Overview

Useful For
Evaluation of a prolonged thrombin time (TT): It is mainly used to confirm or exclude the presence of heparin in the specimen or specimen type
Evaluating hypofibrinogenemia or dysfibrinogenemia in conjunction with the TT and fibrinogen assay

Special Instructions
• Coagulation Guidelines for Specimen Handling and Processing

Method Name
Optical Clot-Based

NY State Available
Yes

Specimen

Specimen Type
Plasma Na Cit

Specimen Required
See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions.

Specimen Type: Platelet-poor plasma
Collection Container/Tube: Light-blue top (citrate)
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL

Collection Instructions:
1. Centrifuge, remove plasma, and centrifuge plasma again.
2. Freeze plasma immediately (no longer than 4 hours after collection) at -20 degrees C or, ideally < or = -40 degrees C.

Additional Information:
1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.
2. Each coagulation assay requested should have its own vial.

Forms
If not ordering electronically, complete, print, and send a Coagulation Test Request (T753) with the specimen.

Reject Due To

Gross hemolysis  Reject
Gross lipemia  Reject
Gross icterus  Reject

Specimen Minimum Volume
0.5 mL
**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasma Na Cit</td>
<td>Frozen (preferred)</td>
<td>14 days</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical & Interpretive**

**Clinical Information**

Prolonged clotting times may be associated with a wide variety of coagulation abnormalities including:

- Deficiency or functional abnormality (congenital or acquired) of any of the coagulation proteins
- Deficiency or functional abnormality of platelets
- Specific factor inhibitors
- Acute disseminated intravascular coagulation
- Exogenous anticoagulants (eg, heparin, warfarin)

The prothrombin time (PT) and activated partial thromboplastin time (APTT) are first-order tests for coagulation abnormalities and are prolonged in many bleeding disorders. A battery of coagulation tests is often required to determine the cause of prolonged clotting times. The thrombin time (TT) test is used to identify the cause of prolonged APTT or dilute Russell viper venom time (DRVVT). Reptilase time (RT) test is used to evaluate a prolonged TT.

Reptilase is a thrombin-like enzyme isolated from the venom of *Bothrops atrox*. Thrombin splits small fibrinopeptides A and B from fibrinogen molecules, producing fibrin monomer, which polymerizes to form a clot. Reptilase, however, splits off fibrinopeptide A but not B, which results in fibrin polymerization. In contrast to thrombin and the TT test which are inhibited by heparin, the RT is normal in the presence of heparin. Similar to the TT test, the RT is prolonged in the presence of hypofibrinogenemia and dysfibrinogenemia.

**Reference Values**

14.0-23.9 seconds

**Interpretation**

<table>
<thead>
<tr>
<th>Thrombin Time</th>
<th>Reptilase Time</th>
<th>Causes</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prolonged</td>
<td>Prolonged</td>
<td>Hypo- or afibrinogenemia</td>
<td>Ascertain by determination of fibrinogen</td>
</tr>
<tr>
<td>Prolonged</td>
<td>Prolonged</td>
<td>Dysfibrinogenemia</td>
<td>Ascertain by specific assay</td>
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<tr>
<td>Prolonged</td>
<td>Normal</td>
<td>Heparin or inhibitor of thrombin</td>
<td>Differentiate by human TT and/or heparin assays</td>
</tr>
<tr>
<td>Prolonged</td>
<td>Prolonged</td>
<td>Fibrinogen split products (FSP)</td>
<td>Ascertain by FSP or D-dimer assay</td>
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</tbody>
</table>

**Cautions**

The reptilase time test has limited diagnostic value when ordered as a stand-alone test.
Clinical Reference

Performance

Method Description

PDF Report
No

Specimen Retention Time
7 days

Performing Laboratory Location
Rochester

Fees & Codes

Test Classification
This test has been modified from the manufacturer's instructions. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
85635

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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</thead>
<tbody>
<tr>
<td>RTSC</td>
<td>Reptilase Time, P</td>
<td>6683-7</td>
</tr>
</tbody>
</table>
## Test Definition: RTSC

**Reptilase Time, P**

<table>
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