

Specimen Collection and Preparation

Laboratory test results are dependent on the quality of the specimen submitted. It is important that all specimens and request forms be properly labeled with name of patient, date of birth, collection date, and origin (source) of specimen, when applicable.

If there is any doubt or question regarding the type of specimen that should be collected, it is imperative that the laboratory be called to clarify the order and specimen requirements.

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:** Draw a sufficient amount of blood with the indicated anticoagulant to yield the necessary plasma volume. Gently mix the blood collection tube by gently inverting 6 to 10 times immediately after draw. If required, separate plasma from cells by centrifugation within 20 to 30 minutes.
- **Serum:** Draw a sufficient amount of blood to yield the necessary serum volume. Gently mix the blood collection tube by gently inverting 8 to 10 times immediately after draw. Separate serum from clot by centrifugation within 20 to 30 minutes. Caution: avoid hemolysis.
- **Whole Blood:** Draw a sufficient amount of blood with the indicated anticoagulant. Gently mix the blood collection tube by inverting 6 to 10 times immediately after draw.

Specimen Collection Tubes Available

The following is a list of tubes referred to in Little Company of Mary Hospital's specimen requirements:

- **Blue-Top (Sodium Citrate) Tube:** This tube contains sodium citrate as an anticoagulant—used for drawing blood for coagulation studies.
Note: It is imperative that the 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.
- **Brown-Top Tube:** This plastic tube contains a spray-dried K2 EDTA—used for drawing blood in lead testing only.

- **Green-Top (Lithium Heparin) Tube:** This tube contains lithium heparin—used for drawing heparinized plasma or whole blood for special tests.
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Green-Top (Sodium Heparin) Tube:** This tube contains sodium heparin—used for drawing heparinized plasma or whole blood for special tests.
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 for some 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 and several chemistry tests.
Note: After tube has been filled with blood, immediately invert tube several times in order to prevent coagulation.
- **Light Green-Top (Lithium Heparin gel) Tube:** This tube contains lithium heparin anticoagulant and separation gel—used for various laboratory tests.
- **Red-Top Tube:** This tube contains a clot activator used for serum determinations in chemistry, serology, and immunohematology. Invert 5 times to activate clotting.
- **Royal Blue-Top Tube:** There are 2 types of royal blue-top Monoject® tubes—1 with the anticoagulant EDTA and the other plain. These are used in drawing whole blood or serum for trace element analysis. Refer to individual metals in individual test listings to determine tube type necessary.
- **Serum Gel Tube:** This tube contains a clot activator and serum gel separator—used for various laboratory tests.
Note: Invert the tube 8 to 10 times 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®.
- **Special Collection Tubes:** Some tests require specific tubes for proper analysis. Please contact the laboratory at 708-229-5085 prior to patient draw to obtain correct tubes for metal analysis or other tests as identified in individual test listings.

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- Yellow-Top (ACD) Tube: This tube contains ACD—used for drawing whole blood for special tests.