
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; Testing is performed at Minneapolis and St. Paul Laboratories.

Turnaround Time: 2 hours

Special Instructions: Deliver immediately to the Laboratory

Specimen

Specimen Type: Whole blood

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

Draw Volume: 1.8 mL blood (in 2 mL tube) or 2.7 mL blood (in a 3 mL tube).

Processed Volume: Minimum: 0.9 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 mL of dead-space.

Test within:

- Twenty-four (24) hours when stored in the capped tube above the packed cells 18 to 24°C; centrifuged or no.
- 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; under-filled tubes; mislabeled or unlabeled specimens

Interpretive**Reference Range:**

Test	All ages
INR Therapeutic Ranges for Oral Anticoagulants	
Prophylactic dose:	1.4 – 1.9
Standard dose:	2.0 – 3.0
High dose:	2.5 – 3.5

Note: Extremely high results will be reported as PT >90.0, INR >9.0

Critical Values:

INR: <1.4 or >3.5

Methodology:

Recombinant human tissue factor combined with synthetic phospholipids (thromboplastin)

References:

Harmening DH (1997) Clinical Hematology and Fundamentals of Hemostasis

Updates:

8/19/2013: Updated specimen stability information.

12/18/2013: Updated specimen stability information.

9/15/2014: Added Off Campus collect info.

7/18/23: Updated special processing instructions. Testing performed in MPLS and STP.