

### Blood Tube Selection and Order of Draw

1. The flow of blood needs to be steady, but not forced when filling tubes.
2. Gently mix all tubes as they are collected by inverting each tube 5-8 times.
3. When collecting more than one tube type, **always** collect in the following order:

Draw Order	Color of Stopper	Additive	General Use
<b>First (for all Line Draws)</b>	Plain Red or White/Red	None	<b>Discard 1 full 10mL tube – if <u>starting IV</u></b> <b>Discard 2 full 10 mL tubes – if <u>clearing a</u></b> <b>heparinized line, to reduce sample</b> <b>contamination.</b>
Then, in this order as appropriate	Blood Culture Bottles	Culture media	Blood culture – bottles
↓	Yellow	SPS	Blood fungal culture, AFB blood culture, joint fluids for routine culture
↓	Blue	Sodium citrate	Coagulation (must fill as full as vacuum allows)
↓	Gold, plain red, white/red	None	Chemistry, Immunology (Serum, with or without separator gel)
↓	Light Green	Heparin with gel	Chemistry (whole blood or plasma)
↓	Lavender	EDTA	Hematology (whole blood)
	Pink	EDTA	Transfusion Services (whole blood)
	White (Pearl)	EDTA with gel (PPT)	Viral testing, special
	Royal Blue	EDTA	Heavy metals and trace elements
↓	Gray	Fluoride oxalate	Glucose, special tests (inhibits glycolysis)

## I. SERUM

The majority of laboratory testing requires serum, which is obtained by drawing a serum separator tube (SST™) from the patient.

1. Note whether the specimen should be collected fasting.
2. Since there is no anticoagulant in a serum separator tube the specimen will clot and produce serum.
3. When serum is required, calculate **2.5 times** the amount of serum requested to derive the total amount of blood to be drawn (i.e., 1 mL of serum requires that 2.5 mL of blood be drawn).
4. As soon as possible, send the specimen to the laboratory through the pneumatic tube system. The tube should **not** be allowed to stand for longer than **2** hours without sending it to the laboratory. *Red blood cells continue to metabolize after removal from the body and delays in testing may produce inaccurate results.*

## II. PLASMA

Some tests specifically indicate that a **plasma** specimen be submitted. Plasma is obtained from blood specimens with anticoagulant additives (e.g., light or dark green top, lavender top, blue top, pink top, gray top, or white top tubes).

1. As soon as possible, transport the properly padded and bagged specimen to the laboratory through the pneumatic tube system. The specimen will not clot, and should be sent to the laboratory **within 2 hours of collection**.
2. When plasma is required, calculate **2.5 times** the amount of plasma requested to derive the total amount of blood to be drawn (i.e., 1 mL of plasma requires that 2.5 mL of blood be drawn).
3. It is critical to ensure that a **blue** top is **completely filled** and centrifuged within **2 hours**.
4. All other anticoagulated tubes should be filled at least half way.