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AP[®] Chemistry Series

Lab #	Kemtec Lab Titles for AP® Chemistry Experiments	Match with AP® Concept Outline			Technology & Sensor/Probe Usage	Texas Instruments Simulations	Recommended College Board Investigations
		Essential Knowledge	Science Practice	Learning Objectives			
S07328	Statistics – Precision and Accuracy – <i>Inquiry*</i>	1.A.2	2	1.2, 1.3	Statistics Analysis	Density of Matter, How Does it Stack	
S07329	Statistics – Precision and Accuracy with Glassware – <i>Inquiry*</i>	1.A.2	2	1.2, 1.3	Statistics Analysis	Density of Matter, How Does it Stack	
S07330	Spectrophotometric Analysis of Copper: Beer's Law – <i>Inquiry*</i>	1.D.3	2, 3, 5	1.15, 1.16	Spectrometer	Beers Law Data Collection, Graphical Analysis, The Ink is Still Wet	1, 2
S07331	Synthesis and Gravimetric Analysis of Cobalt Oxalate Hydrate	1.E.2, 3.B.1, 3	2, 7	1.19, 1.20, 3.5, 3.9	Drop Counter	Chemical Balance	3, 7, 8, 9
S07332	Acid-Base Titrations – <i>Inquiry*</i>	1.E.2, 3.B.2, 6.C.1	2, 3	1.18, 1.20, 3.7, 6.12	Drop Counter	Molecular Titration	4
S07333	Separating Substances by Adsorption Chromatography (Paper and TLC) (Micro Lab) – <i>Inquiry*</i>	2.A.3, 2.B.2	1, 5	2.7, 2.8, 2.10, 2.13	Calculations Statistics	Intermolecular Forces	5
S07334	Stoichiometry: Reactions with Copper Compounds	1.A.3, 2.B.2, 3, 3.A.2	2, 6	2.14, 2.15, 3.3, 3.5	Calculations	Moles Stoichiometry	10
S07335	Stoichiometry: Mole Ration of an Unknown	3.A.2, 3.B.1, 3.C.2	2, 3, 5	3.3, 3.4, 3.5, 3.11	Temperature Calculations	Moles Stoichiometry	
S07336	Using Colligative Properties to Determine Molar Mass of an Unknown – <i>Inquiry*</i>	2.A.3, 2.D.1, 4	2, 3, 5	2.22	Temperature Calculations	Intermolecular Forces	10
S07337	Determining Molar Mass Using the Ideal Gas Equation	2.A.1,2, 2.B.2	1, 2, 5	2.3, 2.4, 2.6, 2.12	Temperature Calculations	Where is the Heat? Hot Molecules, Diving Down Deep, Density of Matter - Bellringer	6
S07338	Reaction Rate and Order	4.A.1,2,3, 4.B.2	1,2, 4	4.1, 4.2, 4.3, 4.4	Temperature Calculations	Stopwatch	11
S07339	Determining Molar Enthalpy Using Hess's Law (Small Scale)	3.C.2, 5.B.1, 2,4 5.C.2	2, 7	5.5, 5.7, 5.8	Temperature Calculations		12
S07340	Le Chatelier's Principle: A Qualitative Approach to Predicting Equilibrium Shifts (Small Scale)	6.B.1, 2	6, 7	5.16, 6.8, 6.9, 6.10			13
S07341	Identifying Weak Acids by pKa	3.B.2, 6.C.1, 2	2, 5, 6	2.2, 3.7, 6.13, 6.19	pH electrode Drop Counter	Interactive pH Titration	14
S07342	Preparing Buffer Solutions and Determining Their Properties	6.C.2	4, 7	6.18, 6.19, 6.20	pH electrode		15,16
S07343	Determining the Equilibrium Constant (and Temperature's Effect) with Beer's Law – <i>Inquiry*</i>	1.D.3, 6.A.2, 3,4 6.B.2	2, 7	1.15,1.16, 6.2, .4,6.5, 6.6,6.7,6.10	Temperature Spectrometer	Beers Law Data Collection, Killer Cup of Coffee	11
S07344	Micro-scale Electrochemical Cells – Voltaic and Electrolytic	1.C.1, 3.C.3	3, 7	1.10, 3.12, 3.13, 5.15	Voltage Probe	Breath of Fresh Air	
S07345	Complete AP® Chemistry Series with S07328 (without glassware)			FREE balance (\$600 value) with purchase of complete AP® Chemistry Series			
S07346	Complete AP® Chemistry Series with S07329 (with glassware)						

FREE balance (\$600 value) with purchase of complete AP® Chemistry Series

* While instructions are included for making any Kemtec AP® Chemistry kit an inquiry lab, the designated kits are pre-written as inquiry based labs.

The Kemtec AP[®] Chemistry series exceeds the 2013 Next Generation Science Standards and offers superior content when compared to other AP[®] product lines.

The Kemtec AP[®] Chemistry series includes 16 labs designed to meet the essential laboratory requirements of an AP[®] Chemistry course. As a series, these labs address the 2013 Essential Knowledge, Science Practices and Learning Objectives established by the AP[®] College Board. Six labs incorporate specific inquiry components and all labs contain instructions for optional inquiry adaptations. For planning purposes, each manual contains a complete breakdown of the AP[®] framework correlations for each of the 16 lab experiments. Each lab accommodates 24 students working in groups of two.



Available through:  **Fisher Science Education**

Why is AP[®] Chemistry Such a Big Deal Right Now?

- AP[®] Board Certification changes for 2013
- Requirement for 25% of class time to be spent in lab
- Requirement for 16 hands-on labs
- Six of the labs must be inquiry based

Key Features of Kemtec AP[®] Chemistry Series

- Exceed the 2013 Next Generation Science Standards
- Classroom-ready lessons and instructions for 24 students
- Options and transitions for guided inquiry
- Technology infused options
- Sample data, complete calculations & data analysis
- Pre and post -lab questions for assessment

Why Choose Kemtec AP[®] Chemistry Kits?

- Convenience – significant reduction of preparation time
- Superior teacher manual with background information
- Prepared student handouts – photocopy ready
- Pre measured chemicals – reduces waste
- Refill packages available – always have fresh reagents
- Safety – no need to store large quantities of chemicals



S07328
Statistics: Precision and Accuracy



S07329
Statistics: Precision and Accuracy
(with Glassware)



S07330
Spectrophotometric Analysis of Copper: Beer's
Law



S07331
Synthesis and Gravimetric Analysis of Cobalt
Oxalate Hydrate



S07332
Acid-Base Titrations: An Inquiry Investigation



S07333
Separating Substances by Adsorption
Chromatography



S07334
Stoichiometry: Reactions with Copper
Compounds



S07335
Stoichiometry: Mole Ratio of an Unknown



S07336
Determining Molar Mass by Colligative Properties



S07337
Determining Molar Mass Using the Ideal Gas
Equation



S07338
Reaction Rate and Order



S07339
Determining Molar Enthalpy Using Hess's Law



S07340
Le Châtelier's Principle: A Qualitative Approach to
Predicting Equilibrium Shifts (Small-Scale Lab)



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