A Factor VIII Concentrate, Highly Purified and Heated in Solution

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A method to produce a highly purified factor VIII concentrate, heated in solution, is described: Pooled cryoprecipitate from citrate plasma is adsorbed on aluminium hydroxide. The fibrinogen is removed by heat denaturation in the presence of glycine, and the factor VIII remaining in the supernatant is precipitated with sodium chloride. This precipitate is dissolved in a sucrose-glycine solution which is heated for 10 h at a temperature of 60°C. The factor VIII is then separated by re-precipitation with sodium chloride. Subsequently, it is dissolved, dialyzed, and filtered under sterile conditions through membrane filters.

The factor VIII concentrate contains 3.5 units of factor VIII: C/mg protein. The ratio

factor VIII R:Ag $\frac{1}{1}$

factor VIII: C $\sim \frac{1}{2}$

The product is free from coagulable protein and protein globulins. The yield of factor VIII is about 8% of the initial plasma.

The reduction in infectiousness obtained by heating was assessed in a study on chimpanzees; in these experiments, hepatitis B virus was added to the cryoprecipitate pool.