

Collect a Quality Sample

Prevent Clotting with Anticoagulant Tubes

What are clotted specimens?

An inappropriately clotted blood specimen is one in which clotting occurs in a tube containing an anticoagulant. A specimen clots when there is not adequate mixing of the anticoagulant in the tube.

What causes a specimen to be clotted?

- Inadequate mixing of the tubes
- No mixing of tubes
- Use of *expired* blood collection tubes

How can clotted specimens be prevented?

- Gently invert each blood specimen **6-8 times** to allow adequate mixing of the blood. Mix blood IMMEDIATELY after collection.
- Fill all blood collection tubes to the fill line. (This step prevents the dilution of the blood components, which can result in altered results).

What labs are primarily affected?

- A variety of laboratory tests are adversely affected, resulting in **invalid** test results. (This then requires the collection of another specimen from the patient).

Examples of adverse outcomes associated with clotted specimens



Coagulation: Prolonged clotting times for PT, aPTT, TT and fibrinogen

Hematology: Erroneous WBC count and RBC indices; Decreased platelet count