



PROSTATE CANCER BIOREPOSITORY NETWORK

SOP No: 003
Blood Collection and Processing

STANDARD OPERATING PROCEDURE	SOP No. 003 Blood Collection and Processing MSKCC Network Site
<i>UNAUTHORIZED COPYING PROHIBITED</i>	Version Number: 1.0 (November 2016) Number of Pages: 6
Electronic Filename: PCBN.SOP03.v1.0 Blood Collection and Processing	



PROSTATE CANCER BIOREPOSITORY NETWORK

SOP No: 003
Blood Collection and Processing

1. PURPOSE

To describe the procedure for the collection of blood samples and its processing into derivative blood products, namely plasma, serum and buffy coat. NOTE: This SOP does not cover detailed safety procedures for handling blood and personnel must follow institutional bio-safety guidelines.

2. RESPONSIBILITIES

Authorized personnel collecting and processing participant blood must ensure that:

- all procedures are followed correctly
- all samples are adequately coded during processing
- all documentation is completed, and accurate records maintained on all samples

3. HEALTH AND SAFETY

Personnel carrying out this procedure must maintain safe working practices and observe all relevant Environmental Health and Safety (EH&S) guidelines. This includes the appropriate use of Personal Protective Equipment (PPE), and the procedures for waste disposal, disinfection & spill clean-up and biosafety.

4. EQUIPMENT AND MATERIALS

Equipment	Materials
Calibrated p1000 and p200 micropipettes	1.8ml Cryovials / Conical tubes
Centrifuge	Cryoboxes / Freezer boxes
Counter-balance tubes	2.0ml glass pipettes
Electronic pipette man	Ethanol / Alcohol wipes
PPE (gloves, lab coat/gown, eye/face shield)	Kimwipes
Transport container (eg. Playmate Igloo Thermos)	p1000 and p200 aerosol pipette tips
	Purple top vacutainer tubes
	Red/gray top vacutainer tubes
	Sterile plastic pasteur pipettes



PROSTATE CANCER BIOREPOSITORY NETWORK

SOP No: 003
Blood Collection and Processing

5. PROCEDURES

5.1 Blood Collection

NOTE: The collection of blood must be performed by personnel qualified by training to draw blood.

- Once the participant blood is drawn, the designate will be alerted.
- After notification, the designate retrieves the specimen.

NOTE: Specimens should be retrieved and processed within 3hrs of blood collection.

- When transporting blood specimen(s), an appropriate transport container should be utilized to contain associated biohazards. Recommend - White Playmate Igloo Thermos.
- SST re/gray top tube for serum, EDTA lavender top, Heparin green top or Citrate blue top tube for plasma.
- Transport tubes at room temperature. Do not allow the samples to freeze or be exposed to an ambient temperature of greater than 25°C.

5.2 Blood Processing

- Once at the Biorepository Laboratory, the blood specimen(s) is/are handled according to optimized techniques for the respective institution.

Separation of serum from blood samples

- Confirm that the blood has formed a clot inside the red/gray top vacutainer.
- Centrifuge the serum tubes at **1000 g** for **10 mins**.
NOTE: Ensure the centrifuged is loaded correctly (evenly displaced on each side) and is balanced (mirroring each side). Examine the volume of blood between pairs of tubes – ensure they are roughly equivalent. A balance tube must be created if there is an odd number tubes.
- Using a sterile pipet, transfer out all serum carefully and distribute equally between three aliquot tubes.
- Transfer tubes to their respective freezer storage box and store at -80°C.
- Complete all documentation.

Fractionation of plasma from blood samples

- Centrifuge the appropriate top vacutainer at **1000 g** for **10mins**.
NOTE: Ensure the centrifuged is loaded correctly (evenly displaced on each side) and is balanced (mirroring each side). Examine the volume of blood between pairs of tubes – ensure they are roughly equivalent. A balance tube must be created if there is an odd number tubes.



PROSTATE CANCER BIOREPOSITORY NETWORK

SOP No: 003
Blood Collection and Processing

- Using a sterile pipette, transfer as much plasma as possible without disturbing red blood cells layer into three aliquot tubes.
- Transfer tubes to their respective freezer storage box and store at -80°C.
- Complete all documentation.