

Chemistry 1210
Spectrophotometric Determination of Acetylsalicylic Acid

Name: _____

Partner: _____

OBJECTIVE: To quantitatively analyze a commercial aspirin tablet for ASA content by spectrophotometric means.

PROCEDURE: As in the chemistry 1210 lab manual, pages _____.

OBSERVATIONS:

DATA:

Mass of weigh boat and ASA (g)	Mass of emptied weigh boat (g)	Mass of reagent grade ASA transferred to flask(g)	Mass of reagent grade ASA transferred to flask (mg)

λ_{\max}		nm
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If less than three sig figs are obtained in absorbance readings, read % T and convert to absorbance by calculation

Volume	1.00 mL	2.00 mL	3.00 mL	4.00 mL	5.00 mL	ASA Tablet
Measured Absorbance or % Transmittance						
Average Absorbance						

Mass of ASA tablet (mg)		Company's claimed ASA amount in tablet (mg)	
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GRAPH:

Attach Beer's Law Plot

CALCULATIONS:

Standard Solution	1.00 mL	2.00 mL	3.00 mL	4.00 mL	5.00 mL
Concentration (mg ASA/mL)					

Sample calculation for concentration of standards:

Calculation of ASA concentration of final unknown ASA solution:

Mass ASA in tablet:

% by Mass ASA in the tablet:

RESULTS:

Slope	Y-Intercept	Concentration of ASA in Final solution	Experimentally Determined Mass ASA in Tablet

DISCUSSION:

Did the tablet contain the claimed amount of ASA? Give a source of error beyond your reasonable control and explain if this error would give a higher or lower mass of ASA than the true value.

CONCLUSION:

QUESTIONS: