**COAGULATION TIME**

**(CLOTTING TIME)**

**Introduction and principle**

**The coagulation time of whole blood is the time required for a measured amount of blood to clot under certain specialized conditions. The process is dependent on the blood clotting factors and on the amount of fibrinogen.**

***Objectives***

**To determine clotting (coagulation) time.**

**Clinical applications**

* **1- Coagulation time is typically most prolonged in hemophilia .**
* **2- In liver disease.**

**3- In hypofibrinogenemia.**

**Normal range**

**5-15 minutes**

**Methods  
Capillary tube method  
Slide method  
Lee And White Method**

**Materials and Instruments  
1-water bath, 37°C.  
2-Glass test tubes, 13 x 100 mm.  
3-Stop watch.  
4-Plastic syringe (10 mL).   
5-Fresh whole blood, 4 mL.**

***Procedure.***

**1- Label three test tubes with the patient’s name, and number them, 1, 2, and 3.**

**2- Withdraw 4 mL of blood.**

**3- Carefully place 1 mL of the blood in test tube 3, then 1mL in test tube 2, and lastly, 1 mL in the tube1. Start the stopwatch as soon as the blood is . placed in tube 3.**

**4- Place the three test tubes in a 37 C water bath.**

**5- At exactly 5 minutes, tilt test tube 1 gently to 45° angle. Repeat this procedure every 30 seconds until the test tube can completely be inverted without spilling the contents i.e. until the blood is completely clotted.**

**6- Record the time it took for the blood in test tube 1 to clot.**

**7- Thirty seconds after the blood in test tube 1 is clotted, proceed with tube 2 and repeat the preceding procedure, tilting the test tube every 30 seconds until a clot is formed, Record the results, Repeat this procedure for test tube 3.**

**8- Since agitation and handling speed up coagulation,the coagulation time of test tube 3 is handling the reported result.**