

COURSE TITLE:

COLLOIDS IN ENVIRONMENT

COURSE DESCRIPTION:

Measurement of surface (interfacial) tensions. Adsorption at interfaces: determination of adsorption isotherms. Wetting of solid particles. Stability of colloidal dispersions: determination of critical coagulation concentration. Measurement of zeta potential. Suspensions: determination of particle size distribution. Emulsions: preparation of emulsions, determination of the type and rheological properties of emulsions. Association colloids: determination of critical micelle formation concentration, solubilization in micellar solutions. Macromolecular colloids: determination of the molecular mass of dissolved polymers, measurement of the viscosity of polyelectrolyte solutions.

LITERATURE:

Shaw, D.J.: Introduction to Colloid and Surface Chemistry, Butterworth-Heinemann, 1992.

Th. F. Tadros: Surfactants in Agrochemicals, Marcel Dekker Inc., New York, 1994.

M.J. Schwuger: Detergents in the Environments, Marcel Dekker Inc., New York, 1996.

Hunter, R.J.: Foundations of Colloid Science, Oxford Univ. Press, 2004.

Csempez, F.: Experimental Colloid Chemistry, Semmelweis Publishers, 2012.

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