

# **The importance of the determination of activated partial thromboplastin time and partial thromboplastin sensitivity compared to the lupus anticoagulant, deficiency of coagulation factors and heparin**

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## **Abstract**

Activated partial thromboplastin time (aPTT) is coagulation test which detect the disturbances of hemostasis and it is the most common test for monitoring unfractionated heparin therapy. In parcial tromboplastin are present activators of contact phase and phospholipids which can significantly affect the sensitivity of reagents to coagulation factors, lupus anticoagulans and heparin.

The objective of this study was firstly to compare the sensitivity of parcial tromboplastins with different origins of fosfolipids and various activators to lupus anticoagulans, to decreased and increased levels of coagulation plasmatic factor VIII and sensitivity to standard heparin. Secondly, according to measured data to determine whether any of the selected reagents is suitable for monitoring heparin while being able to detect deficit of coagulation factors and presence of inhibitor.

Determination of aPTT was performed with five different reagents which had various phospholipids and activators. The measurements of aPPT were performed on automatic analyzer BCS<sub>XP</sub>.

From the measured data we have found that none of the tested tromboplastins had 100% sensitivity to all referred factors. Pathromtin SL is mainly used for coagulation screening and monitoring heparin therapy. Pathromtin SL a APTT LS appear to be the most sensitive for decreasing the level of factor VIII. The best for high levels of factor VIII is APTT LS and for screening of Lupus anticoagulans the most sensitive are APTT SP, APTT LS a Pathromtin SL.