

# SELECTION OF OPTIMAL PARAMETERS FOR THE ANALYSIS OF DIOXOINDOLINONE BY THE METHOD OF HIGH PRESSURE LIQUIDS CHROMATOGRAPHY

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## Introduction

Dioxoindolinone – (1'-(2-oxo-propil)-spiro[[1,3]dioxolane-2',3'-indolin]-2'-one) – is a new native compound of the isatin group, synthesized in the Organic Synthesis and Biopharmaceutical Laboratory of the Institute of Chemistry.

The substance has anti-depressive and sedative activity and is researched in order to develop methods of analysis and standartization.

## Purpose

Selection of chromatographic parameters for the elaboration of the method of analysis of Dioxoindolinone (1'-(2-oxo-propyl)-spiro[[1,3] dioxolane-2', 3'-indoline] -2'-one), by HPLC method.

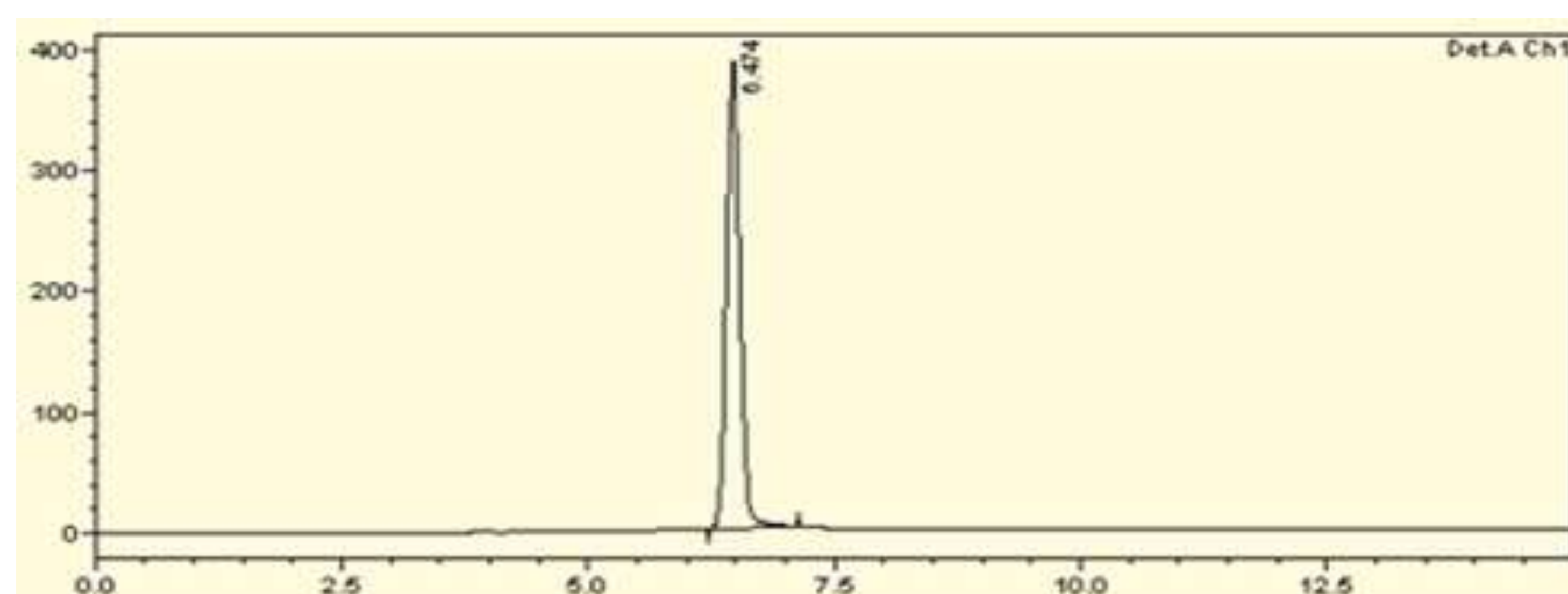


Fig. 2. Chromatogram of Dioxoindolinone

## Material and methods

Dioxoindolinone, experimental synthesis series; and possible specific impurities (izatine – initial synthetic substance, ketal izatine – intermediate product )were assessed; Shimadzu LC-20AD liquid chromatograph with UV-detector SPD-20A, solvents and reagents in accordance with the requirements of the European Pharmacopoeia.

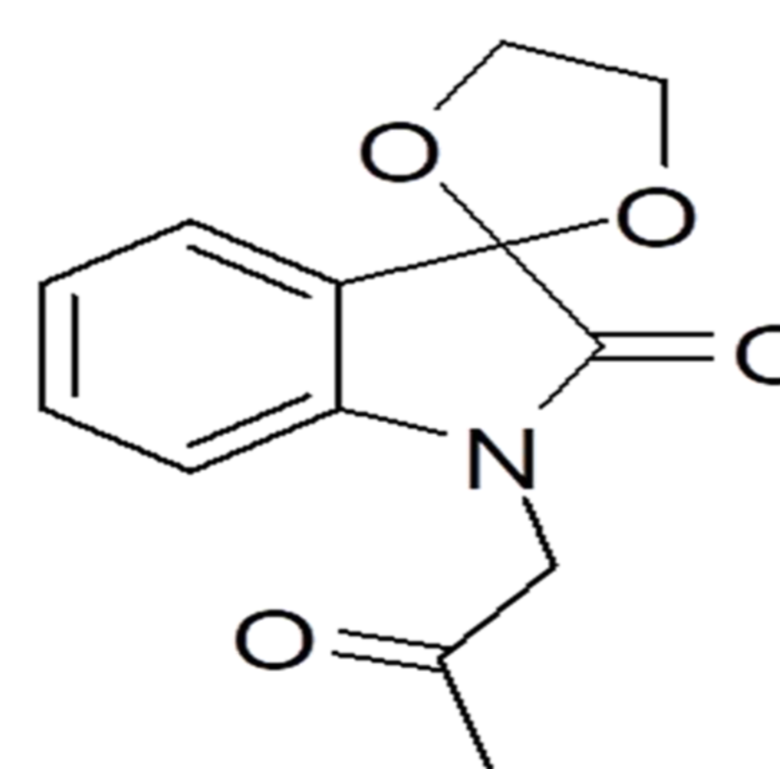


Fig. 1. Dioxoindolinone

## Results

The research allowed to select the optimal conditions for the analysis of Dioxoindolinone by HPLC method: mobile phase – methanol: water: phosphoric acid solution 0.1% (40:20:40), Zorbax Eclipse Plus C18 column, 5 μm, 4.6 x 250 mm; UV-VIS detector, wavelength 258 nm., column temperature 30 0C, beginning of the mobile phase 1.2 mL / min, injection volume 20 μl. The retention times were: for Dioxoindolinone – 6.5 min.; for izatine – 4,3 min.; for ketal izatine – 7,11 min.

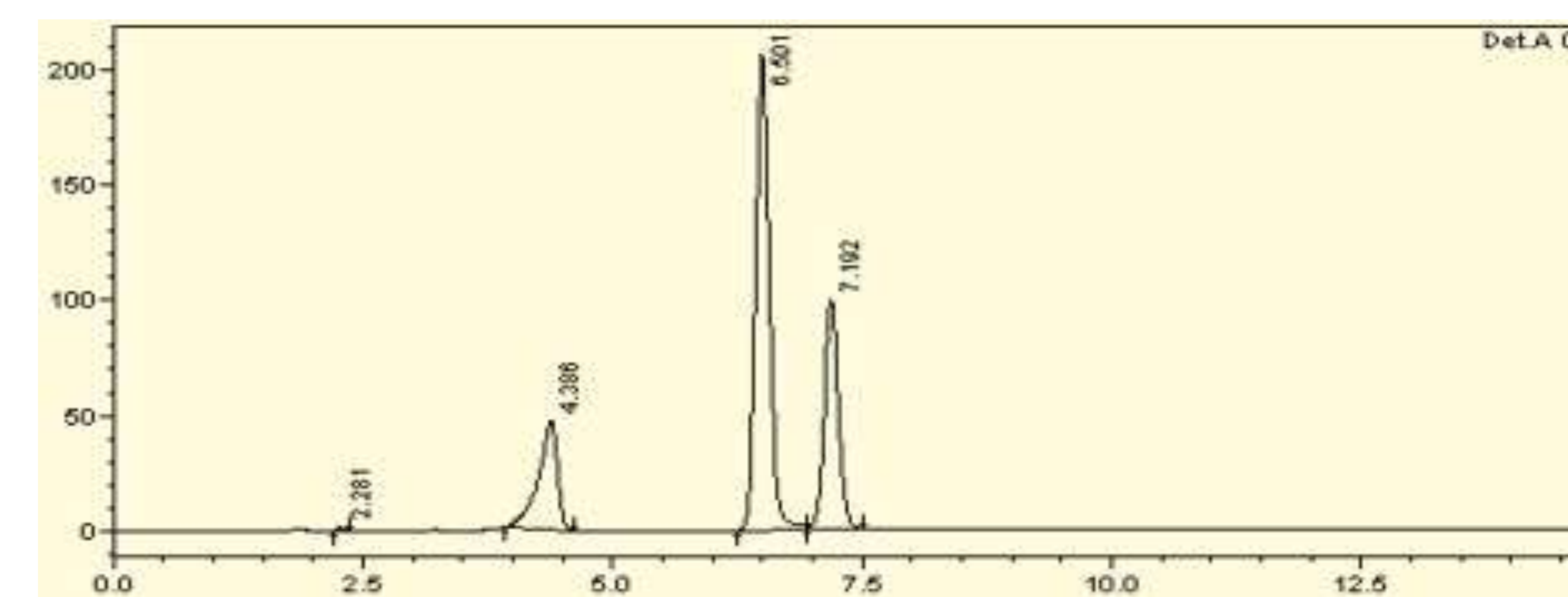


Fig. 3. Chromatogram of the model mixture

## Conclusions

The selected chromatographic conditions and mobile phase offer possibilities for the elaboration of the method for the determination of related substances in Dioxoindolinone, as well as its assay.

## Keywords:

Dioxoindolinone, HPLC, analysis, related substances, assay.