

## Order of Draw

Blood collection tubes must be filled in a specific order to avoid specimen contamination from the additive in the preceding tube. The following order of draw is an accepted laboratory standard.

1. Tubes or bottles for blood cultures
2. Light-blue top tubes (sodium citrate)



3. Serum tubes (with or without clot activator)



4. Green top tubes (sodium or lithium heparin)



5. Lavender or pink top tubes (Potassium EDTA)



6. Gray (Sodium fluoride and sodium or potassium oxalate)



## Blood Collection Tubes:

Most blood collection tubes contain an additive that either accelerates clotting of the blood (clot activator) or prevents the blood from clotting (anticoagulant). A tube that contains a clot activator will produce a serum sample when the blood is separated by centrifugation and a tube that contains an anticoagulant will produce a plasma sample after centrifugation. Some tests require the use of serum, some require plasma, and other tests require anticoagulated whole blood.

Tube cap color	Additive	Additive Function	Common laboratory tests
Light-blue 	3.2% Sodium citrate	Prevents blood from clotting by binding calcium	Coagulation
Red or gold (mottled or "tiger" top used with some tubes is not shown) 	Serum tube with or without clot activator or gel	Clot activator promotes blood clotting with glass or silica particles. Gel separates serum from cells.	Chemistry, serology, immunology
Green 	Sodium or lithium heparin with or without gel	Prevents clotting by inhibiting thrombin and thromboplastin	Stat and routine chemistry
Lavender or pink 	Potassium EDTA	Prevents clotting by binding calcium	Hematology and blood bank
Gray 	Sodium fluoride, and sodium or potassium oxalate	Fluoride inhibits glycolysis, and oxalate prevents clotting by precipitating calcium.	Glucose (especially when testing will be delayed), blood alcohol, lactic acid

