

# ABSTRACT

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Title of Thesis: HPLC evaluation of some drugs XI.

The main focus of this diploma thesis was to find suitable chromatographic conditions for HPLC analysis of Fenofibrate and Ketorolac. Approximate chromatographic conditions for analysis of Fenofibrate were suggested based on review of previous research projects concerning HPLC analysis of this drug. As for the stationary phase, a C<sub>18</sub> column (250 x 4.6 mm, 5 μm particle size) was considered to be the most suitable. Suggested mobile phase is to be formed by mixture of acetonitrile and phosphate buffer (pH approximately 3,6) in the ratio 50:50 or 60:40. Detection could be carried out by an UV-VIS detector at 286 nm. For the analysis of ketorolac it was used Sigma-Aldrich's Discovery HS C18 HPLC column (150x4.6 mm, 5 μm). The mobile phase consisted of acetonitrile and 0,01 mol/l potassium dihydrogen phosphate buffer (pH 3.25) in the ratio 40:60 (v/v). Isocratic elution at a flow rate of 1 ml/minute was set at temperature 25°C and the maximum pressure was 20 Mpa. Thiaprofenic acid was used as internal standard and the detection was carried out by a PDA detector (model SPD-M20 A at the range of 190-800 nm). The same internal standard and the mode of detection was also used for the chiral analysis of Ketorolac, where a Daicel's CHIRALCEL®OD-R column (0,46x25 cm, 10 μm) was chosen as a stationary phase. The mobile phase consisted of acetonitrile and 1 mol/l chloristane buffer at ratio 40:60 (v/v). The flow rate was set at 0,5 ml/min, maximal pressure at 16 MPa and temperature at 24°C.