

## Adsorption features of hydrocarbon vapors on the surface of the carbon adsorbent modified by polyvinylpyrrolidone monolayer

© Mikhail Yu. Pariychuk, Natalia A. Kopytina, Kirill A. Kopytin,<sup>\*+</sup>

Stanislav Yu. Kudryashov, and Lydmila A. Onuchak

*Department of Physical Chemistry and Chromatography. Samara State University.*

*Acad. Pavlov St., 1. Samara, 443011. Russia.*

*Phone: +7 (843) 231-42-30. E-mail: kirko87@inbox.ru*

<sup>\*</sup>Supervising author; <sup>+</sup>Corresponding author

**Keywords:** gas-adsorption chromatography, carbon adsorbents, modified adsorbents, polymer modifiers, polyvinylpyrrolidone.

### Abstract

In this paper by the reverse gas-adsorption chromatography method, there were defined thermodynamic characteristics of adsorption (TCA) of a number of hydrocarbons on the carbon graphite-solid support Carbopack Y (CpY) modified by polar polymer polyvinylpyrrolidone (PVP). Analysis of the TCA showed that PVP is adsorbed in the form of globules on the surface of the carbon adsorbent CpY. The intervals between these may be the centers of localization for the appropriate size of the adsorbed molecules.