

Thrombodynamics is a new global hemostasis assay that evaluates the coagulation of the plasma sample both qualitatively and quantitatively by means of measuring the spatiotemporal dynamics of fibrin clot growth in a *in vitro* system. The coagulation starts from a localized surface with immobilized tissue factor. The fibrin clot growth process develops in space and time. The process of fibrin clot formation is recorded by Thrombodynamics Analyser T-2 in a time-lapse video microscopy mode by means of dark-field light scattering method. The obtained series of photos shows how the form, size and density of the fibrin clot changes over time.

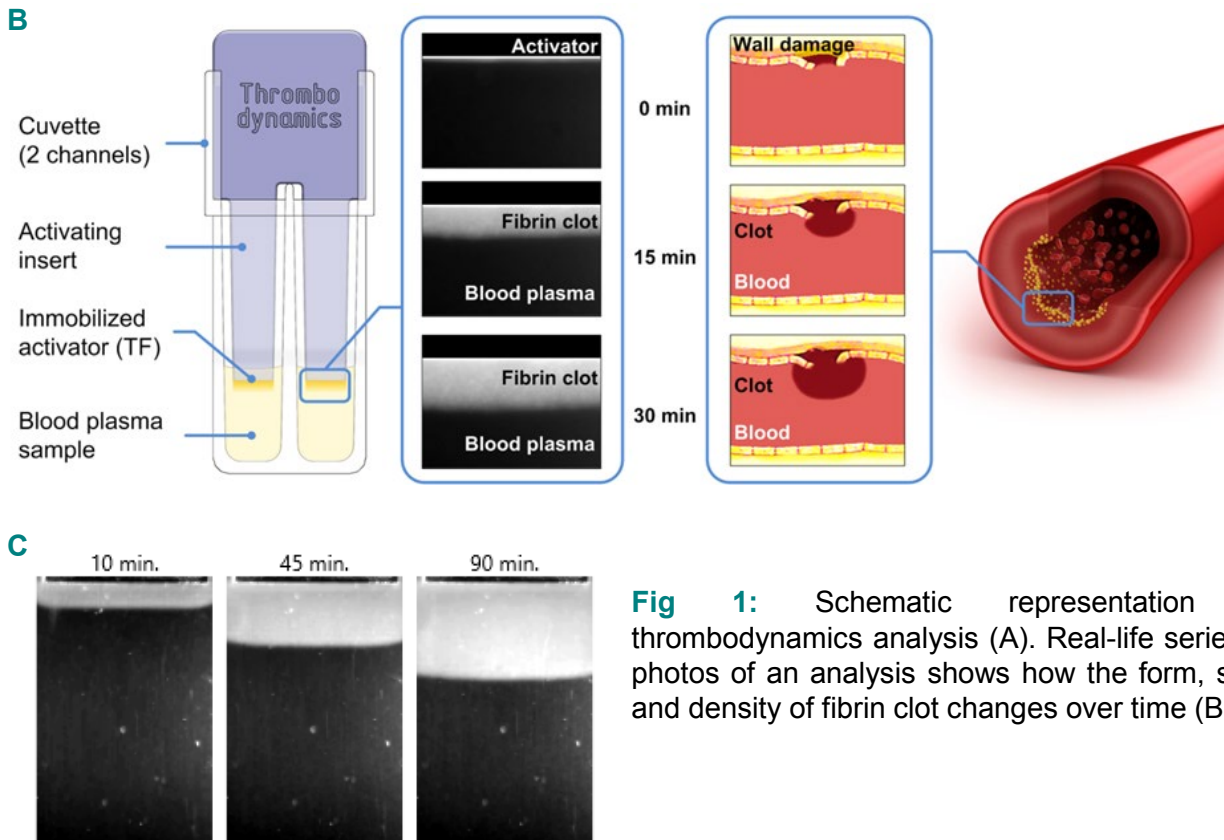


Fig 1: Schematic representation of thrombodynamics analysis (A). Real-life series of photos of an analysis shows how the form, size, and density of fibrin clot changes over time (B).

In contrast to traditional global hemostasis tests, thrombodynamics takes the spatial diffusion of plasma components during coagulation into account. Multiple parameters are generated during the measurement; including clot size, lag time, clot growth velocity, thrombin generation (in all layers of the clot). Thrombodynamics can be used to analyze hyper-coagulation, hypo-coagulation and fibrinolysis in plasma of patients. For this assay platelet poor plasma is required.

This assay can be used to generate a personalized bleeding or thrombotic profile.