

## **Chernecky & Berger: Laboratory Tests and Diagnostic Procedures, 5th ed.**

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Activated Partial Thromboplastin Substitution Test—Diagnostic

### **Norm.**

Normal factors VIII, IX, X, XI, and XII.

### **Usage.**

Helps identify single factor deficiencies causing prolonged partial thromboplastin time, including factors VIII, IX, XI, and XII.

### **Description.**

A differential activated partial thromboplastin time (APTT) method that identifies which factor deficiency or deficiencies are present when APTT is prolonged. Known reagents for each factor are systematically added to the client's blood sample. A factor is determined to be deficient when the substitution produces a normal APTT.

### **Professional Considerations**

Consent form NOT required.

#### **Preparation**

1. Tubes: Red topped and blue topped.
2. Preschedule the test with the laboratory.

#### **Procedure**

1. Draw 2–3 mL of blood into a red-topped tube and discard. Completely fill a blue-topped tube with the blood sample.

#### **Postprocedure Care**

1. Apply pressure over the venipuncture site for 5 minutes if the client is receiving heparin therapy. Observe the site closely for development of a hematoma.
2. Write the collection time on the laboratory requisition.
3. Refrigerate the specimen until the test is completed.

#### **Client and Family Teaching**

1. Results are normally available within 24 hours.

#### **Factors That Affect Results**

1. Failure to discard the first few milliliters of blood drawn may contaminate the specimen with tissue thromboplastin, which can activate coagulation.
2. Failure to completely fill the tube with blood may cause falsely prolonged results.
3. Hematocrit >50% may cause falsely prolonged results, and hematocrit <20% may cause falsely decreased results.
4. Drawing the sample from a line being kept open with a heparin flush will cause falsely prolonged results.
5. Reject hemolyzed specimens and specimens received more than 2 hours after collection.

6. Anticoagulant therapy within 2 weeks before the test invalidates results.

Other Data

1. Useful only with single-factor deficiencies.
2. See also Activated partial thromboplastin time and partial thromboplastin time—Plasma

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