COLORIMETRIC DETERMINATION OF ASPIRIN SMART WORKSHEET

PART A. PREPARATION OF SOLUTIONS FOR BEER LAW GRAPH

COMPOSITION OF SOLUTION S

The molar mass of acetylsalicylic acid is 180.16 $g\,mol^{-1}$

Part A: Mass of acetylsalicylic acid data and molar concentration calculation

 Mass of acetylsalicylic acid in 1 L solution
 Note: The property of the property

PREPARATION OF DILUTED SOLUTIONS TO BE USED FOR BEER'S LAW GRAPH

Final volume is 50.00 mL for all solutions, including blank $\,$

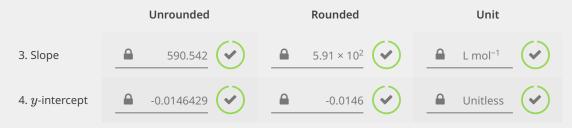
Part A: Volume data, ferric salicylate ion concentration calculation and absorbance data

Trial	Volume of solution S (mL)	Final volume (mL)	2. [$\operatorname{Fe-salicylate}$ ion] $(\operatorname{mol} \operatorname{L}^{-1})$		Absorbance
	(IIIL)	(IIIL)	Unrounded	Rounded	
Blank (${ m FeCl_3}$ soln used to calibrate colorimeter)	0.00	50.00	0.00000	0.00	
1	2.00	50.00	0.0003557504	0.000356	0.194
2	3.00	50.00	0.0005336257	0.000534	0.271
3	4.00	50.00	0.0007115009	0.000712	0.402
4	5.00	50.00	0.0008893761	0.000889	0.524
5	6.00	50.00	0.0010672513	0.00107	0.622

Data check

Absorbance Values: ✓ Data passes ascending order check

Part A: Slope and intercept calculation



YOUR PROGRESS ON THE PREPARATION OF SOLUTIONS FOR BEER LAW GRAPH

 CORRECT
 22 / 22
 POINTS AWARDED98 / 98
 AUTOSOLVED
 0 / 22
 NOT FINISHED
 0 / 41

PART B. ANALYSIS OF ASPIRIN TABLET

ASPIRIN TABLET DATA

Part B: Strength and absorbance of aspirin

 Data
 Unit

 Strength of aspirin tablet (mg acetylsalicylic acid)
 □ 325
 ✓ mg

 Absorbance of aspirin solution
 □ 0.109
 ✓ Unitless

ASPIRIN TABLET CALCULATIONS

Part B: Calculations

Unrounded	Rounded	Units
0.000209372	0.000209	$\mathrm{mol}\mathrm{L}^{-1}$
0.00523430	0.00523	$\mathrm{mol}\mathrm{L}^{-1}$
0.00130857	0.00131	mol
235.753	236	mg
27.3846	27 🗸	%
	 □ 0.000209372 □ 0.00523430 □ 0.00130857 □ 235.753 	□ 0.000209372 ✓ □ 0.000209 ✓ □ 0.000523430 ✓ □ 0.00523 ✓ □ 0.00130857 ✓ □ 0.00131 ✓ □ 235.753 ✓ □ 236 ✓

Quality of Data

% Error % error above 20% 0

YOUR PROGRESS ON

 CORRECT
 10 / 10
 POINTS AWARDED44 / 50
 AUTOSOLVED
 0 / 10
 NOT FINISHED
 0 / 12

YOUR OVERALL PROGRESS