

Cryopreservation of Human Serum

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[Abstract] This protocol describes how to collect and aliquot human serum and store at -80 °C for future cytokine/chemokine/protein profile analysis.

Please use personal protective equipment (PPE) as required when handling samples with potential Bloodborne Pathogens.

Materials and Reagents

1. Red top tube (BD, catalog number: [366431](#), [366441](#) and [366430](#))
2. Cryovials
3. Patient whole blood sample in red top tube
4. Clot activator (optional)

Equipment

1. Freezing box
2. -80 °C freezer
3. Biosafety cabinet
4. Centrifuge

Procedure

1. Incubate blood sample in Red top tube for at least 30 min at room temperature (to form a clot).
2. Label 4 cryovials to freeze the sample (polypropylene vials). Label should include study number, sample identification, the date, and “serum”.
3. Centrifuge the red top tubes for 10 min at 1,200 RCF.
4. Slowly remove the serum into a sterile transfer pipette and divide equally among the 4 appropriately labeled vials. Take care to avoid coming too close to the pellet/clot.
5. Place the cryovials in a freezing box and label the box.
6. Place the freezing box as soon as possible into the -80 °C freezer.

References

1. Modified from the original BD protocols