(C) SOP for Serum Sample collection from Human Subjects

1.0 Purpose

This document outlines the procedure to obtain **serum** from human whole blood in serum separation tubes for the analysis of circulating long non-coding RNA (lncRNA) and proteomics research work.

Serum contains the liquid portion of the blood without cells and clotting factors and, thus, the molecules present in it represent the whole body system. Serum is plasma minus clotting factors. The cells and clotting factors must be removed from the blood sample by allowing adequate time (30-60 min) for a clot to form.

2.0 Scope

This SOP applies to the collection of serum from subjects participating in CCRAS funded project "SYSTEMS BIOLOGY APPROACH TO DELINEATE MOLECULAR SIGNATURES OF PRAKRITI IN HEALTHY HUMANS".

3.0 Safety

3.1. All blood samples should be handled and processed according to institutional Biosafety Guidelines. This procedure should be performed in accordance with all applicable safety procedures.

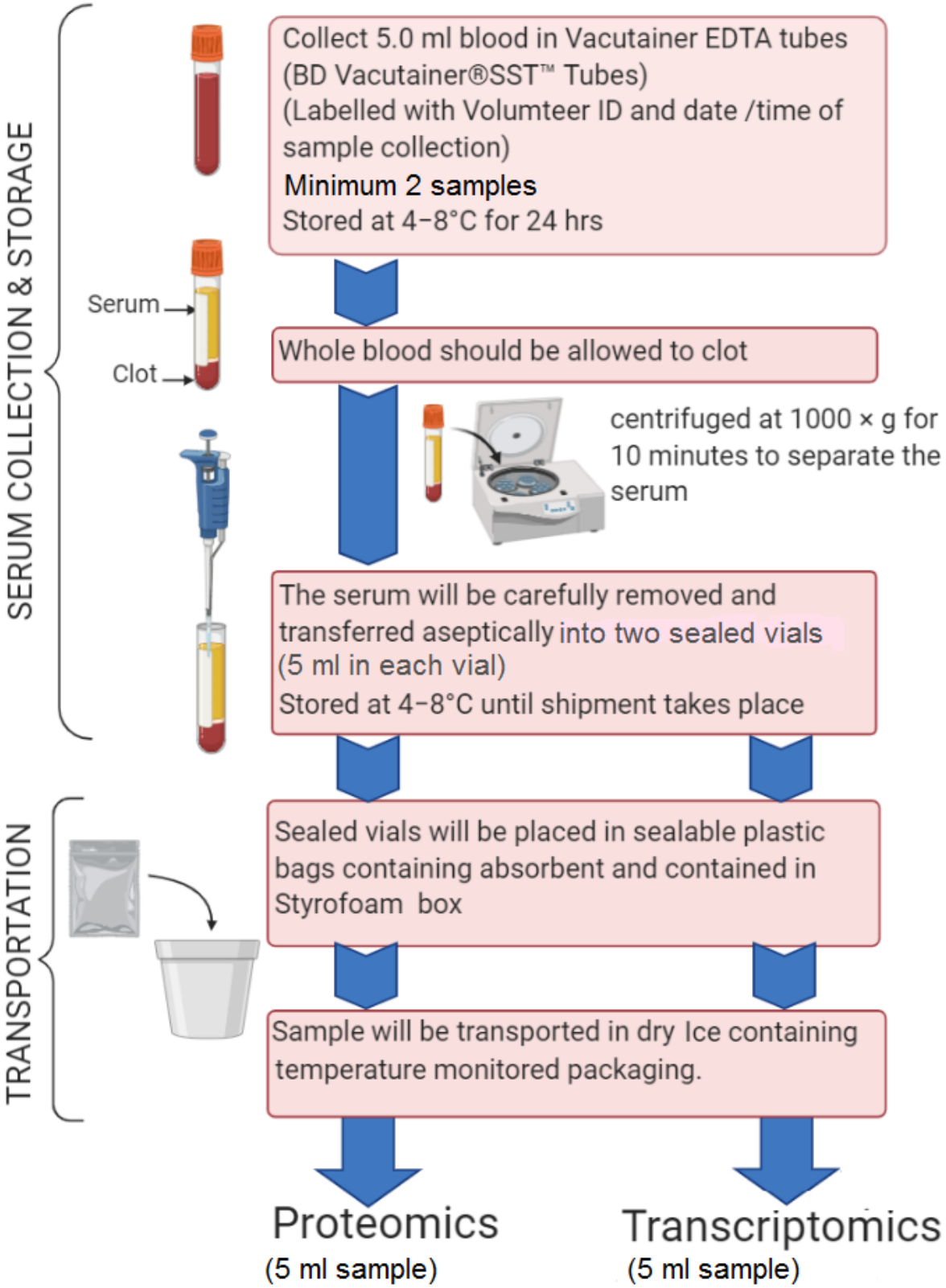
3.2. It is imperative that serum samples are collected and processed using strict aseptic technique.

3.3. Laboratory personnel are required to be trained on this procedure prior to processing blood samples collected from the study. Laboratory managers are responsible for documenting the training in accordance with institutional requirements.

4.0 Materials and Reagents as mentioned in the schematic SOP.

5.0 Procedure for serum collection as described in the schematic SOP.

The collection systems for serum samples recommend 30–60 min at room temperature for a clot to form in the blood of a healthy human. The SOP of sample collection and transport for the proposed proteomics research work is: Collect 5.0 ml blood in Vacutainer EDTA tubes (BD Vacutainer™ Eclipse™ PST™ II Plasma Separator Tubes). Immediately store both of them at -80 °C. Transport to School of Biotechnology, JNU, New Delhi in Dry Ice containing temperature monitored packaging.


SERUM COLLECTION & STORAGE
Collect 5.0 ml blood in Vacutainer EDTA tubes (BD Vacutainer®SST™ Tubes)
(Labelled with Volumteer ID and date /time of sample collection)
Minimum 2 samples
Stored at 4–8°C for 24 hrs
Serum
Clot
Whole blood should be allowed to clot
centrifuged at 1000 × g for 10 minutes to separate the serum
The serum will be carefully removed and transferred aseptically into two sealed vials (5 ml in each vial)
Stored at 4–8°C until shipment takes place
TRANSPORTATION
Sealed vials will be placed in sealable plastic bags containing absorbent and contained in Styrofoam box
Sample will be transported in dry Ice containing temperature monitored packaging.
Proteomics
(5 ml sample)
Transcriptomics
(5 ml sample)