Lab Dept: Coagulation

Test Name: PROTIME AND INR (WARFARIN)

**General Information**

Lab Order Codes: WPT

Synonyms: PT; Protime; Prothrombin Time and INR for patients receiving oral anticoagulants, ie, Coumadin/Warfarin

CPT Codes: 85610 - Prothrombin time

Test Includes: PT reported in seconds and INR

**Logistics**

Test Indications: Useful for monitoring or adjusting the amount of Coumadin for a patient on oral anticoagulant therapy.

Lab Testing Sections: Coagulation

Phone Numbers:
- MIN Lab: 612-813-6280
- STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 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.
- Depending on the patient's hematocrit, up to 3 assays can be determined using one 1.8 mL light blue top tube.

**Specimen**

Specimen Type: Whole blood

Container: Light Blue top (Buffered Na Citrate 3.2%) tube

Draw Volume: 1.8 mL or 2.7 mL blood

Processed Volume: 1 mL (Minimum: 0.5 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 24 hours.
● Do not refrigerate.
● If not received in our lab within 24 hours of collection, sample must be centrifuged and *platelet-poor plasma removed from cells and transferred to an aliquot 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: Centrifuge in Stat Spin for 5 minutes or 10 minutes at 3000 rpm at room temperature. For primary tube testing, leave plasma on cells OR remove plasma and place in a 4 mL plastic cup; allow for 100 uL of deadspace.

Test within:
● Twenty-four (24) 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; mislabeled or unlabeled specimens

Interpretive

Reference Range:

<table>
<thead>
<tr>
<th>Test</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR Therapeutic Ranges for Oral Anticoagulants</td>
<td></td>
</tr>
<tr>
<td>Prophylactic dose:</td>
<td>1.4 – 1.9</td>
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<tr>
<td>Standard dose:</td>
<td>2.0 – 3.0</td>
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<tr>
<td>Critical Values:</td>
<td>INR: &lt;1.4 or &gt;3.5</td>
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<td>-----------------</td>
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<tr>
<td>Methodology:</td>
<td>Recombinant human tissue factor combined with synthetic phospholipids (thromboplastin)</td>
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</tbody>
</table>
| Updates:        | 8/19/2013: Updated specimen stability information.  
|                 | 12/18/2013: Updated specimen stability information.  
|                 | 9/15/2014: Added Off Campus collect info. |

### High dose: 2.5 – 3.5

Note: Extremely high results will be reported as PT >120.0, INR >9.0