

Diploma thesis: The study of derivatization of basic drugs with NBD-Cl

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### **Abstract**

The subject of this thesis is the study of reactions based on a derivatization, specifically the derivatization of nortriptyline and flubendazole with 7-chloro-4-nitrobenzo-2-oxa-1,3-diazole (NBD-Cl) concerning a potential use of this method in HPLC with fluorimetric detection of the examined substances.

According to the obtained results, nortriptyline with NBD-Cl can be successfully derivatized. The optimum conditions of derivatization are pH = 9 with the duration of the reaction (shaking the reaction mixture while heating at 70°C) of five minutes. Under these optimum conditions the molar reactivity of this reaction is 1:1, the reproducibility of the method is good and the range of fluorimetric assay is linear.

On the contrary, no positive results arose in the course of examining the reaction of flubendazole with NBD-Cl. However, the derivatization seems not to run quantitatively, the results show, that a formation of some undefined fluorescent derivatives cannot be excluded. Other analytical methods need to be applied to solve this problem then.