Procedure

- 100ul master solutions with concentrations of .25 and .125 were made
- Each master solution was diluted 2x, and 5x into 50ul solution
- All other steps same as previous G/F assays performed

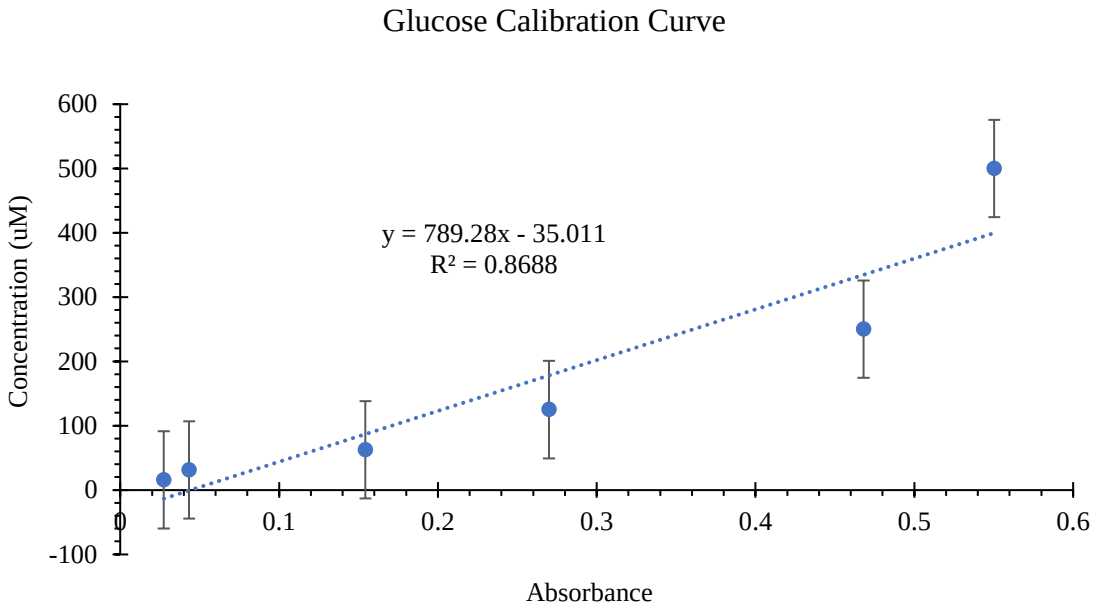
Organization of the Plate

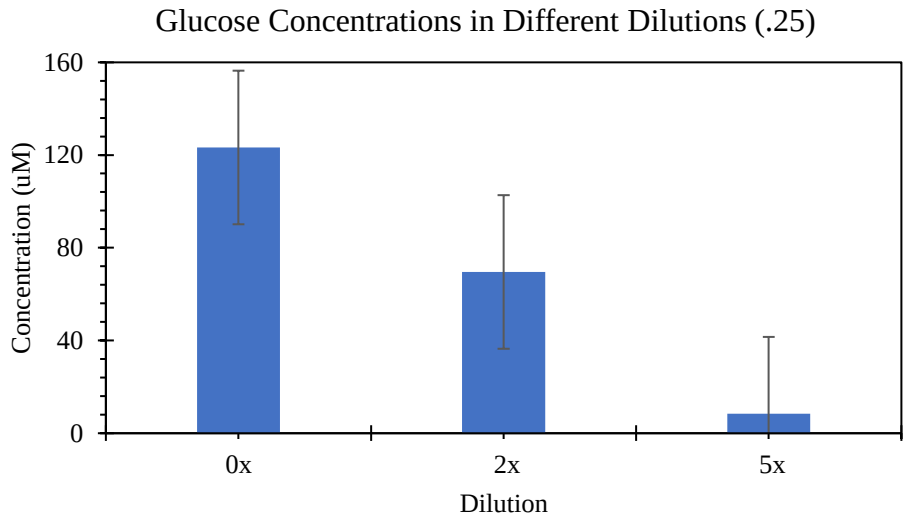
	1	2	3	4	5	6	7	8	9	10	11	12
A	.25 Master Solution	.25 Master Solution	.25 Master Solution	.25 Master Solution	.125 Master Solution	.125 Master Solution	.125 Master Solution	.125 Master Solution	.1M Suc	500uM	500uM	500uM
B	.25 2x	.25 2x	.25 2x	.25 2x	.125 2x	.125 2x	.125 2x	.125 2x	.1M Suc	250uM	250uM	250uM
C	.25 5x	.25 5x	.25 5x	.25 5x	.125 5x	.125 5x	.125 5x	.125 5x	.1M Suc	125uM	125uM	125uM
D									.1M Suc	62.5uM	62.5uM	62.5uM
E										31.25uM	31.25uM	31.25uM
F										15.6uM	15.6uM	15.6uM
G										Blk	Blk	Blk
H												

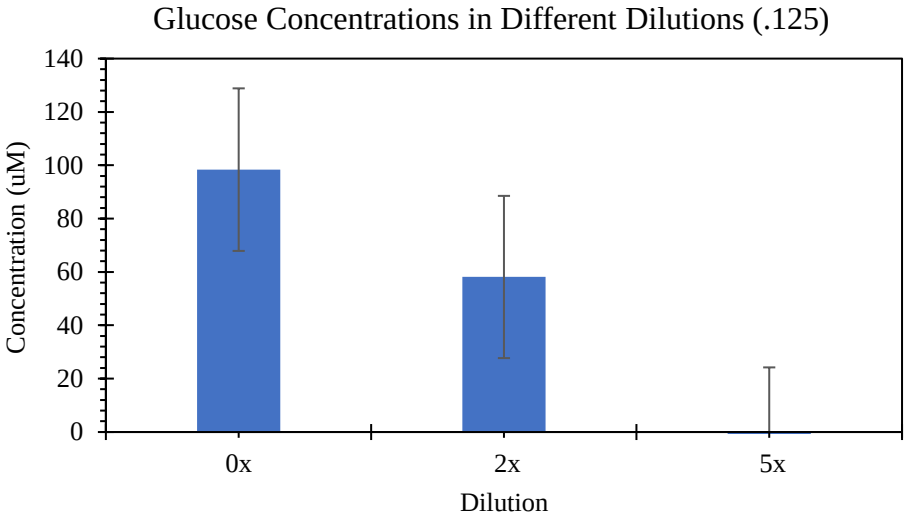
Possible Errors

- Most likely placed .25 master solution in both 2x dilution vials
- .25 master solution appeared slightly larger than .125 master solution although negligible
- Left master solutions in the incubator for a few minutes longer than usual due to getting sidetracked
- Forgot to heat up the plate to 100C immediately after starting incubation resulting in it not being fully heated up after the 20 minutes

Glucose Analysis

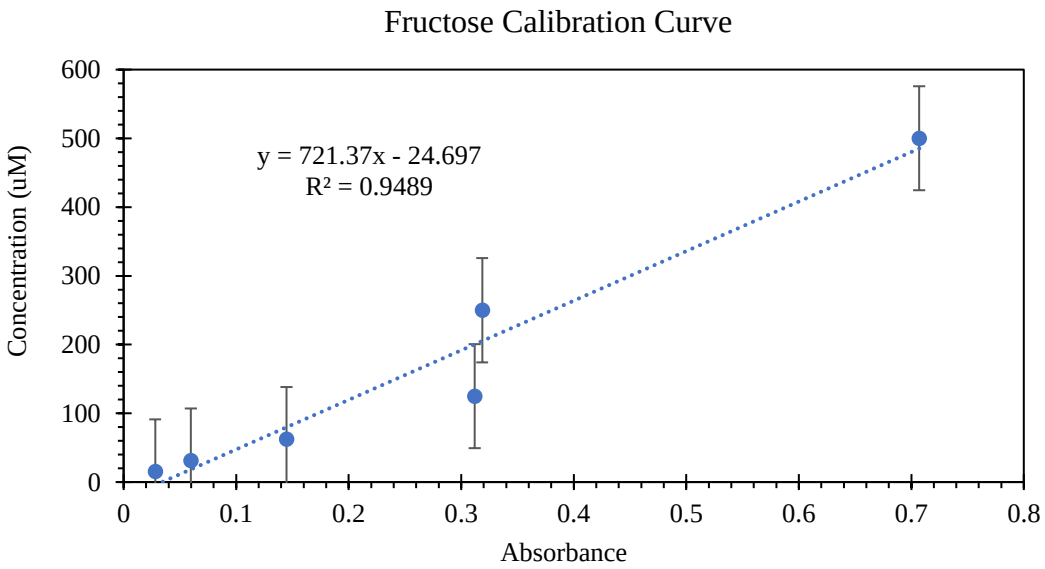


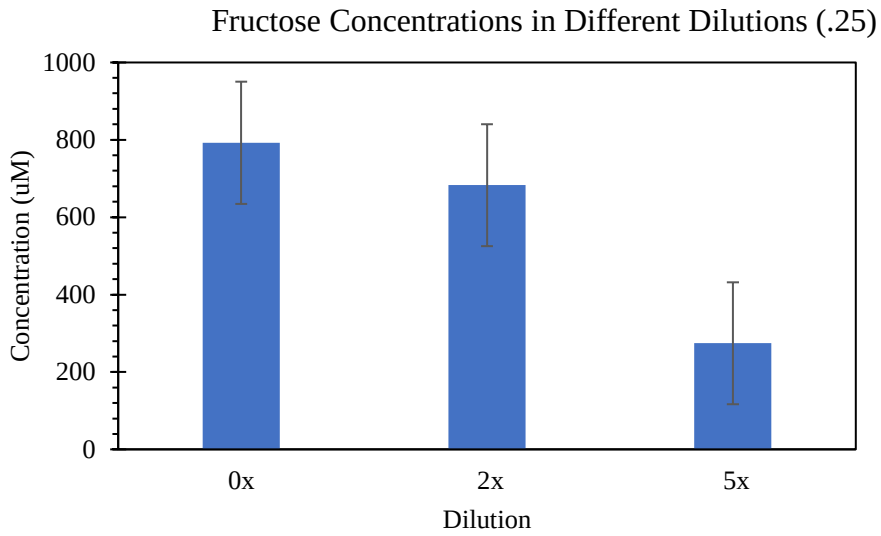




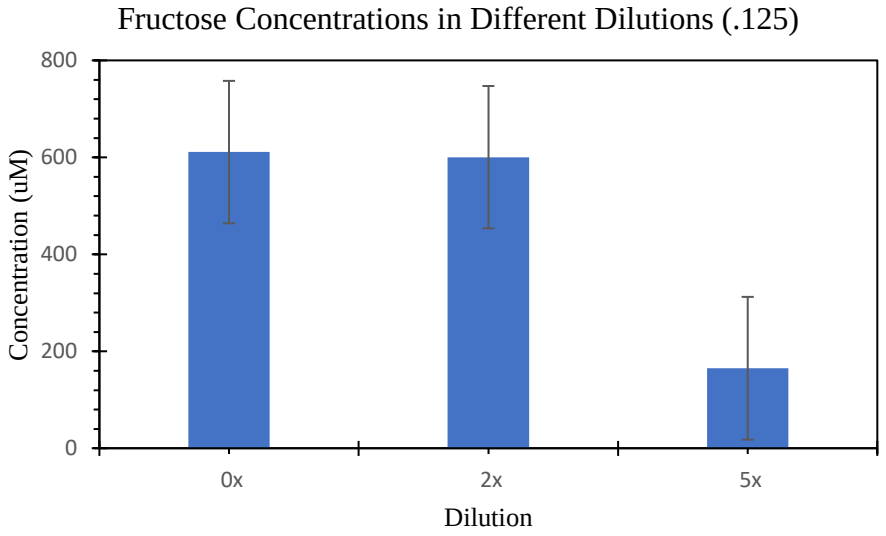
- Weak r-squared value
- 0x and 2x dilutions are within calibration curve
- 5x dilutions are outside of calibration curve

Fructose Analysis

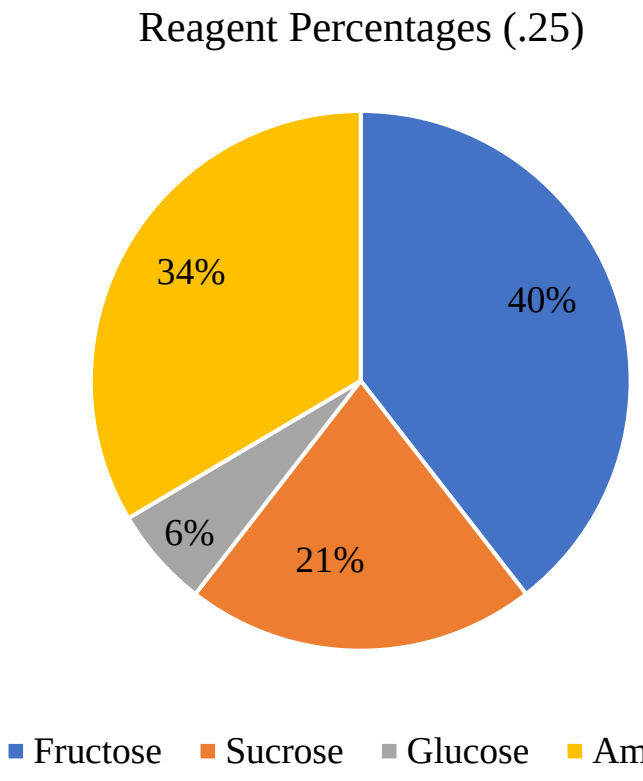


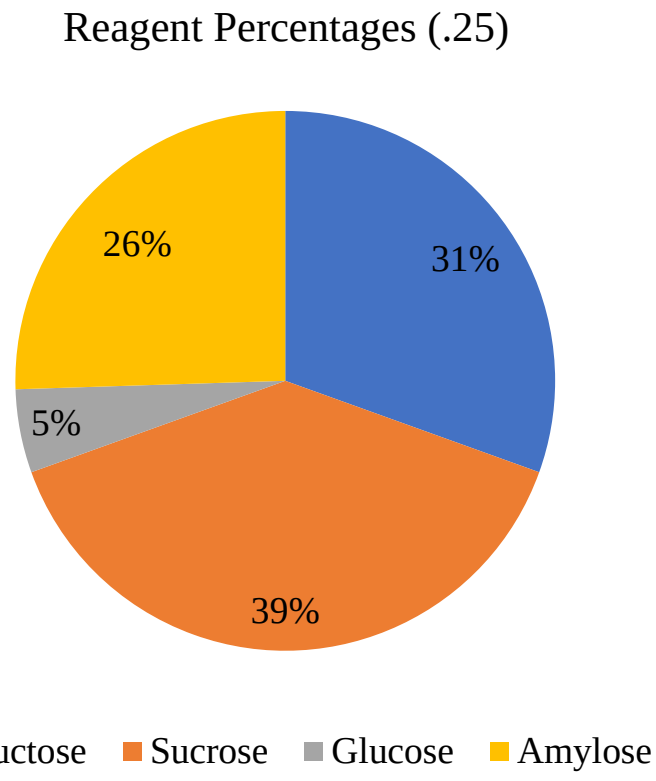


- Stronger r-squared value but not ideal
- 5x dilutions are within range
- 0x and 2x dilutions are out of calibration range
- 0x and 2x dilutions are relatively similar showing possible error



Calculations of Amylose Concentration





- Noticeable amount of sucrose does not react
- Most Glucose is converted to Amylose
- Same glucose was converted to amylose at both concentrations
- More sucrose was not converted to fructose for higher concentration

Conclusions

The data suggests that the 0x and 2x dilution samples are within calibration range for glucose but above range for fructose. The 5x dilutions appear to be within the calibration range for fructose but below range for glucose. Given that the .25 master solutions were used for both 2x dilutions, it is possible that the 2x dilutions would fall below the range for the glucose assay and within the calibration range for fructose if the protocol was followed correctly. However, the latter is more likely to occur over the first. Thus, for given the quantity of glucose that is converted to amylose, dilutions of 0x, 2x, and 5x should be conducted if the same calibration curve is to be used