

# Specimen Collection, Preparation, and Transportation

All specimens must be clearly labeled with patient name (as it appears on request), D.O.B., date and time of collection, and source of specimen.

Any discrepancies regarding specimen labeling, inadequate or invalid specimen, or tests requested will be brought to the attention of ordering facility as soon as possible by our client services personnel. Our intent is to resolve any questions as soon as possible with the least disruption of your office.

## Blood Collection

Most laboratory tests are performed on anticoagulated whole blood, plasma, or serum. Please see our individual test directory section for specific requirements.

- **Plasma:** Plasma is the clear liquid portion of blood that is separated following centrifugation of anticoagulated blood. Anticoagulated blood is drawn in an assortment of different tubes, EDTA (lavender), Citrate (blue), Heparin (green), or Oxalate (grey). These tubes must be mixed gently after blood is drawn. Plasma must be placed in properly labeled aliquot tube(s) to be submitted to laboratory.
- **Serum:** Serum is the clear liquid portion of blood that is separated following centrifugation of clotted blood. A room temperature or refrigerated serum specimen may be submitted in either a centrifuged SST® tube, or an aliquot of serum submitted in a properly labeled plastic aliquot tube. FROZEN SERUM must be frozen solid prior to transport to laboratory for testing to avoid thawing of specimen and invalidating test results.
- **Whole Blood:** Draw a sufficient amount of blood with indicated anticoagulant. Gently mix blood collection tube by inverting 6 to 10 times immediately after draw.

## Specimen Collection Tubes

The following is a list of tubes referred to in “Specimen Required” in the individual tests:

- **Green-Top Tube:** This tube contains sodium heparin or lithium heparin—used for collection of heparinized plasma or whole blood for special tests. Certain tests require either sodium heparin or lithium heparin. If test requirement is heparinized plasma or whole blood, either may be used.  
**Note:** After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.

- **Grey-Top (Potassium Oxalate/Sodium Fluoride) Tube :** This tube contains potassium oxalate as an anticoagulant and sodium fluoride as a preservative—used to preserve glucose in whole blood and for some special chemistry tests.  
**Note:** After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Lavender-Top (EDTA) Tube:** This tube contains EDTA as an anticoagulant—used for most hematological procedures.  
**Note:** After tube has been filled with blood, immediately invert the tube several times in order to prevent coagulation.
- **Blue-Top (Sodium Citrate) Tube:** This tube contains sodium citrate as an anticoagulant—used for collection of blood for coagulation studies.  
**Note:** It is imperative that tube be completely filled. The ratio of blood to anticoagulant is critical for valid prothrombin time results. Immediately after draw, invert tube 6 to 10 times in order to activate the anticoagulant.
- **Red-Top Tube:** This tube is a plain VACUTAINER® containing no anticoagulant—used for collection of serum for selected chemistry tests as well as clotted blood for immunohematology.
- **Royal Blue-Top Tube:** There are 2 types of royal blue-top Monoject® tubes—1 with anticoagulant EDTA and the other plain. These are used for collection of whole blood or serum for trace element analysis. Refer to individual metals in the individual test listings to determine tube type necessary.
- **Serum Separator Tube (SST®):** This tube contains a clot activator and serum gel separator—used for various laboratory tests.  
**Note:** Invert tube to activate clotting; let stand for 20 to 30 minutes before centrifuging for 10 minutes. If frozen serum is required, pour off serum into plastic vial and freeze. Do not freeze VACUTAINER® tubes.
- **Special Collection Tubes:** Some tests require specific tubes for proper analysis. Please contact Decatur Morgan Hospital-Decatur General Campus Client Services prior to patient draw to obtain the correct tubes for metal analysis or other tests as identified in the individual test listings.
- **Yellow-Top (ACD) Tube:** This tube contains ACD—used for the collection of whole blood for special tests.