Enzyme Lab

Explanation:

Enzymes, substrates, active sites, inhibitors

Equipment and how to use it

Graphing

Testing

Effect of concentration on enzyme activity

Effect of temperature on enzyme activity

Effect of pH on enzyme activity

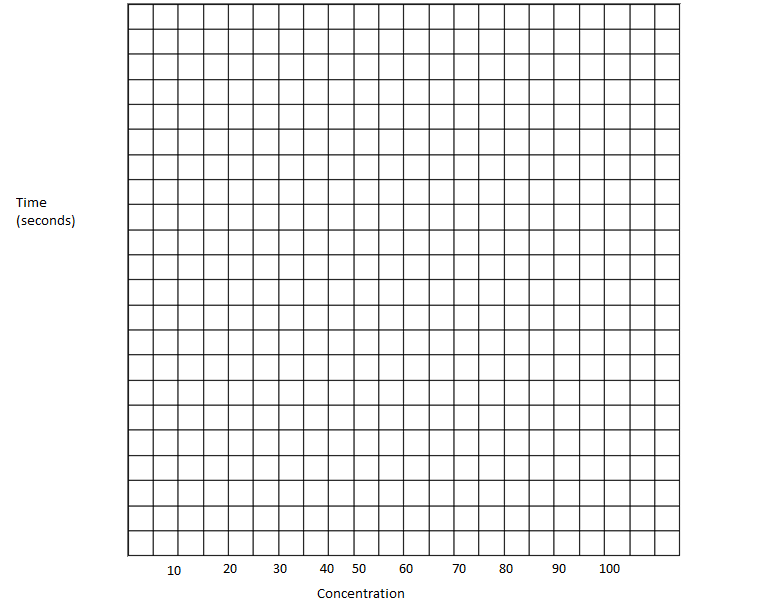
Questions About the experiments

Data Sheet for Enzyme Lab

Enzymes and concentration

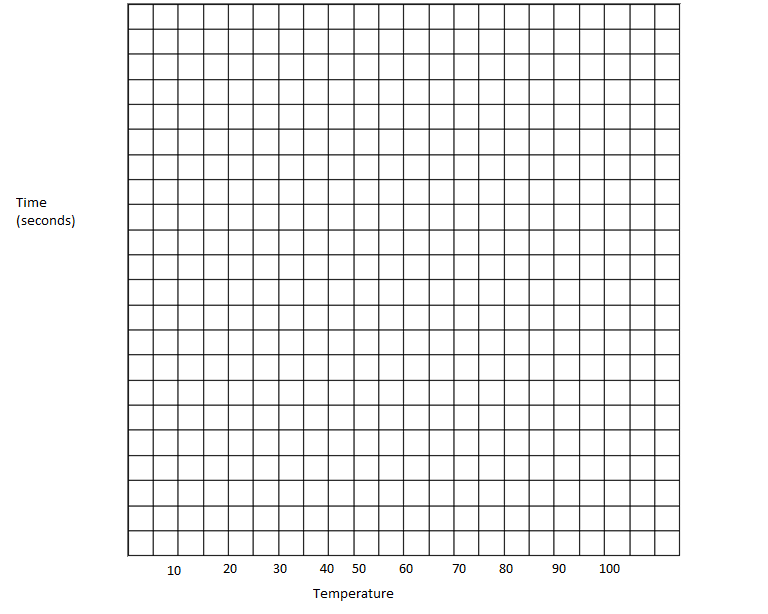
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Conc. | Mixing | H2O2 | RPM | Time for 15 ml O2 | Total amount/time |
| 100% | 10 ml enzyme |  |  |  |  |
| 70% | 7 ml enzyme + 3 ml ringers |  |  |  |  |
| 50% | 5 ml enzyme + 5 ml ringers |  |  |  |  |
| 30% | 3 ml enzyme + 7 ml ringers |  |  |  |  |

Graph your data



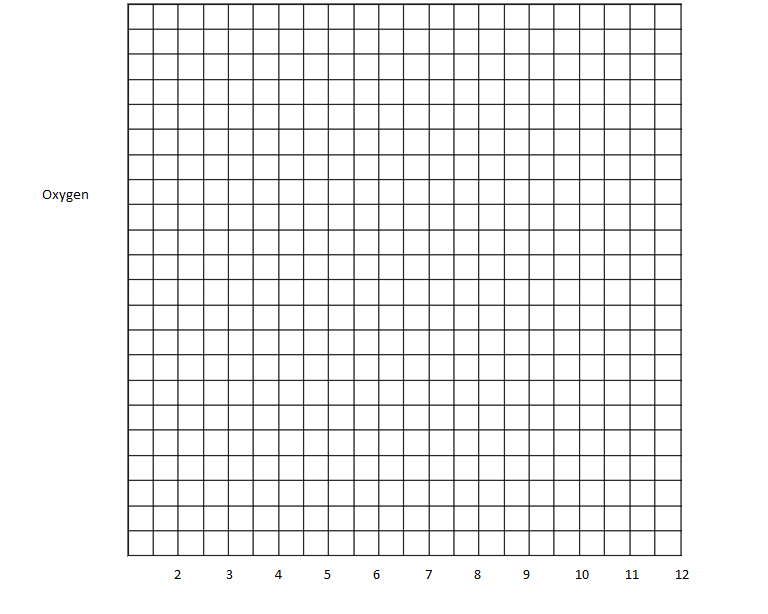
Enzyme temp

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | °C | H2O2 | RPM | Time for 15 ml O2 | Total amount/time |
| Room temp |  |  |  |  |  |
| Warm |  |  |  |  |  |
| hot |  |  |  |  |  |



Enzyme at pH

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test | pH | H2O2 | RPM | Time for 15 ml O2 | Total amount/time |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |
|  |  |  |  |  |  |



Summary Questions

What is an enzyme

What does it do

How does it work

What was the most active concentration

What was the least active concentration

What was the most active temperature

What was the least active temperature? Why?

What was the most active pH range?

What was the least active concentration?

When do enzymes work best?