HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank		
Document:	Internal Policy and Procedure		
Title:	Activated Partial Thromboplastin Time (Automatic)		
Applies To:	All Hematology Staff		
Preparation Date:	January 06, 2025	**Index No:**	LB-IPP-048
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1. PURPOSE:

1.1 To establish system & set responsibilities for work.
1.2 To elucidate the procedure for PTT measurement.

2. DEFINITIONS:

N/A

3. POLICY:

3.1 PTT is general coagulation screening test of the coagulation factors XII, XI, IX, VIII, X, V, 11 and fibrinogen.

4. PROCEDURE:

4.1 **Principle:**

4.1.1 The activated partial thromboplastin time (APTT) involves the recalcification of plasma in the presence of a standardized amount of cephalin (platelet substitute) and a particulate activator (silica).
The APTT explores the coagulation factors XII, XI, IX, VIII, X, V, II and I except the platelets.

4.1.2 The PTT involve the recalcification of plasma in presence of a standardized amount of cephalin (platelet substitute) and a particular activator (silica).

4.2 **Specimen collection:**

4.2.1 Blood (9 vol.) is collected in 0.109 M (i.e., 3.2 %) trisodium citrate anticoagulant (1 vol.). Use sample collection tubes made of plastic or siliconized glass.
4.2.2 Use freshly collected blood taken into citrated tube in the ratio 9 parts blood to 1-part anticoagulant.
4.2.3 When monitoring heparin therapy, use preferably CTAD tubes, specially designed sample collection tube to prevent heparin inactivation.
4.2.4 Centrifugation: 15 minutes at 2000-2500 g. Collect the plasmas in plastic tubes.
4.2.5 Plasma storage: 4 hours at 2° - 5 °C
4.2.6 If on heparin therapy, plasmas remain stable for 2 hours at 2° - 5 °C when collected with citrate anticoagulant and for 4 hours at 2° - 5 °C when collected with CTAD tubes.

4.3 **Procedure:**

4.3.1 Calibration:
The pre-calibrated PTT values are identically for all vials of each lot to enter the calibration data on the analyzer scan the barcode printed on the assay value insert across the instrument barcode reader.

4.3.2 Patient plasmas:
Patient plasmas are tested undiluted. They are loaded in the instrument then select the tests to be performed.

4.3.3 Ouality control:

It necessary to run controls in order to ensure accuracy and reproducibility of the result, two different levels of control should be used. Prepare the control reagent and scan the information contained in the barcode printed on their respective assay value insert to the Stago.

4.3.4 ASSAY:
The PTT determination of plasmas to be tested is automatically carried out by the analyzer as soon as the sample have been loaded.

5. MATERIALS AND EQUIPMENT:

5.1 Automate Coagulometer (STAGO COMPACT)
5.2 STA® - CaCl 0.025 M (REF 00367)
5.3 STA® - Coag Control N + P or STA® - System Control N+ P: kits containing control plasmas, normal and abnormal levels.
5.4 Common clinical laboratory equipment and materials (centrifuge, distilled water…)

6. RESPONSIBILITIES:

6.1 The assigned technician

7. APPENDICES:

7.1 Reagent Preparation And Storage

8. REFERENCES:

8.1 Hemostasis And Thrombosis Basic Principles and Clinical Practices .J.B Lippincott 1994
8.2 Oral anticoagulant control, F.K Schattauer Verlag GmbH, Colman R.W.Hirsh J, Marder V.J.Salzma, 1985.

9. APPROVALS:

	Name	Title	Signature	Date
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APPENDIX 7.1: REAGENT PREPARATION AND STORAGE

Reagents	Preparation	Stability after reconstitution/ opening on board STA Compact®	Storage position on STA Compact®
STA® - PTT A °	Add 5 ml of distilled water. Allow the reconstituted reagent to stand at room temperature (18-25 °C) for 30 minutes. Mix vigorously by turning the vial upside down, 5-10 times, to obtain a homogeneous solution. Then, place the perforated cap.	24 hours	Product drawer
STA® - CaCl $_2$ 0,025 M	15-ml vial. Allow the solution to stand at room temperature (18-25 °C) for 30 minutes before use.	3 days	Product drawer
STA® - Coag Control N **STA® - Coag Control P**	Add exactly 1 ml of distilled water. Allow the solution to stand at room temperature (18-25 °C) for 30 minutes. Then, homogenize.	8 hours	Product drawer