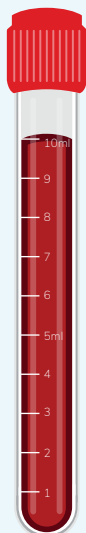


Collecting, Preparing, and Shipping Serum Specimens to CDC for Dengue Testing

1. Collecting Blood for Serum



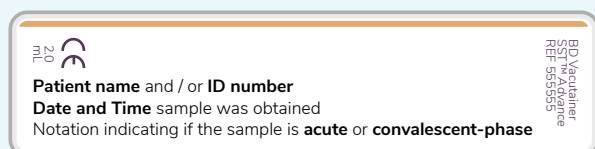
- A 5–10 mL volume of blood should be collected aseptically from a peripheral vein using appropriate gauge needles and a Vacutainer™ serum separator tube (SST) if available.
- Before you centrifuge the tube to separate the serum, allow the Vacutainer™ drawn blood to sit at room temperature for at least 30 minutes but no longer than 60 minutes.



- The clot should be completely formed within 30 minutes. Trauma-induced hemolysis should be minimized if the blood is separated within 60 minutes of collecting the whole blood.

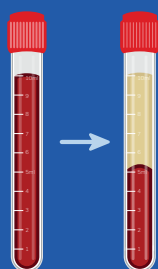
2. Separating the Serum

- Centrifuge the specimen before storing or shipping in order to completely separate serum from the blood cells. After centrifuging the serum, use sterile technique to transfer the serum into plastic freezing vials with leak-proof screwcaps. Label the plastic vial(s) with all of the following:



- Freeze the serum immediately after it has been transferred into the plastic freezing vial(s). Store the specimen at -20°C or colder until it is shipped to CDC.

How Much Blood and Serum?



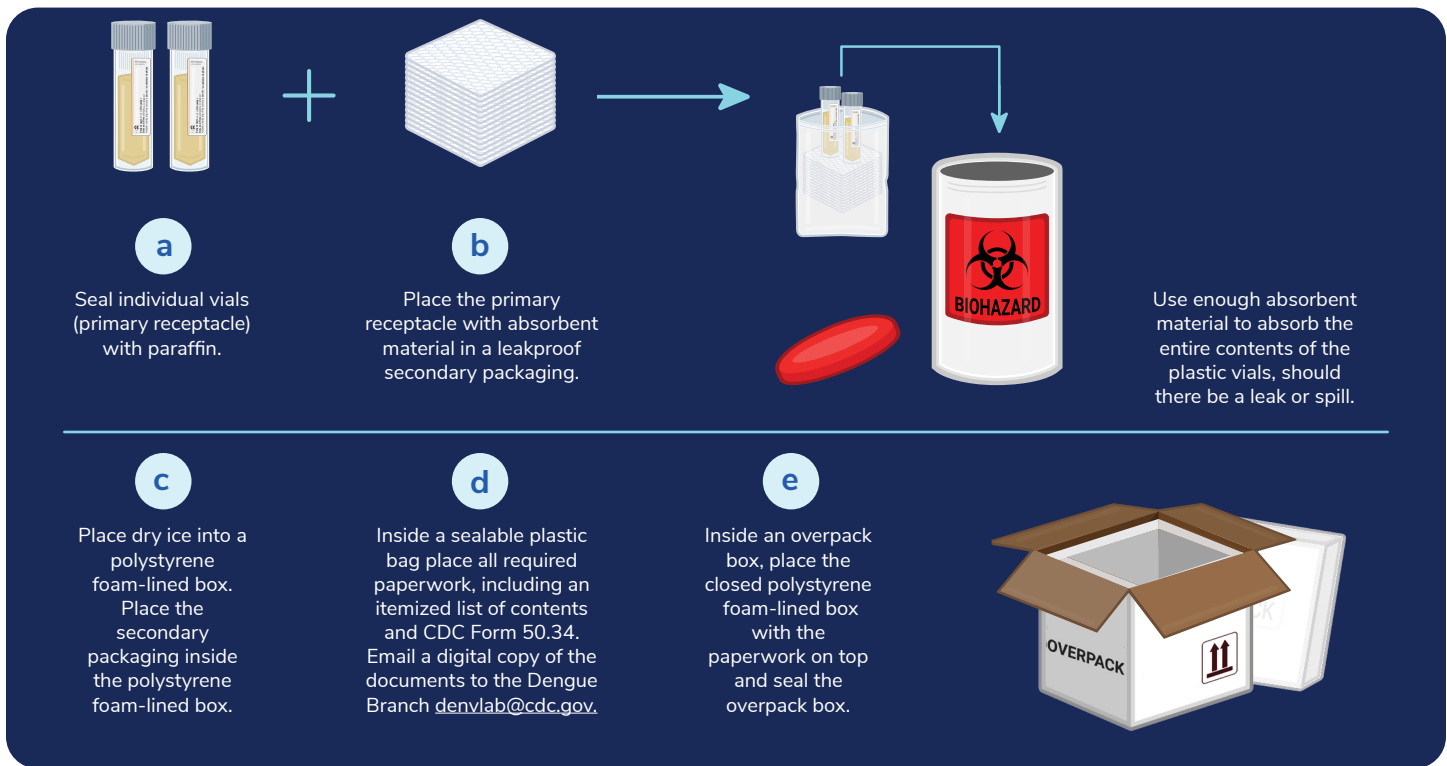
Serum makes up close to half of the volume of blood. For example, 10 mL of whole blood will yield 5 mL of serum. For testing, 1.0 mL of serum is an acceptable volume.



Whenever possible, retain backup aliquot at the originating laboratory in case sample is compromised during shipment.

NOTE: CDC Specimen Test Order and Reporting (CSTOR) [Web Portal](#) is CDC's preferred method of specimen submission. Do not send any shipments of specimens or samples without coordination and authorization from your jurisdiction and CDC. Please contact CDC Dengue Branch at **1-787-692-4102** or denvlab@cdc.gov to coordinate testing and shipping of samples.

3. Packaging the Specimen for Submission to CDC

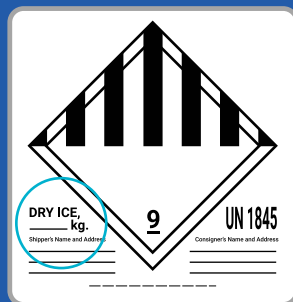


How Much Dry Ice is Needed?

- Overnight Delivery:**
At least 3 kgs of dry ice.
For longer transit times, more than 6kgs of dry ice.



Insert Dry Ice Weight Here



- If dry ice is not available, consider using frozen cold packs (e.g., -20°C , -70°C). Maintaining proper temperature during shipping is critical to preserve the specimen for testing.

4. Labeling the Package

- Shipping must be performed by a U.S. Department of Transportation (USDOT) and International Air Transport Association (IATA) certified shipper. The USDOT Hazardous Materials Regulations and the IATA Dangerous Goods Regulations state that the following labels and markings should be placed on one side of the overpack:

UN 1845 Label - Required when shipping dry ice.

UN 3373 Biological Substance, Category B label

OVERPACK Label - This indicates that secondary packaging is inside an outer box with dry ice.

Miscellaneous Class 9 Label - The dry ice label has the number 9 at the bottom of a diamond.

CDC Dengue Branch Address Label
CDC Dengue Branch
Att. Dr. Rafael Tosado
1324 Cañada Street
San Juan, PR 00920

Required Shipping Documents

- Courier Airway Bill
- Packaging List or
- Commercial Invoice
- Dangerous Good Declaration Forms

Two Sets of Double Up Arrows - Place one on same side as shipping labels, and another set on the opposite side of the box.

Name and Telephone Number of Person Responsible for Shipment - This person must be knowledgeable about the shipment and know how to remediate in case of spill or leakage.

