

MRX THROMBIN TIME



Thrombin Time (TT) is a common clotting test used to detect fibrinogen abnormalities, and the presence of heparin and other thrombin inhibitors in human citrated plasma. Medirox has developed two different TT reagents in order to meet different instrument performances and different market requirements.

TT can be used as a screening test for functional abnormalities of fibrinogen, and to detect the presence of heparin and/or thrombin inhibitors in citrated plasma. The assay measures the ability of exogenous thrombin to convert fibrinogen to fibrin, followed by fibrin polymerisation and clot detection. The time taken from addition of thrombin to citrated plasma, to fibrin clot formation is recorded as the thrombin time and presented in seconds. Several conditions will result in a prolonged TT, including malfunction of fibrinogen (hereditary dysfibrinogenemia), fibrinogen degradation products, direct and indirect thrombin inhibitors such as heparin, hirudin, dabigatran (Pradaxa®) etc.

There is no international standardisation for TT, leading to a variety of TT reagents on the market with different advantages and disadvantages. Thus, the composition of TT reagents differs a lot between different manufacturers, influencing the clotting times for patient samples and controls. The recommended use of normal and/or abnormal controls varies. The discrepancies in the use of an abnormal control or not are probably caused by different sensitivity of the TT reagents to fibrinogen concentration in the sample/control material. The MRX TT reagents are designed to detect an impaired fibrin polymerisation process and presence of heparin but not to distinguish between samples with different fibrinogen concentrations. The low fibrinogen concentration in the abnormal control will not generate an abnormal TT using MRX TT reagents, due to this selection of the TT reagent design Medirox therefore recommends the use of a normal control, only.

- » High precision, total CV $\leq 2,5$ %
- » High stability, up to 8 days reconstituted
- » High flexibility, multiple reconstitution volumes and sample to reagent ratio

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DETAILS & TYPICAL DATA			
Parameters:	MRX941	MRX941	MRX945-2
Reconstituted volumes:	2 mL reconstituted	5 mL reconstituted	2 mL reconstituted
Product form:	Lyophilised	Lyophilised	Lyophilised
Origin:	Bovine thrombin and bovine albumin	Bovine thrombin and bovine albumin	Bovine thrombin and bovine albumin
Additional products needed:	<ul style="list-style-type: none"> • Diluent (GHI154) or CLSI CLRW type water or equivalent • Eximius Control Basic or Plus (L1) (MRX170, MRX180) • No calibration required 		
Expected values:	7,8-8,3 sec	15,4-18,8 sec	10,0-15,2 sec
Heparin sensitivity:	0,03-0,25 IU/mL	N/A	0,03-2 IU/mL
No interference with:	Triglycerides <0,625 g/L, Bilirubin*, Hemoglobin	Triglycerides <3,75 g/L, Bilirubin*, Hemoglobin*	Triglycerides <1,25 g/L, Bilirubin <500 mg/L, Hemoglobin <2,5 g/L

* Haemolysed or icteric plasma should not be assayed.

STABILITY & STORAGE			
Parameters:	MRX941 (2 mL rec.)	MRX941 (5 mL rec.)	MRX945-2 (2 mL rec.)
Storage:	2-8 °C	2-8 °C	2-8 °C
Shelf-life:	24 months at 2-8 °C	24 months at 2-8 °C	24 months at 2-8 °C
Reconstituted solution:	8 days at 2-8 °C	8 days at 2-8 °C	7 days at 2-8 °C 2 days at 25 °C

ORDERING INFORMATION		
Reference number	Product description	Size
MRX941-5	MRX Thrombin Time	10x5 mL
MRX945-2	MRX Thrombin Time Plus	10x2 mL
MRX171	Eximius Control Basic (L1)	10x1 mL
MRX181	Eximius Control Plus (L1)	10x1 mL
GHI154 - 2	Diluent (CLSI CLRW type water)	10x2 mL
GHI154 - 4	Diluent (CLSI CLRW type water)	10x4 mL
GHI154	Diluent (CLSI CLRW type water)	10x5 mL
GHI154 - 10	Diluent (CLSI CLRW type water)	10x10 mL