ABSTRACT

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Diploma thesis:

Simplification of terbinafine HPLC analysis of samples based on biodegradable polyesters

A HPLC method for determination of terbinafine in samples consisting of copolymers of lactic and glycolic acid was optimized and validated. The development of the method was based on the finding of suitable chromatographic conditions for separation of terbinafine. The separation was performed on the Ascentis Express ES-CN, 15 cm × 4.6 mm; 2.7 μm core-shell column. The mixture of the citrate phosphate buffer pH 4 and acetonitrile in ratio 40:60 (v/v) was chosen as the mobile phase. The mobile phase flow rate was set to 1.4 ml/min and the temperature to 30 °C. The injection volume of samples containing terbinafine was 5 μl. The UV detection at 226 nm was employed. The retention time of terbinafine was 3.3 min. The whole analysis was completed within 4 min. The method was validated, following parameters were tested: column efficiency, factor of symmetry, LOD, LOQ, linearity, repeatability and robustness.

Keywords: terbinafine, HPLC, core-shell column, PLGA