

Specimen Collection and Preparation

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

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

Blood Collection

Most laboratory tests are performed on anticoagulated whole blood, plasma, or serum. In general, specimens should be refrigerated until placed in the courier box for transport to laboratory. Please see our individual test directory section for specific requirements.

- **Plasma:** Draw a sufficient amount of blood with indicated anticoagulant to yield necessary plasma volume. Gently mix blood collection tube by 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 necessary serum volume. Allow blood to clot at ambient temperature, and then, separate serum from clot by centrifugation within 20 to 30 minutes. Caution: avoid hemolysis.
- **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 Available


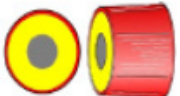



The following is a list of tubes referred to in LMHS's specimen requirements:

- **Green-Top (Lithium Heparin) Tube:** This tube contains lithium heparin—used for collection of 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 collection of 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 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 tube several times in order to prevent coagulation.
- **Light 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. 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 anticoagulant.
- **Pink-Top (K₂EDTA) Tube:** This tube contains K₂ EDTA as an anticoagulant and is used for blood bank procedures.
- **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 in collection of whole blood or serum for trace element analysis. Refer to individual metals in the individual test listings to determine tube type necessary.
- **Special Collection Tubes:** Some tests require specific tubes for proper analysis. Please contact LMHS prior to patient draw to obtain 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 collection of whole blood for special tests.

Order of Tube Collection

Very often, multiple blood assays are ordered on patients. Whether the health care worker chooses to use a multiple-draw, evacuated tube collection system or a plastic syringe, there are certain guidelines for delivery of blood and proper collection tubes. Please refer to the following chart:

TUBE TYPE	DESCRIPTION	COLOR OF TUBE
Blood cultures	BacT/ALERT Blood culture bottles	Purple- ANA Green- AER Yellow- PEDI
Citrate	1.8ml and 2.7ml blue Sodium Citrate TUBE MUST BE FULL !!!!!	
SST/ No additive	7ml red serum clot	
	5ml red/ yellow SST	
Heparin (green)	4ml green/ yellow Lithium Heparin PST	
	4ml and 6ml Sodium heparin (For ammonia- put on ice and deliver immediately)	
EDTA (pink)	6ml pink K2 EDTA	
EDTA (lavender)	3ml lavender K2 EDTA	
PST heparin (gray)	2ml gray Sodium Fluoride Potassium Oxalate	
Trace Element	Royal Blue	