

## How to Collect a Quality Sample: Prevent Clotting

### What are clotted specimens?

A clotted blood specimen is one in which there is a coagulation of blood factors (primarily platelets and fibrin) with a resulting entrapment of blood cells. A specimen clots when there is not adequate mixing of the anticoagulant in the tube with the whole specimen.

### What causes a specimen to be clotted?

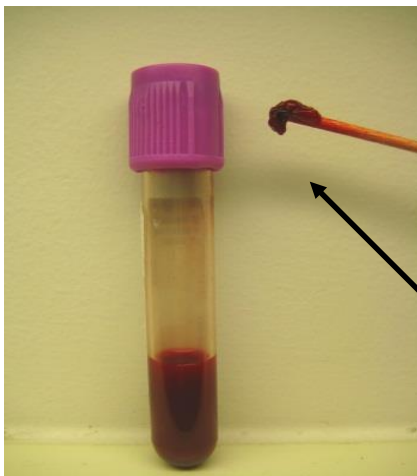
- Inadequate mixing of the tubes
- No mixing of tubes
- Use of *expired* blood collection tubes

### 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?

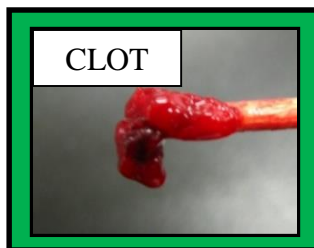
A variety of laboratory tests are adversely affected, resulting in **invalid** test results. (This then requires the collection of another specimen from the patient).



### Examples of adverse outcomes associated with clotted specimens

- *Chemistry: Interferes with automated testing*
- *Hematology: Erroneous WBC count and RBC indices; Decreased platelet count*

**NEVER REMOVE A CLOT FROM A TUBE**



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Submitted by: Teri Bishop, MLT (ASCP)