

ABSTRACT

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Title of Thesis: *HPLC analysis of Drugs*

The diploma thesis describes selection of the most suitable conditions for determination of a two enantiomers of drugs betaxolol and bisoprolol with a method HPLC.

The aim of the thesis was to find a suitable isocratic method for the substances for extraction from plasma. The chromatographic column Daicel Chiralcel® OD-R 4,6 mm x 250 m was utilized. The best results were achieved with mobile phase consisting of acetonitrile and aqueous solution of sodium perchlorate (1 molar) in volume ratio 50:50 for betaxolol and 35:65 for bisoprolol. The column was thermostated at 25 °C. UV detection ($\lambda = 190$ nm) was applied to get a sufficient sensitivity. Tramadol and O-desmethyltramadol was tested as an internal standard. Biological samples were tested by LLE before the HPLC analyses. Furthermore, the LLE method for biological samples was tested before performing HPLC.