RVV-V is a specific factor V activator from Russell's viper venom. RVV-V is a serine proteinase, which converts the single-chain coagulation factor V into a light chain (80 000 g/mol) and a heavy chain (230 000 g/mol) with higher coagulant activity (factor Va). Apart from factor V, no other protein substrate for RVV-V is known. The amino acid sequence is 68% identical to that of batroxobin and 33% to that of the β-chain of human thrombin.

Activated factor V is not stable and loses its activity within 20 hours at 37 °C. Therefore, RVV-V is used to destabilize and selectively inactivate factor V in plasma and thus to prepare a routine reagent for the factor V determination.

May be used by the expiry date given on the label when stored unopened, protected from moisture, in the dark, 2°-8°C. Avoid contamination of the reagents by micro-organisms. Shipment of product does not require cooling during the time of transportation.

A series of dilutions is prepared from the RVV-V sample. 1.0 ml of normal plasma is incubated with 1 μl of RVV-V dilution for 3 min at 37 °C. The incubate is diluted 1:100 in barbital buffer and measured using in the following coagulation test:

50 μl factor V-free plasma
50 μl incubate diluted
100 μl Thromboplastin-reagent containing calcium
=> determine clotting time at 37 °C

The factor V activation is complete when increasing the RVV-V concentration does no more lead to a further shortening of the clotting time.

One unit (U) is the activity of RVV-V required for complete activation of the factor V contained in 1 ml of normal plasma.

