

Bao kha

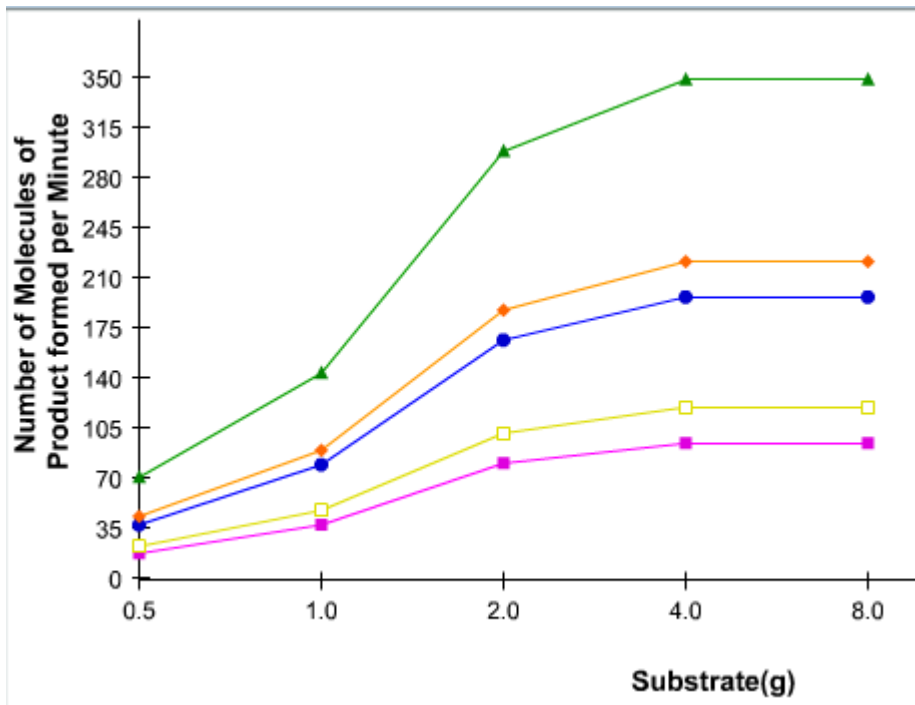
Lab Partners: Harry, Noah, Titan.

LAB REPORT 3-ENZYME ACTIVITY

Honor Code: On my honor, I have neither received nor given any unauthorized aid on this assignment. –Kha

Data:

Amount of Substrate	pH3	pH5	pH7	pH9	pH11
0.5 g	19	39	72	45	24
1.0 g	39	81	145	91	49
2.0 g	82	168	300	189	103
4.0 g	96	198	350	223	121
8.0 g	96	198	350	223	121



Discussion:

- 1) As the substrate goes higher, it would take a longer time for the molecule to form. It is not a linear relationship.
- 2) The highest is 4.0 and 8.0 which is 350 formed molecule per minute
- 3) The maximum initial rate cannot be reached at low lactose concentration because as the lactose goes low, the initial reaction also goes slower, if the lactose goes higher, the initial reaction also goes higher
- 4) The best pH level for the initial reaction rate is at pH7 because 350 product is formed per minute
- 5) The temperature should be kept at one temperature because heat will speed up the molecules while if it is colder, it would slower the speed of the reaction down, because of this fact, we can know that the temperature will affect the speed and the speed will affect the reaction.
- 6) The special consideration the producer of this product needs to concern is about the environment of the user. If the user lives in a tropical place (which is warmer) the reaction would be different; so as the cold areas, also they also need to concern about the acidity.

Important Facts (Include to let readers know):

Materials:

- 1) Lactose
- 2) 5 tubes with different pH
- 3) (If you do this on a computer) you should only need a program for your materials
- 4) Computer

Procedure 1

- 1) Have 5 test tubes with a pH of 7
- 2) Put 0.5 lactose in tube 1, 1 in tube 2, 2 in tube 3, 3 in tube 4, 4 in tube 5.
- 3) Click the computer to see the data and record.

Procedure 2

- 1) Have 5 test tubes with some pH 9 or 11 and the rest 3 or 5. The last tube will have a pH of 7
- 2) Keep the lactose even, do not change the lactose
- 3) Click the computer to see the data and record.