Coagulation Factors Level in Fresh Frozen Plasma in Rwanda

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Abstract

Objectives: To determine the level of coagulation factors and inherited inhibitors in Fresh Frozen Plasma (FFP) and to evaluate Prothrombin Time and activated partial thrombin time in fresh frozen plasma.

Design: Cross-sectional study.

Setting: Jomo Kenyatta University of Agriculture and Technology in Medical Laboratory Sciences.

Subjects: Eighteen blood bags collected from voluntary blood donors.

Main outcome measures: Coagulation factors and inhibitors levels, Prothrombin Time (PT) and Activated Partial thrombin Time (APTT) remained within the reference range requested by quality assurance regulations after three months of storage.

Results: APTT and PT show an increase from baseline to one month then remain constant up to three months, while, Fibrinogen, Factor II, Factor V, Factor VII, Factor X, Von Willbrand Factor, Protein C and Antithrombin decreased from baseline up to three months and then Factor VIII, Factor IX, Factor XI, Factor XII and Protein S, remained constant from baseline up to one month and decreased up to three months.

Conclusion: There is good retention of all coagulation factors and inhibitors in plasma produced from whole blood within eight hours of collection, stored at minus 18ºC for three months.