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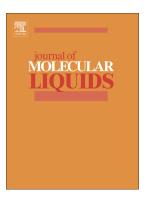
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# ACCEPTED MANUSCRIPT

## Study of the interaction of $\beta$ -cyclodextrin with albendazole in aqueous solutions.

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#### *Keywords:*

 $\beta$ -cyclodextrin, albendazole, isotermal titration calorimetry (ITC), UV-VIS spectroscopy

### **ABSTRACT**

We performed calorimetric titration (ITC) measurements of aqueous albendazole solutions with aqueous  $\beta$ -cyclodextrin solutions. The obtained results were used to determine the enthalpy and entropy of the drug- $\beta$ -cyclodextrin interaction, the stoichiometry of the resulting inclusion complex and its formation constant. Using the UV spectrophotometer, we determined the solubility of albendazole in water, as well as the increase of the drug solubility driven by the increase of  $\beta$ -cyclodextrin concentration. Biological studies carried out on mouse cultures confirmed an increase of the albendazole- $\beta$ -cyclodextrin complex bioavailability, as compared to the uncomplexed drug.

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