

Abstract

A HPLC method was developed for the separation and determination of the substances fenoxycarb and permethrin. The method is based on using HS F5 column (10 x 4 mm, 3 μ m particle) and UV detection at 225 nm. The compounds were separated using isocratic elution of the mobile phase acetonitril - water (65:35) at a flow-rate of 1,0 ml/min. There was temperature 70 °C during the measurement. The system enabled successful separation of both compounds in time less than 5 min. The retention time of fenoxycarb was 1,53 min and the retention time of permethrin was 3,68 min. The chromatographic resolution between both compounds was 11,012. The method was applied to analysis of the active substances fenoxycarb and permethrin in veterinary preparations Arpalit® Neo mechanical spray, Arpalit® Neo spray a Arpalit® Neo foam. Developed method was compared with the method available on Department of Analytical Chemistry, Faculty of Pharmacy in Hradec Králové, Charles University in Prague (HPLC, Chromolith Performance RP-18, 100 x 4,6 mm, gradient elution of mobil phase acetonitril + water/acetonitril (60:40), flow rate 1,0 ml/min, temperature 30 °C, analysis time 11 min).

Keywords: fenoxycarb, permethrin, HPLC