

EXPERIMENTAL METHODS FOR STUDYING CHEMICAL EQUILIBRIA in AQUEOUS SOLUTIONS

LABORATORY	TASK
LAB 1	Introduction. Lab Schedule. Literature.
LAB 2	1) Standardization of 0.1 M NaOH and 0.1 M HClO ₄ Introduction to potentiometric (PT) and conductometric (CT) titration techniques. 2) Computation (MS Excel, Origin, the Glee program).
LAB 3	1) A pH electrode calibration 2) Potentiometric titration (PT) of acetic acid with NaOH
LAB 4	1) A conductometric sensor calibration 2) Conductometric titration (CT) of water with acetic acid
REPORT 1	
LAB 5	Determinations of dissociation constants for the investigated acids based on potentiometric and conductometric measurements. Computation (the CerkoLab-EQSOL program).
LAB 6	Species distribution diagrams (calculations and discussion). Computations (MS Excel, the Hyss program).
REPORT 2	
LAB 7	Critical micelle concentration (SDS and CTAB) – conductometric titration experiments. Computation (MS Excel, Origin).
LAB 8	Critical micelle concentration (SDS and CTAB) – spectrophotometric (UV) experiments. Computation (MS Excel, Origin).
REPORT 3	
LAB 9	Summary of the laboratory classes.

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