

ABSTRACT

Charles University in Prague, Faculty of Pharmacy in Hradec Králové

Department of Analytical Chemistry

Title of graduation theses:

Development of extraction and HPLC determination of vitamins A and D in pharmaceutical formulation Infadolan

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The High Performance Liquid Chromatography conditions for the determination of vitamins A and D in ointment Infadolan[®] were found.

The analytical column Onyx Monolithic C18 (50 x 4,6 mm) with guard column (5 x 4,6 mm) was used for achievement of optimal results. A mobile phase composed of acetonitrile : methanol : water in ratio 49 : 49 : 2 (v/v/v), the flow-rate 2 ml/min, the sample volume 20 µl, the isocratic mode and laboratory temperature were chosen. The UV detection was set at 265 and 290 nm. Vitamin E acetate was used as an internal standard. Substance were eluted in the following order: vitamin A acetate, vitamin D and vitamin E acetate.

During the search for suitable extraction agents for the development of an extraction method the ability of many basic analytical solvents was tested. Agents with the most suitable properties were used in five multi-stage extractions. Achieved results were compared and next procedure was proposed.