

Abstract

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Title of Diploma Thesis: **HPLC determination of selected insecticides in cosmetic**

Active ingredients fenoxycarb and permethrin were determined in cosmetic anti-parasitic product Arpalit[®] Neo shampoo against parasites with bamboo extract. Analysis was performed by HPLC using RP-Amide column 100 x 3 mm with a particle size of 2.7 micron and detection by UV at a wavelength of 225 nm. Separation proceeded by isocratic elution with mobile phase of acetonitrile - water (55:45) at a flow rate 1.0 ml/min. Temperature during measurement was 60 °C. For evaluation method was used an internal standard method, as the internal standard was used dye sudan II. For separation was needed time interval of 6 min. The retention time of fenoxycarb was 1.01, sudan II 2.87 and permethrin 4.42 min. Resolution of chromatographic peaks fenoxycarb and sudan II was 10.612 and sudan II and permethrin 6.524.

Keywords: fenoxycarb, permethrin, HPLC.