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パソコンを活用した物理化学実験
—— KClの溶解熱の測定 ——

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IKUO, A., YOSHINAGA, Y., HASEGAWA, S., and OGAWA, H.: An experiment program of physical chemistry utilizing PC – Determination of heat of dissolution of KCl–. Bull. Tokyo Gakugei Univ. Natur. Sci., **59**: 27-35 (2007) ISSN 1880-4330

Abstract

We have developed an experiment program, “Determination of heat of dissolution”, for an undergraduate physical chemistry laboratory class of junior (third year) level students of a teacher’s college, Tokyo Gakugei University (TGU). The program is composed of three parts: i) determination of heat of dissolution of KCl to water; ii) statistical processing of the data obtained in i) by use of a spreadsheet program on personal computer (PC), such as Microsoft Excel; and iii) calculation of enthalpy of hydration of KCl from the Born-Haber cycle, and further, estimation of hydration number of KCl by entropy calculation. (in Japanese)

Key words: experiment program, physical chemistry laboratory, heat of dissolution, KCl

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