

Enzyme Lab

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Data

Procedure A

Time (s)	0	15	30	45	60	75	90	105	120
H ₂ O ₂ /H ₂ O	24.2	21.6	20.5	20.4	20.3	20.3	20.1	20.1	20.1
H ₂ O ₂ /lj	23.5	29.1	29.9	29.3	29	29	28.8	28.2	28.2

Table 1: Table of Measurements over Time for Procedure A and Procedure B

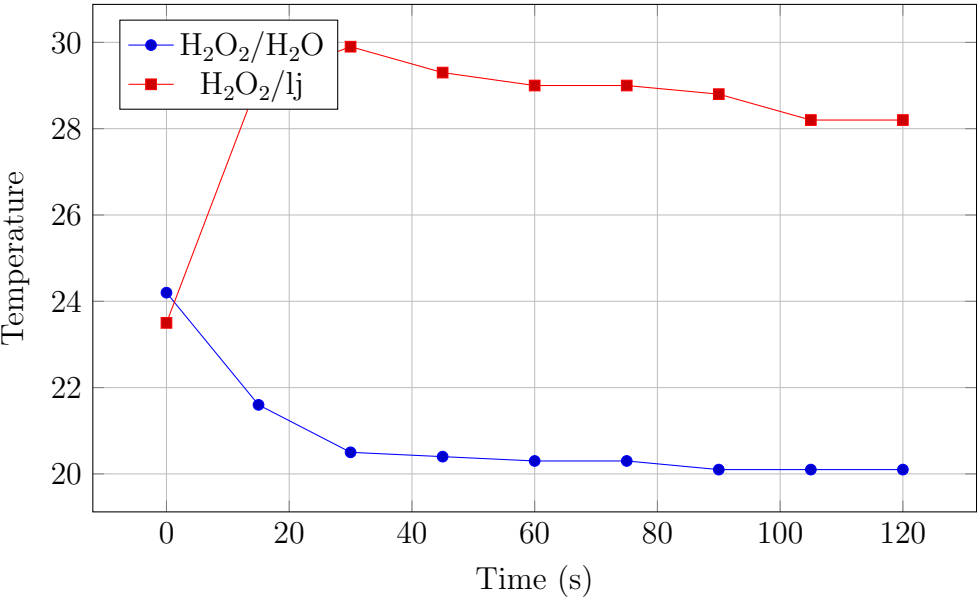


Figure 1: Graph of Measurements over Time for Procedure A and Procedure B

Time (s)	0	15	30	45	60	75	90	105	120
H ₂ O ₂ /boiled lj	22	20.5	20.1	20.1	20	20.2	20.2	20.1	20.2
H ₂ O ₂ /acid lj	22	21.5	21.5	21	21	21	21.1	21	20.9
H ₂ O ₂ /base lj	22	21.2	21.2	21.3	21.2	21.5	21.6	21.8	21.9
H ₂ O ₂ /salt lj	23	23.2	24.5	26.9	28.9	31	31.5	31.9	31.7
Boiled H ₂ O ₂ /lj	23	31	38	41	41	41	39	38	37.5

Table 2: Table of Measurements over Time for Procedure B

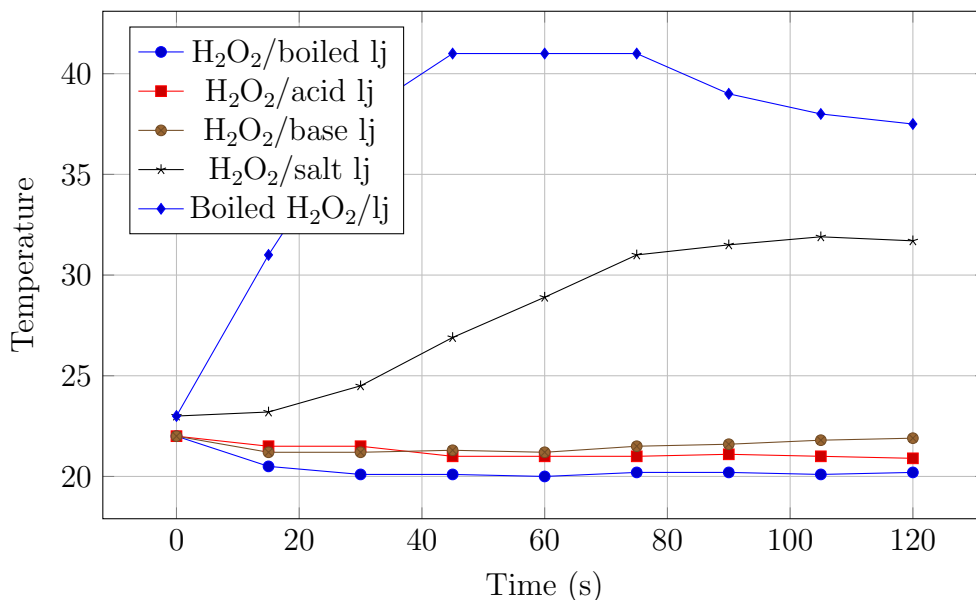


Figure 2: Graph of Measurements over Time for Procedure B

Procedure B

Procedure C

Data Analysis

Question 2

- The test tube with water and H₂O₂ saw a slight decrease in Temperature because the water was stored in a freezer. The test tube with serves as a control for the experiment compared to when we later added the liver juice, confirming that the temperature increase we saw was due to the liver juice reacting with the H₂O₂.
- We could tell a reaction was occurring in test tube B because the temperature increased.
- Before we added the enzyme, the reaction was occurring at a very slow rate. This is because the H₂O₂ was decomposing on its own, but at a very slow rate. When we added

Time (s)	0	15	30	45	60	75	90	105	120
1.5% H_2O_2	22	26.1	26.9	28.9	26.5	26.2	26.2	26.1	26
3% H_2O_2	23	29.1	30	29.9	29.1	29	28.9	28.5	28.2
6% H_2O_2	23	34	37	36.5	36	35.1	34.9	34.1	33.9
10% H_2O_2	23	38	43	42	41	40	39	38	37.5

Table 3: Table of Measurements over Time for Procedure C

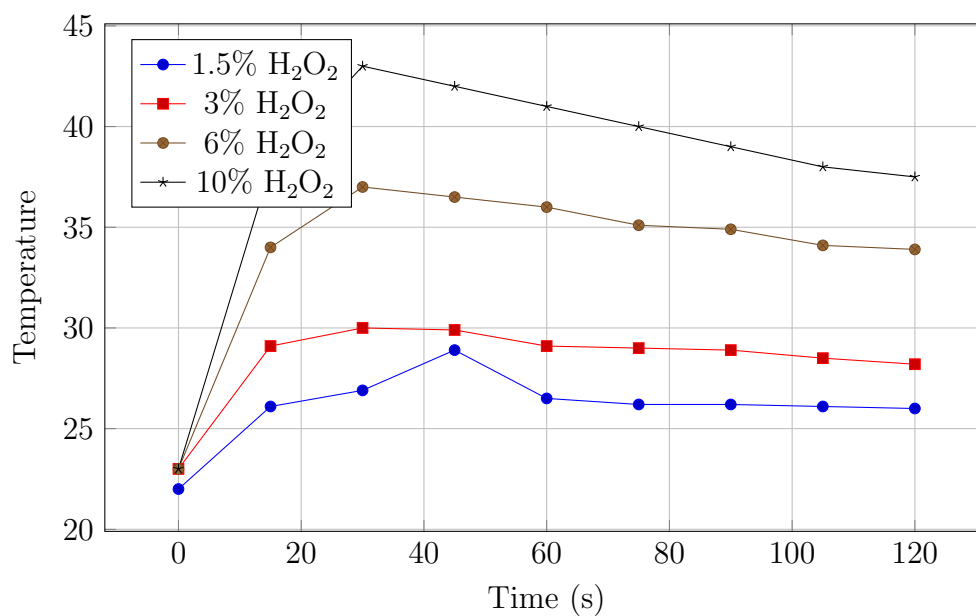


Figure 3: Graph of Measurements over Time for Procedure C

the enzyme, the reaction rate increased significantly because the enzyme was able to catalyze the decomposition of H_2O_2 into water and oxygen gas.

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