

UCLA Orphan Disease Testing Center Specimen Requirements and Handling Information for DNA Extraction:

Special Precautions: Standard Precautions apply.

Type of Specimen: Whole Blood

Patient Preparation: Follow the standard aseptic technique for Phlebotomy procedures.

Collection Containers for Blood: Sterile vacutainer blood collection tubes containing the following anticoagulant;

| Collection tube | anticoagulant | Comments | Application |
|-----------------------|---|--|-------------|
| Purple top Vacutainer | EDTA (ethylenediaminetetra-acetic acid) | If the EDTA is not removed will bind magnesium in the PCR mixture and interfere with the PCR process. Remove it by using organic extraction and ethanol precipitation. | DNA |
| Green top Vacutainer | Heparin | Heparin binds the Taq polymerase. It is used in Taq purification kits. Remove it by using organic extraction and ethanol precipitation. | DNA |
| Yellow top Vacutainer | Acid Citrate Dextran | Perform best for PCR studies | DNA |
| Blue Top Vacutainer | Neutral Citrate | Perform best for PCR studies | DNA |

Volume: The minimum is 2 mL in small size collection tubes, optimum is 5-7 mLs. Collection tubes must be completely filled to prevent excessive dilution of the blood by the anticoagulant.

Blood scheduled for DNA analysis can be stored at room temperature for up to 24 hours or at 2-8 C for up to 72 hours prior to DNA extraction.

Unacceptable Blood specimens:

- Blood that has clotted.
- Specimens collected in an unlabeled or improperly labeled tube as specimen identity is essential for molecular testing. Proper tube labeling must include the patient's name, collection date, time and a UCLA hospital ID number (not required if the sample did not come from UCLA).
- Specimens that are >48 hours old.

Type of Specimen: Purified DNA

DNA: DNA samples are generally collected in a sterile DNase RNase free 2.0 ml microcentrifuge tube.

Handling Instructions for DNA: DNA sample vials should be placed in a secured secondary container and can be shipped at room temperature.

Corrective Actions for rejected samples:

ODTC staff will contact the ordering clinician, report the problem and request a new specimen that is acceptable. Note the date and time of the call and the response on the requisition. Unacceptable specimens will be discarded in a biohazard waste container.