

Clotting Time



Clotting Time

- **The time required for blood to form a clot.**
- **The normal coagulation time in glass tubes is 5 to 15 minutes.**
- **The whole blood clotting time is a rough measure of all **intrinsic clotting factors** in the absence of tissue factors.**
- **This simple test has been used to diagnose hemophilia.**
- **Its chief application is in monitoring anti-coagulant therapy.**



Materials

- **Capillary tubes of uniform size.**
- **A petri-dish.**
- **Alcohol swabs.**
- **Cotton wool.**
- **Plasticine.**
- **A water bath set at 37°C.**



Procedure

- Clean finger with alcohol swap, prick it with lancet and **note the time** that the prick is made.
- Wipe away the first drop of blood. Then while the blood is still flowing freely place one end of a capillary tube in the blood. Holding the tube horizontally let it fill by capillary action, fill more than one tube.
- Close the end of the capillary tube with plasticine. Place the tube in the water bath.

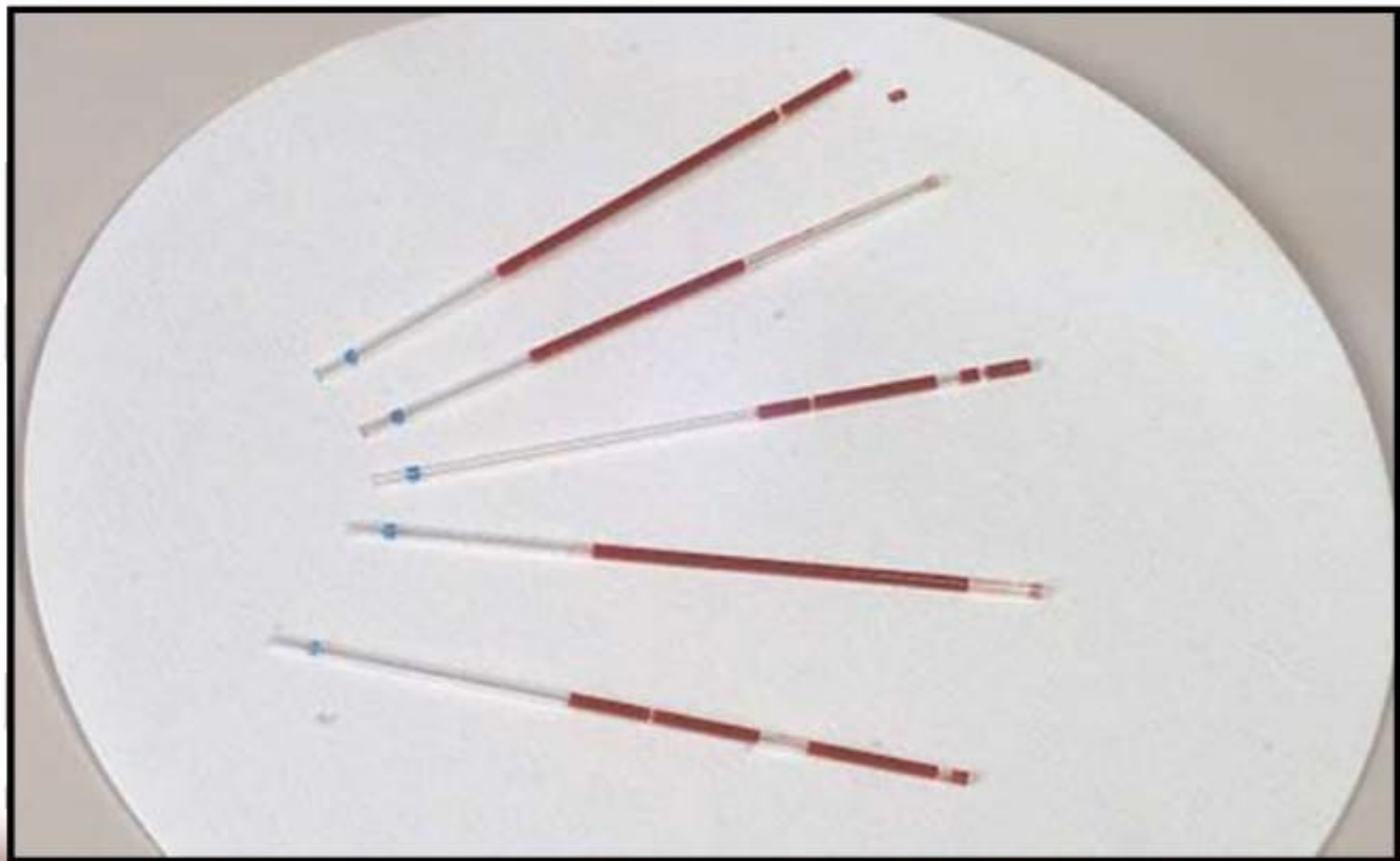


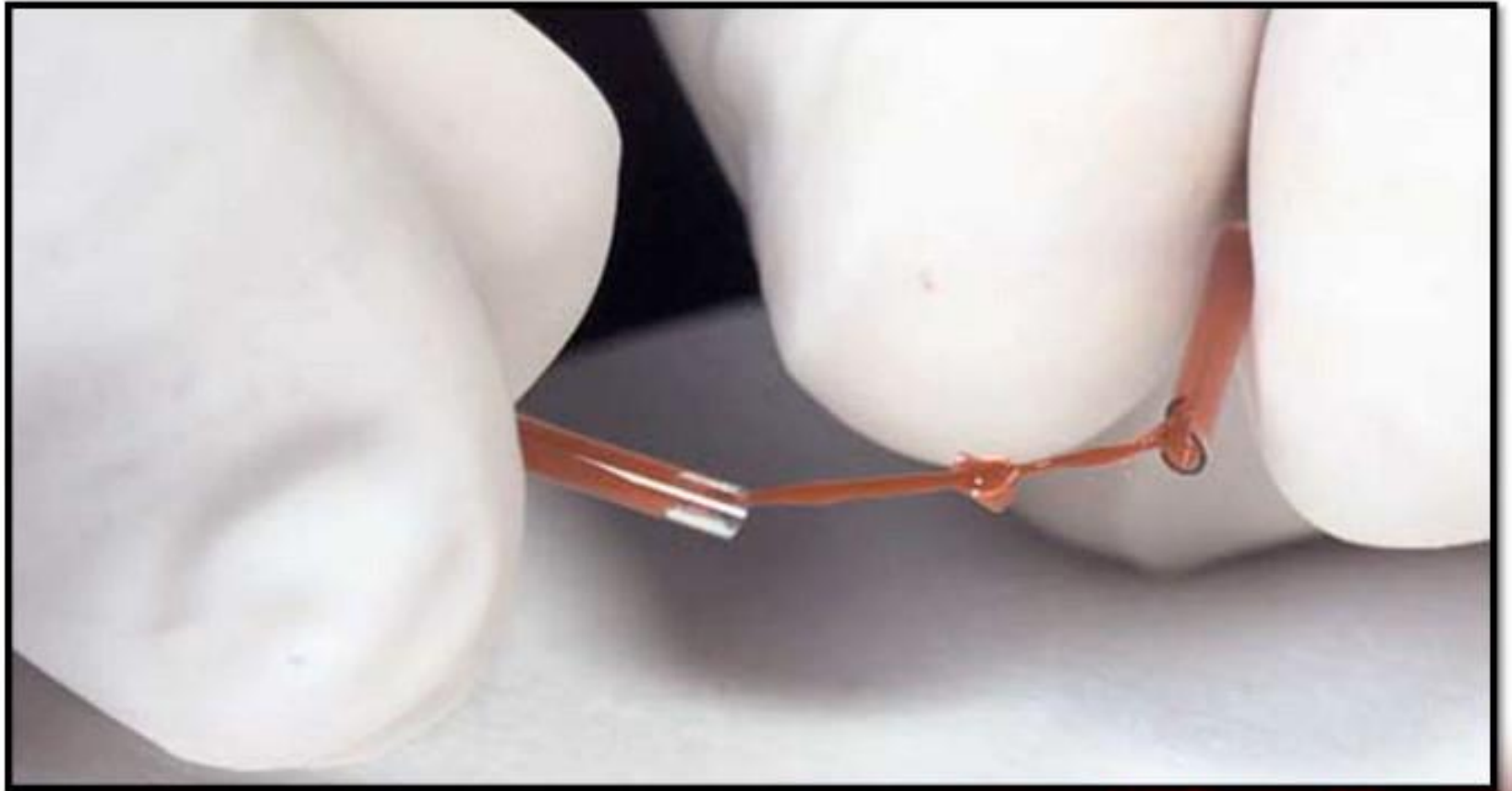
Procedure

- Two minutes after making the puncture, break a capillary tube and separate the two halves slowly.
- Repeat the procedure at 30 second intervals with the remaining tubes.
- When the blood forms a **continuous thread-like clot** between the broken ends of the tube, the end-point has been reached, note the time.
- The time from pricking the finger to the appearance of the clot is the **clotting time**.









Results

- Usually the clotting time measured by this method is in the **range 5-15 minutes**.
- Prolong clotting time seen in deficiencies in the intrinsic coagulation pathway.
- Example:
hemophilia due to deficiency of Factor VIII (8).



Clotting Time using Test Tube Method

- Place 2 ml blood into non heparinized test tube incubated in water bath.
- Every 30 second invert gently to check for clot formation.
- Time from pricking finger to clot formation is **clotting time.**



Clotting Time using Test Tube Method

