McLaren MEDICAL LABORATORY

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Ensuring Quality Samples: Avoid Clotting in Anticoagulant Tubes

What Are Clotted Specimens?

Clotted specimens occur when blood clots in a tube that contains an anticoagulant. This typically happens due to insufficient mixing of the blood with the anticoagulant.

Common Causes of Clotting

- Inadequate mixing of the specimen

- Failure to mix the specimen at all

- Use of expired collection tubes

How to Prevent Clotted Specimens

- Gently invert each tube 6–8 times immediately after collection to ensure proper mixing.

- Fill each tube to the designated fill line to prevent incorrect blood-to-additive ratios, which can affect test results.

Labs Most Commonly Affected

Clotted specimens can compromise various laboratory tests, often rendering results invalid and requiring a repeat collection.

Examples of Impacted Test Areas:

Coagulation: Falsely prolonged results for PT, aPTT, TT, and fibrinogen

Hematology: Incorrect WBC counts, altered RBC indices, and reduced platelet counts