HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER MATERNITY AND CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank (Haematology)		
Document:	Internal Policy and Procedure		
Title:	Activated Partial Thromboplastin Time (Manual)		
Applies To:	All Laboratory Staff		
Preparation Date:	January 06, 2025	**Index No:**	LB-IPP-047
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1. PURPOSE:

1.1 Prothrombin time measure the clotting time of plasma in the presence of tissue extract (thromboplastin) and is an indicator to The overall efficiency of the extrinsic clotting system (factor V,VII and X).

2. DEFINITONS:

N/A

3. POLICY:

3.1 Measurement of prothrombin time as an indicator to overall efficiency of the extrinsic, clotting system.

4. PROCEDURE:

4.1 Check temperature of water –bath and level of water.
4.2 Centrifuge patient sample for 12min at 3000 rpm.
4.3 Follow manufacturer's instructions for reconstitution of control plasma (thromboplastin is in liquid form and ready for use, mix well).
4.4 Pre-warm of thromboplastin and calcium chloride.
4.5 Add 0.1 ml of normal control to each of two tubes, then add 0.1 ml of pre-wormed thromboplastin, mix and incubate for 3 min at 37°c.
4.6 Add 0.1ml of calcium chloride to each tube and start stopwatch, mix and checked for end point (formation of clot).
4.7 Record the result in logbook.
4.8 Repeat same steps for abnormal and patient samples.
4.9 PTT RANGE: 30 - 40 seconds, each lab. Should calculate its own reference range
- 4.9.1 CAUSES OF PROLONGED PTT
- 4.9.2 DIC.
- 4.9.3 Warfarin or heparin anticoagulants
- 4.9.4 Vit. k deficiency
- 4.9.5 An inherited coagulation disorder
- 4.9.6 Hemophilia
- 4.9.7 Liver disease

4.10 MIXING TEST:
For prolonged result do correction by mix equal amount of patient plasma with normal control or normal plasma, record the result (to differentiate between factors deficiency and inhibitor)

5. MATERIALS AND EQUIPMENT:

5.1 Normal plasma
5.2 Patients plasma

5.3 PTT reagents
5.4 Calcium chloride
5.5 EQUIPMENT
- 5.5.1 Water bath 37°c.
- 5.5.2 Glass tubes
- 5.5.3 Pipette (0.1 ml and 0.2 ml).
- 5.5.4 Stopwatch.
- 5.5.5 Centrifuge.
- 5.5.6 Thromboplastin
- 5.5.7 Normal and abnormal control obtained commercially with known values
- 5.5.8 Patient blood sample collected into (Use freshly collected blood take into 0.11 mol/l trisodium citrate in the Ratio 9 parts blood to 1 part anticoagulants.

6. RESPONSIBILITIES:

6.1 The assigned laboratory technician.

7. APPENDICES:

N/A

8. REFERENCES:

8.1 A Manual Laboratory & Diagnostic Tests (Lippincott Williams & Wilkins
8.2 Oral anticoagulant control F.K Schattauer Verlag GmbH, 1985. 8.2. Colman R.W.Hirsh J, Marder V.J.Salzman E.W.Haemostasis and Thrombosis Basic Principles and Clinica Practices .J.B Lippincott 1994.I
8.3 Medical Encyclopedia (Medlin Plus)
8.4 Clinical Laboratory Methods/ John D. Bauer – MD- Mosby
8.5 Practical Hematology (Sir John V. Dacie)

9. APPROVALS:

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