

Journal of Thermal Analysis and Calorimetry 1998 vol.54 N1, pages 305-309

---

# Thermochemistry of heteroatomic compounds X. The thermochemistry of solution and solvation of substituted alkylphosphonic derivatives

Ovchinnikov V., Sagadeev E., Lapteva L., Khasieva L., Alikberov M., Sitnikova E., Antipin I., Stoikov I., Konovalov A.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

## Abstract

The enthalpies of vaporization of different classes of phosphorylated alcohols and amines were determined from their enthalpies of solution in hexane and carbon tetrachloride. The enthalpies of specific (hydrogen-bond) interaction with the solvents (chloroform and pyridine) of derivatives containing X-H groups (X=O or N) in the  $\alpha$ -position to the P=O group were determined. The results were explained in terms of the spatial structure of such compounds.

---

## Keywords

Enthalpy of solution, Enthalpy of solvation, Enthalpy of specific interaction with solvent, Enthalpy of vaporization, Phosphonic derivatives