

SUMMARY

Analytical evaluation of drugs by liquid chromatography VI

Degree paper

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The aim of this degree paper was to optimize conditions for the determination of 6-aminocaproic acid, hydrolytic degradation product of accelerant of transdermal penetration transkarbam 12, using high-performance liquid chromatography (HPLC) and subsequently to validate this method. 3,5-dinitrobenzoyl chloride was used before HPLC analysis for derivatization of 6-aminocaproic acid. Analysis of derivatized acid was performed on Separon SGX C-18 analytical column (150 x 3mm I.D, 5 μ m). The gradient elution was used for the separation. The mobile phase was consisted of acetonitrile and sodium acetate buffer pH 4,5 and the flow rate was 1 ml/min. 20 μ l sample volumes were injected into the chromatographic system. Wavelength used for the detection was 230 nm. The method of internal standard was used for quantitative evaluation of derivatized 6-aminocaproic acid and 7-aminocaprylic acid was chosen as the most suitable internal standard. After the development of the method, these validation parameters were evaluated: precision, accuracy, linearity, selectivity, ruggedness, limit of detection and limit of quantification. The method was found as precise, accurate, linear (correlation coefficient value was 0,9998), selective and rugged enough. The limit of detection was 0,75 μ g/ml and limit of quantification was 1,8 μ g/ml.