

**THERMODYNAMICS OF THE ADSORPTION OF VOLATILE ORGANIC  
COMPOUNDS BY CYCLODEXTRIN-CONTAINING PHASES  
ACCORDING TO INVERSE GAS CHROMATOGRAPHY DATA**

*Kuraeva Yu.G., Kapralova T.S., Onuchak L.A.*

Samara University

443086, Samara, Moskovskoye shosse st., 34

The ability of cyclodextrins to form inclusion complexes with molecules of various natures determines their widespread use in sorption and separation technologies. A pressing issue is the study of the thermodynamic aspects of sorption and complexation by cyclodextrins to understand the mechanisms of enantioselective recognition.

This paper summarizes the results of studies on the sorption of organic compounds of various classes by systems based on  $\beta$ -cyclodextrin and its derivatives dissolved in various initial matrices. Polymeric, liquid-crystalline, and ionic liquid matrices were used. Using inverse gas chromatography, the thermodynamic characteristics of sorption and complexation were determined, and Infinite dilution activity coefficient were calculated. The selectivity of the studied cyclodextrin-containing phases with respect to structural and optical isomers of organic compounds under gas chromatographic conditions is examined. The patterns of influence of orientational, solvophobic and associative effects on the formation of “guest – host” complexes in the studied systems were revealed.

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