



Procedure for Handling Whole Blood Specimens for Circulating Tumour Cell (CTC) Assessment

1. MATERIALS AND SUPPLIES

Supplies:
Appropriate blood tubes (CellSave or sodium heparin)
Labels
Lab Log Book
Sample Database
Sample Worksheet
File folders
Non latex gloves
Eye Protection
Lab Coat
Tube rack
Biological safety cabinet (laminar flow hood)

2. PROCEDURES

SAMPLES

- Samples consist of patient blood received from clinical trials centers, or volunteer blood.
- Ensure that the blood sample container has not leaked and has not been damaged.
- Ensure that the blood sample corresponds to the specimen submission form.

QUALITY CONTROL

- Ensure the blood has not been frozen.

PREPARATIONS REQUIRED BEFORE STARTING PROCEDURE

- Prepare all the necessary documents required for logging blood sample.
- Ensure that protective gear is worn when handling blood sample.

Working with blood specimens

- Wear latex gloves or suitable alternative to latex
- Wear eye protection and lab coat
- Clean all equipment and surfaces with 70% Ethanol
- Only work with whole blood in the laminar flow hood to contain potential spills
- When completed clean all equipment and surfaces with 70% Ethanol

Disposal of equipment and materials that came in contact with blood sample

- Place sharp items in a sharps container
- Place disposable materials including gloves into a biohazard waste bucket.
- Put all blood-related items (including gloves used while working with blood) into a biohazard waste pail located under the hood.
- For any beakers or re-useable lab equipment in contact with blood, add 10% bleach to completely soak the area for 20 minutes.



PROTOCOL

Receiving Blood Sample

- Ensure that the shipping container is not damaged.
- Wear protective equipment (gloves, eye, lab coat)
- Open shipping container carefully.
- Review the Specimen Submission Form against the label on the blood.
- Confirm that the temperature indicator has not turned purple (indicating sample has been exposed to freezing temperatures)
- Ensure that the blood sample has not leaked and tube has not been damaged.

Entering Blood Sample into Database

- Assign the Lab ID Number to the Sample
- Fill out the Lab Log Book
- Enter sample into the Sample Database
- Start a Sample Worksheet for the sample
- Create a file folder that will hold all documentation and paperwork associated with the sample.

Storage of Blood Sample

- Place the blood sample in rack
- Place rack with blood sample in Biological Fume hood
- Store sample at room temp for no more than 24 hours
- Store until ready to use
- Before use, invert both CellSave and sodium heparin tubes 8 times to mix and prevent clotting

Table 1. Summary Protocol

	Action
1	Receive Sample into the lab
2	Confirm that the Sample has not been damaged
3	Confirm that the label on the sample corresponds to the Specimen Submission Form
4	Assign Lab ID Number
5	Log Sample into the Lab Log book
6	Log Sample into the Sample Database
7	Place all documentation and paperwork into a folder specific to the sample
8	Store sample at room temperature, DO NOT FREEZE

References

- Refer to the 3rd edition of the Public Health Agency of Canada's Laboratory Biosafety Guidelines,
- Refer to the Queen's University's Biohazards Safety Manual published by the Department of Environmental Health and Safety, when handling biohazardous materials such as blood and tumor samples
- "SOP for General Laboratory Work with Human Blood" Daniel Estes, 08/2007 (http://biomembrane.engin.umich.edu/research/sop/SOP_general_blood.pdf)



Welcome to the laboratory of
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