

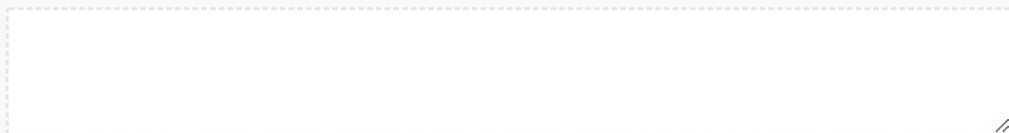
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GradeScope Assignment Modules will Include Different Types of Questions

Q2 Purpose

2 Points

In 1-2 sentences, describe what the experiment entails and the objectives of the experiment.



Type answer directly
into the text box

Q3 Procedure - Pre-lab

5 Points

Prior to the laboratory, create the procedural flowchart and write out the experimental protocols for the experiments that you will conduct in the laboratory in your lab notebook, in your own words. Procedural flow charts should show the experimental steps, the input and output of each step, and the experimental conditions. The experimental protocols should also include tables of reagents that will be used in the experiment including, where appropriate, reagent molarities (for solutions), measured quantities (mass or volume), and number of moles. Tables that you will use for collecting data should also be prepared. Also be sure to include blank spaces in your procedure for the observations and measurements that you will make during the experiment.

Create a pdf of your handwritten procedures and tables.

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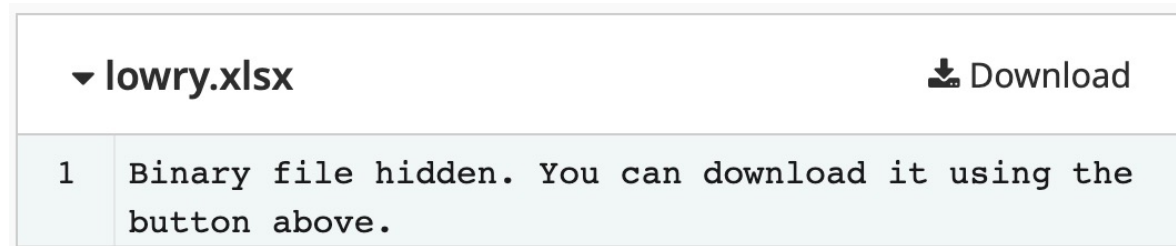
A single PDF (under 100 Mb)

.png, .jpg, .gif, .heic

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Importing Images to GradeScope

Remember: We can't rotate the images

Take a picture of the table in your notebook, and upload it below

▼ 27F5BE95-3A00-4C4F-9260-D50E19EC6229.jpeg

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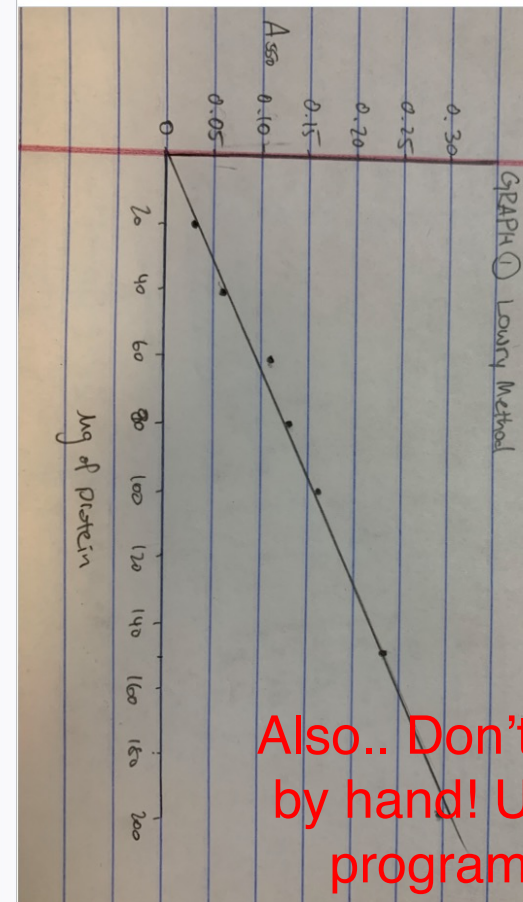
TABLE 3							
Tube #	Standard/Other Protein (mL)	Water (mL)	Interfering Substance (mL)	Blue Dye (mL)	Aspirin	Protein Amount (µg)	
						Expected	Measured
1	0	0.5	-	4.5	0	0	-
2	0.01	0.49	-	4.5	0.257	10	-
3	0.02	0.48	-	4.5	0.370	20	-
4	0.03	0.47	-	4.5	0.457	30	-
5	0.04	0.46	-	4.5	0.554	40	-
6	0.05	0.45	-	4.5	0.588	50	-
7	0.075	0.425	-	4.5	0.732	75	-
8	0.10	0.4	-	4.5	0.938	100	-
9	0.15 (unknown)	0.35	-	4.5	0.714	-	-
10	0.15 (1/2 dilution)	0.35	-	4.5	0.392	-	-
11	0.15 (1/2 dilution)	0.35	-	4.5	0.182	-	-
12	0.15 (1/2 dilution)	0.35	-	4.5	0.127	-	-
13	0.05 (lysozyme)	0.45	-	4.5	0.428	50	-
14	0.05 (gelatin)	0.45	-	4.5	0.304	50	-
15	0.05 (BSA)	0.45	-	4.5	0.648	50	-
16	0.05 (BSA)	0.45	-	4.5	0.305	50	-
17	0.05 (BSA)	0.35	0.1 (TCA)	4.5	0.553	50	-
18	-	0.40	0.1 (TCA)	4.5	0.037	0	-
19	0.05 (BSA)	0.35	0.1 (Urea)	4.5	0.711	50	-
20	-	0.40	0.1 (Urea)	4.5	0.056	0	-
21	0.05 (BSA)	0.35	0.1 (SDS)	4.5	0.160	50	-
22	-	0.40	0.1 (SDS)	4.5	0.168	0	-
23	0.05 (BSA)	0.35	0.1 (BME)	4.5	0.760	50	-
24	-	0.40	0.1 (BME)	4.5	0.110	0	-
25	0.05 (BSA)	0.35	0.1 glycine	4.5	0.769	50	-
26	-	0.40	0.1 glycine	4.5	0.117	0	-



Take pictures or screen shots of the graphs, and upload them below.

Graph 1:

▼ image.jpg



Also.. Don't create graphs by hand! Use a graphing program, like Excel.

Importing Images to GradeScope

Do not expect us to find your answer!

Show a sample calculation for calculating % error. Take a picture of your calculation and answer. Upload the picture below.

Show a sample calculation for calculating % error. Take a picture of your calculation and answer. Upload the picture below.

3.1 Section B

Tube 13 - lysozyme

$$\% \text{ error} = \left(\frac{\text{measured value} - \text{expected value}}{\text{expected value}} \right) \times 100\%$$

$$= \frac{161 - 100}{100} \times 100\% = 61\% \text{ error}$$



Handwritten calculations for protein concentration and % error.

Tube 12:
 $X = 13.13 \mu\text{g protein}$
 $A = 0.007$
 $0.007 = 0.0016x$
 $X = 4.375 \mu\text{g protein}$

protein concentration calculation

tube 9: $\frac{0.04897 \text{ mg}}{0.15 \text{ mL}} = 0.326 \text{ mg/mL}$

tube 10: $\frac{0.0143 \text{ mg}}{0.15 \text{ mL}} = 0.095 \text{ mg/mL}$

tube 11: $\frac{0.004966 \text{ mg}}{0.15 \text{ mL}} = 0.0331 \text{ mg/mL}$

tube 12: $\frac{0.004579 \text{ mg}}{0.15 \text{ mL}} = 0.0305 \text{ mg/mL}$

Q 3.1 range of % error calculation

Lowry

lysozyme: $\frac{(56.8 - 100)/100}{100} \times 100\% = 56.8\%$

gelatin: $\frac{(14 - 100)/100}{100} \times 100\% = -26\%$

Dye-Binding = range of % error calculation

lysozyme: $\frac{(43.64 - 50)/50}{50} \times 100\% = -12.72\%$

gelatin: $\frac{(63.18 - 50)/50}{50} \times 100\% = -53.64\%$

