSIBILITIES

The fulfilment of this standard protocol rests with all the members of the Pulmonary Biobank Consortium who are responsible for management, processing and storage of blood serum.

5. MATERIALS AND EQUIPMENT

Recommended materials and equipment are listed below. Depending on the place where the task or procedure is performed, these materials may be replaced by alternative or equivalent products.

Materials and Equipment	Materials and Equipment (specific to center)
Bag or container for transportation in hospital	
Blood extraction tube for biochemistry (SST II)	
Centrifuge with blood extraction tubes adapter	
Sterile Pasteur pipettes	
Rack for blood extraction tubes	
Rack for cryotubes	
1,5-2ml sterile cryotubes	
Pens and markers	
Gloves to protect staff when manipulating blood and/or biohazard material	
Filter paper	
Lab coat for protection against spills and splashes	
Adequate and suitable labels for collection tubes	
Adequate and suitable labels for cryotubes	
Labeling printer	
Cryostorage boxes	
-80ºC ultrafreezer	

6. GLOSSARY

Blood serum: Blood component which is obtained after blood coagulation and removal of fibrin clot and other components.

7. PROCEDURES

7.1 COORDINATION FOR BLOOD SAMPLE EXTRACTION AND PROCESSING

1. Blood must be collected before surgery and close to the day when lung tissue extraction is performed. Time between blood extraction and freezing at -80ºC should not exceed 45min. if a proteomic study with serum will be performed.
2. The designated person, who will carry out this procedure, knowing the schedule of surgery, will coordinate with the qualified staff ensuring properly tubes identification and appropriate sample extraction.

7.2 TUBE VERIFICATION AND IDENTIFICATION

1. Verify patient information ensuring privacy and ethics contemplated by *Data Protection Law*. Make sure that blood extraction tubes are properly labeled and correspond to the available patient information.
2. Label one biochemistry tube (SST II) without anticoagulant for blood extraction.

7.3 OBTAINING BLOOD SERUM

1. Extract blood in an identified extraction tube for biochemistry (without anticoagulant). These tubes contain coagulation activators.
2. Immediately after extraction, invert softly the tube to favor coagulation.
3. Take the tube to the lab to start processing it, ensuring there are no more than 45 minutes time lapse between extraction and processing. Follow the rules for safe transportation of biohazard material established in your center.
4. Prepare 4-6 cryovials for serum storage and label them properly.
5. Centrifuge the blood tubes (without anticoagulant) at 1500xg for 15 minutes without brake in order to avoid mixing the components. The upper fraction or supernatant is clear and transparent with a pale yellow color. This is blood serum.
6. Aspirate the supernatant carefully and aliquot 0,5 ml of serum into the labeled cryovials.
7. Store cryovials in cryostorage boxes and place them in a -80ºC freezer.
8. Register location of the stored sample in the Pulmonary Biobank Consortium's software.

8. APPLICABLE REFERENCES, LEGISLATION AND GUIDELINES

1. Declaration of Helsinki. http://ohsr.od.nih.gov/helsinki.php3 http://www.wma.net/e/policy/b3.htm
2. Tri-Council Policy Statement; Ethical Conduct for Research Involving Humans; Medical Research Council of Canada; Natural Sciences and Engineering Council of Canada; Social Sciences and Humanities Research Council of Canada, August 1998. http://www.pre.ethics.gc.ca/english/policystatement/policystatement.cfm
3. Human Tissue and Biological Samples for use in Research. Operational and EthicalGuidelines. Medical Research Council Ethics Series. http://www.mrc.ac.uk/pdf-tissue_guide_fin.pdf
4. Best Practices for Repositories I. Collection, Storage and Retrieval of HumanBiological Materials for Research. International Society for Biological and Environmental Repositories (ISBER). http://www.isber.org
5. National Bioethics Advisory Commission: Research involving human biological materials: Ethical issues and policy guidance, Vol. I: Report and recommendations of the National Bioethics Advisory Committee. August 1999. http://bioethics.georgetown.edu/nbac/hbm.pdf
6. US National Biospecimen Network Blueprint http://www.ndoc.org/about_ndc/reports/NBN_comment.asp
7. Blood Collection: Routine Venipuncture and Specimen Handling. http://medlib.med.utah.edu/WebPath/TUTORIAL/PHLEB/PHLEB.html