

CHM 101A Grading Key

Experiment 1: Synthesis of Aspirin

Performing experiment and writing lab report: 3+1

Percentage yield: 1

Melting Point: 1

Ferric Chloride test for aspirin and salicylic acid: 2

Ferric chloride reaction: 2

Experiment 2: Isolation of DNA

Performing experiment and writing lab report: 3+1

Diphenylamine test: 2

Ratio of absorbance at 280 and 260 nm: 1

Structure of the four bases: 2

Structure of the two sugars: 1

Experiment 3: Extraction of caffeine from tea leaves

Performing experiment and writing lab report: 3+1

Percentage yield: 2

Structure of chemicals in tea: 3

General structure of an alkaloid: 1

Experiment 4: Determination of Ca content in milk powder

Performing experiment and writing lab report: 3+1

Titration with EDTA: 1

Percentage yield of Ca: 2

Chemical reaction and structure of Ca-EDTA complex: 2

Chemical structure of EBT indicator and its reaction: 1

Experiment 5: Estimation of iodine in iodized salt

Performing experiment and writing lab report: 3+1

Test for iodate: 1

Standardization of sodiumthiosulfate: 2

Estimation of salt: 2

Calculation: 1

Experiment 6: Determination of pI of glycine using pH metry

Performing experiment and writing lab report: 3+1

Plot of pH Vs volume of NaOH: 2

Identification of pK_{a1} and pK_{a2} on the plot: 2

Calculation of pI: 1

Isoelectric point (theory): 1

Experiment 7: Photochemical reaction in cyanotype printing

Performing experiment and writing lab report: 3+1

Photos at different times: 4

Chemical reactions: 2

Experiment 8: To determine energy of activation

Performing experiment and writing lab report: 3+1

Calculation for rate: 1

Calculation for k: 1

Plot of $\ln k$ Vs $1/T$: 2

Calculating energy of activation: 2

Experiment 9: Conductometric Titration

Performing experiment and writing lab report: 3+1

Plot of conductance V_s volume of base: 3

Calculation of result: 3

Experiment 10: Preparation of nickel-hexamine complex and its estimation by complexometry and spectrophotometry

Performing experiment and writing lab report: 3+1

Percentage yield: 2

Estimation of Ni *via* titration: 2

Calculation: 1

Chemical reactions and structure of Ni-EDTA complex: 1