**Table** **2.** **ROTEM® Assays** **and Parameters 12,29**

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| --- | --- | --- | --- | --- |
| **ROTEM® ASSAYS: 4 channels in simultaneous** | | | | |
| **Assay** | **Activators and Additives** | | | **Clinical Comments** |
| **EXTEM** | CaCl2 + recombinant tissue factor + polybrene (2M,5M) | | | Deficiency of factors of the extrinsic pathway; VKA (Coumadin/ Warfarin); DOAC; Indication for PCC administration; Clot firmness based on platelet and fibrin contribution. |
| **FIBTEM** | CaCl2 + recombinant tissue factor + polybrene + cytochalasin D (2M,5M) | | | Fibrin polymerization; dose calculation for fibrinogen concentrate; Hyperfibrinolysis, FXIII deficiency. |
| **APTEM** | CaCl2 + recombinant tissue factor + polybrene + aprotinina/ tranexamic acid (2M,5M) | | | Verifying the effect of antifibrinolytic drugs; differential diagnosis to clot retraction and FXIII deficiency (in combination with EXTEM). |
| **INTEM** | CaCl2 + Ellagic acid (5M,2M) | | | Deficiency of factors of the intrinsic pathway; UFH and protamine effects (in combination with HEPTEM) |
| **HEPTEM** | CaCl2 + Ellagic acid + Heparinase (5M,2M) | | | Testing in patients with very high heparin plasma concentrations; UFH and protamine effects (in combination with INTEM). |
| **ROTEM® Parameters** | | | | C:\Users\8092\Desktop\images.png |
|  | **Acronym** | **Parameter** | **Unit** | **Definition** |
| **Coagulation Activation and Clot Polymerization Parameters** | **CT** | Coagulation  Time | seconds | Time from test start until a clot firmness amplitude of 2mm is reached. |
| **CFT** | Clot Formation Time | seconds | Time between 2 and 20mm clot firmness amplitude is achieved |
| **α angle** | Alpha angle | degree (°) | Angle between the baseline and a tangent to the clotting curve through the 2mm point. |
| **Clot Firmness Parameters** | **A5/ A10/**  **A20** | Amplitude at 5/10/ 20 min | mm | Amplitude of clot firmness 5/10/20 min after CT |
| **MCF** | Maximum Clot Firmness | mm | Maximum amplitude of clot firmness reached during the run time. |
| **Clot Lysis Parameters** | **ML** | Maximum Lysis | % | Maximum lysis detected during the run time, described in % of MCF. |
| **LI30** | Lysis Index at 30 min | % | Residual clot firmness at 30 min after CT, described in % of MCF |
| **LI60** | Lysis Index at 60 min | % | Residual clot firmness at 60 min after CT, described in % of MCF |

A, amplitude; A5/A10, amplitude at 5/10 minutes after CT; CFT, Clot Formation time; CT, clot time; DOAC, direct oral anticoagulants; LI, Lysis index; LI30/LI60, Lysis index, residual clot firmness, 30 and 60 minutes after CT in % of MCF; ML, maximum lysis during run time in % of MCF; MCF, Maximum clot firmness; mm, millimeters; PCC, prothrombin complex concentrate; UFH, unfractionated heparin; VKA, vitamin K antagonists; *Adapted from Klaus Gorlinger* 29.