## Laboratory Experiments for Advanced Placement Chemistry Table of Contents

General Information	
Alignment to AP* Chemistry Curriculum Framework	viii
Safety in the Laboratory	xi
The Laboratory Notebook	xiv
Reporting Laboratory Data	xvi
Experiments	Page
1. Determination of the Empirical Formula of Silver Oxide	1
2. Analysis of Silver in an Alloy	17
3. Gravimetric Analysis of a Metal Carbonate	27
4. Analysis of Alum, AlK(SO <sub>4</sub> ) <sub>2</sub> ·12H <sub>2</sub> O	39
5. Finding the Ratio of Moles of Reactants in a Chemical Reaction $^{\ddagger}$	51
6. Thermodynamics—Enthalpy of Reaction and Hess's Law	63
7. An Activity Series <sup>‡</sup>	83
8. Determining the Molar Volume of a Gas	99
9. Determination of the Molar Mass of Volatile Liquids	113
10. Liquid Chromatography	125
11. Identify the White Substance <sup>‡</sup>	141
12. Kinetics of a Reaction <sup>‡</sup>	151
13. The Determination of $K_{eq}$ for FeSCN <sup>2+</sup>	171
14. Determination of $K_{a}$ of Weak Acids	191
15. Acid–Base Titrations <sup>‡</sup>	205
16. Selecting Indicators for Acid–Base Titrations	227
17. Preparation and Properties of Buffer Solutions <sup>‡</sup>	247
18. Determination of the Solubility Product of an Ionic Compound <sup><math>\ddagger</math></sup>	265
19. Separation and Qualitative Determination of Cations and Anions	275
20. Oxidation–Reduction Titrations <sup>‡</sup>	305
21. Analysis of a Commercial Bleach	319
22. Electrochemical Cells	331
23. Electrolysis	349
24. Preparation and Analysis of Tetraamminecopper(II) Sulfate Monohydrate	363
25. Synthesis, Isolation, and Purification of an Ester	373
26. Predicting the Products of Chemical Reactions and Writing Chemical Equations $^{\ddagger}$	389
<sup>‡</sup> Denotes a guided–inquiry experiment.	
Safety and Disposal	415
Master Materials List	416