

Coagulation Factors VII, II, V, X

Key coagulation factors of the extrinsic and common pathways; activity levels are based on correction of clotting time for plasma deficient of the factor of interest and reported as a percent

Materials

1. ST4 semi-automated mechanical coagulation instrument (Diagnostica Stago, NJ)
2. 4-well cuvettes
3. Magnetic mixing ball
4. Citrated plasma samples
5. Owren's Veronal Buffer
6. Thromboplastin reagent
7. Citrated plasma deficient of factor VII[#]
8. Normal mouse plasma (NMP) BL/6 pool

Procedure

1. Instrument, cuvettes, and mixing balls are pre-warmed to 37°C
2. Citrated plasma samples are diluted 1/200 in Owren's Veronal Buffer
3. 30 µL of sample dilutions, in duplicate, are added to each well, followed by 30 µL of citrated plasma deficient of factor VII[#], and then incubated at 37°C for 3 minutes
4. 60 µL of thromboplastin reagent is added to each well to initiate clotting
5. Time until clot formation is measured in seconds
6. Time is interpolated on a standard curve based on NMP serial dilutions and reported as %BL/6

[#] For Factor II, Factor V, and Factor X: follow factor VII method, using plasma deficient of the specific factor being measured in place of factor VII deficient plasma