UNIVERSITY OF PANNONIA

SUBJECT DATASHEET

Semester:	2010/11/2
Subject:	Experiments In Colliod Chemistry
Code:	VEMKFK3232A
Responsible department:	Department of Physical Chemistry
Responsible department code:	MKFK
Responsible lecturer:	dr. Mónika Valiskó

Educational objectives:

Deepening knowledge of colloid chemistry through laboratory work.

Detailed content of the subject:

Adsorption from carbonic acid aqueous solutions on activated carbon: adsorption isotherms. Properties of an ionic surfactant: solutions, micelles, Krafft point, solubilization. Surface tension measurement in soap solutions by Traube stalagmometer. Sedimentation analysis using Schöne apparatus. Gelation time of silicic acid sol: investigation of concentration, temperature and pH dependence. Viscosity of non-newtonian liquid: viscosity measurement in Gelatin sol by Ostwald viscometer. Examination of the gelation of starch by rotation viscometer. Surface tension of alcohols and aqueous carbonic acid solutions: Szyszkowski isoterm. Swelling of Gelatin in function of temperature or pH. Phase inversion of emulsions: demonstration of phase inversion in (vegetable oil + water) system upon addition of electrolyte or change of phase volume ratio.

Requirements:

Accomplishment of the measurements. The measurements and calculations have to be reported. Grading is based on the total points given for the measurements and an oral or written test about the theoretical backgrounds.

Required and suggested references:

1. Buzágh, A.: A kolloidika praktikuma. Tankönyvkiadó. Budapest, 1962. 2. Adamson, A.W.: Physical Chemistry of Surfaces JOHN WILEY and SONS. New York - - London-Sydney- Toronto, 1976. 3. Szántó, F.: A kolloidkémia alapjai. Gondolat. Budapest, 1987.