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<th><strong>Lab Dept:</strong></th>
<th>Coagulation</th>
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<td><strong>Test Name:</strong></td>
<td>PT MIXING STUDIES</td>
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**General Information**

- **Lab Order Codes:** PTM
- **Synonyms:** Protime Mixing Study; Prothrombin Time Mixing Study; Simple PT Mixing Study
- **CPT Codes:** 85611 - Prothrombin time: substitution, plasma fractions, each
- **Test Includes:** PT 1:2 dilution reported in seconds.

**Logistics**

- **Test Indications:** Useful for detecting the presence/absence of an inhibitor or the absence of specific coagulation factors.
- **Lab Testing Sections:** Coagulation
- **Phone Numbers:**
  - MIN Lab: 612-813-6280
  - STP Lab: 651-220-6550
- **Test Availability:** Daily, 24 hours
- **Turnaround Time:** 4 hours
- **Special Instructions:**
  - Patient's with hematocrit levels >55% must have a special tube made to adjust for the hematocrit; contact the laboratory for special tube.
  - Specimen must arrive within 30 minutes of collection.
  - Indicate when specimen is drawn from a line or a heparin lock.

**Specimen**

- **Specimen Type:** Whole blood
- **Container:** Light Blue top tube (Buffered Na Citrate 3.2%)
- **Draw Volume:** 2.7 mL blood
- **Processed Volume:** 1 mL plasma
Collection:
- A clean venipuncture is essential, avoid foaming.
- Entire sample must be collected with single collection, pooling of sample is unacceptable.
- Capillary collection is unacceptable.
- Patient’s with a hematocrit level >55% must have a special tube made to adjust for the hematocrit; contact lab for a special tube.
- Mix thoroughly by gentle inversion. Deliver immediately to the laboratory at room temperature via courier or pneumatic tube.

Off campus collections:
- Must be tested within 4 hours.
- Do not refrigerate.
- If not received in our lab within 4 hours of collection, sample must be centrifuged and *platelet-poor plasma removed from cells and transferred to an aliquot tube being careful not to disturb the cell layer. Centrifuge the plasma a second time and transfer into a clean aliquot tube being careful not to include any residual platelets on the bottom of the tube. Freeze at -20°C and deliver to the lab on dry ice within 2 weeks.

*Validation of your lab’s centrifuge for platelet poor plasma is required.

Special Processing:
Lab staff: Spin sample collected in blue top tube for 5 minutes on the Stat Spin centrifuge, remove plasma and transfer to a 4 mL BCS sample cup. Spin remaining plasma again for 5 minutes in the Stat Spin Centrifuge. Transfer plasma to a new BCS sample cup for analysis leaving approximately 200 uL in the bottom of the original cup to discard.

Test within:
- Four (4) hours when stored as plasma remaining in the capped tube above the packed cells 18 to 24°C.
- Four (4) hours as plasma that has been separated from cells by centrifugation when stored 2 to 8°C or 18 to 24°C.
- Two (2) weeks when stored -20°C.
- Six (6) months when stored -70°C (rapidly frozen).
- Plasma must be frozen if testing cannot be completed within four (4) hours.
- Frozen plasmas are thawed at 37°C for three (3) minutes, test immediately.

Patient Preparation: None

Sample Rejection: Improper tube, Clotted specimen, Underfilled tubes, Overfilled tubes, Specimen more than 2 hours old, Mislabeled or unlabeled specimens

Interpretive

Reference Range: If an inhibitor is present the PT will not correct into the normal range. If the patient is lacking specific coagulation factors the PT will demonstrate significant correction.
Critical Values:   N/A

Limitations:  Correction reactions may be difficult if the patient’s PT is only modestly prolonged. Samples drawn through line or heparin lock will not correct giving the impression of an inhibitor.

Methodology:  PT based correction of patient’s plasma with normal plasma.

Contraindications:  Current anticoagulant therapy.
