



GENERAL INFORMATION – SPECIMEN COLLECTION

Accuracy of laboratory test results depends on the **quality of the specimen submitted for testing**. Careful attention to recommended collection protocols is extremely important. If questions arise about patient preparation or specimen collection, please call Client Support for assistance.

Specimen requirements are provided in the various test listings. Please refer to these sections first. When necessary, there will be a reference in the test listing to the **GENERAL INFORMATION** Section. This section offers more extensive instructions for selected assays.

Generally, the specimen requirements are written in a format that specifies the requested volume, and specimen type, minimum volume, storage temperature, and any special handling notes.

Specimen Collection

Serum or Plasma

Draw blood in the type of vacutainer tube indicated in the test listing. For serum or plasma, draw approximately 2 1/2 times the requested volume. For serum, allow the blood to clot at least 15-20 minutes and separate by centrifugation. For plasma, thoroughly mix the whole blood with the anticoagulant by gently inverting the tube 8-10 times and separate plasma by centrifugation. Transfer the serum or plasma to a plastic transport tube available from our Supplies Department.

Whole Blood

Collect whole blood in the type of vacutainer tube indicated for the specific test. Thoroughly mix the blood with the additives by gently inverting the tube. Maintain specimen at the required temperature.

Never freeze whole blood unless specifically instructed in the specimen requirements.

Recommended Order-of-Draw for Glass & Plastic Venous Blood Collection Tubes:

1. Blood culture tubes.
2. Coagulation tubes (e.g., sodium citrate or blue closure)
3. Serum tube with or without clot activator, with or without gel (e.g., red closure).
4. Heparin tube with or without gel plasma separator (e.g., green closure)
5. EDTA (e.g., lavender closure), pink closure used for Blood Bank)
6. Glycolytic inhibitor (e.g., oxalate, gray closure)
7. Other specialized anticoagulants

-Source: CLSI, Volume 23, Number 32, H3-A5 Standard

Drawing Blood Using Winged Blood Collection Sets (Butterflies)

When using a winged blood collection set for venipuncture **and** a coagulation (citrate) tube is the first specimen to be drawn, first draw a discard tube. The discard tube is used to fill the "dead space" in the tubing. This helps to ensure that the line is primed and the proper volume of blood is evacuated into the second coagulation (citrate) tube used for testing.

Specimen Collection Reminders

1. An overnight fast means nothing to eat or drink, except water, for 12-16 hours after an evening meal.
2. Tubes with powdered anticoagulants should be tapped near the stopper to dislodge any anticoagulant that may be between the stopper and the tube wall.
3. All tubes with liquid anticoagulants should be filled to the exhaustion of the vacuum to ensure proper ratio of anticoagulant to blood.
4. **For each test requiring a frozen specimen, use a separate transport vial.** This prevents compromising the specimen by thawing and refreezing the sample if the tests are routinely performed on different days. A reminder is included for applicable tests: **This test requires its own frozen aliquot.**
5. For random urines, a first morning specimen is preferred because it has a more uniform volume and concentration, and its lower pH helps preserve the formed elements.