Department of Basic Sciences

Chemistry for Engineers Lab Fall 2013 NS 114 L

List of Experiments

Week	Ex No.	Title of Experiment
1st	Introduction to general experimental and lab safety guidelines.	
Molar Solutions of Strong Electrolytes		
2nd	1	Preparation & standardization of 0.5M solution of a strong electrolyte.
Normal Solutions of Strong Electrolytes		
3rd	2	Preparation & standardization of 0.5N solution of a strong electrolyte.
Kinetic Studies of Precipitation Reaction		
4th	3	The study of effect of concentration & temperature on rate of a chemical reaction.
Gravimetric Analysis of Group II Metal		
5th	4	Determination of Ba^{2+} in an industrial sample solution gravimetrically.
Quantitative Analysis of Metals in Hard Water		
6th	5	Determination of water hardness by Complexometric (EDTA) titration.
Percentage Composition of Salts		
7th	6	Determine the percentage composition of each component in the mixture.
Percentage Purity of Metal Carbonate		
8th	7	Find out the percentage purity of commercial sample of $CaCO_3$.
No. Lab. In Midterm Week		
Copper Ion in Electroplating Bath Solution		
10th	8	Determine the molarity of Cu^{2+} & find number of water of crystallization in copper sulphate.
pH Titration of Electrolyte Mixture		
11th	9	Determine the strength of the given solution of a strong acid & individual acids in a mixture by pH measurement method.
Electrochemistry & Nernst Equation		
12th	10	Determine the cell potential (voltage) of different cells and verify by Nernst equation.
Electroplating & Faraday's Law of Electrolysis		
13th	11	Investigate the mass transfer of copper metal during electroplating and verify Faradays law of electrolysis graphically.
14th	**Makeup Classes Week**	
15th	**Lab. Final Examination**	
16th	Week for Preparation of Theory Final Examination	