Name: Score:

8 Multiple choice questions

Term 1 of 8

Did freezing have any effect on the activity of pectinase? Explain.

- Yes, the results using enzyme that had been previously boiled were less than the control (1.0 ml enzyme at 22℃) and were relatively similar to the negative control.
- Yes. The results using enzyme that had been previously frozen resulted in less product than using the same quantity of normal pectinase, both incubated at 22℃.
- Incubation at 4C and 22℃ resulted in essentially the same amount of product compared to incubation at 37℃. All had 1.0 ml of normal pectinase.
- Yes, the result was much less than the control applesauce with 1.0 ml enzyme incubated at 22℃

Term 2 of 8

What is the role of the intercalated disks in the function of cardiac muscle tissue?

- the negative control confirms there is no contamination in the reagents. in most experiments this should yield no product (negative result). in this case it also indicates how much juice can be separated from plain applesauce. the positive control confirms that the reagents are working. results from the two experiments should be remarkably different.
- yes, the results using enzyme that had been previously boiled were less than the control (1.0 ml enzyme at 22℃) and were relatively similar to the negative control.
- support synchronized contraction
- Very little. Likely most binding sites for enzyme occupied with 0.5 ml of pectinase.

Term 3 of 8

Why is it necessary to include twocontrols (positive and negative) in the study?

- The negative control confirms there is no contamination in the reagents. In most experiments this should yield no product (negative result). In this case it also indicates how much juice can be separated from plain applesauce. The positive control confirms that the reagents are working. Results from the two experiments should be remarkably different.
- 37℃, because all the complex carbohydrates had been digested into disaccharides. 22℃ is an acceptable temperature condition but not the best because some complex carbohydrates remain.
- Incubation at 4C and 22℃ resulted in essentially the same amount of product compared to incubation at 37℃. All had 1.0 ml of normal pectinase.
- Very little. Likely most binding sites for enzyme occupied with 0.5 ml of pectinase.

Term 4 of 8

What temperature condition was best for the activity of pectinase? Explain.

- Incubation at 4C and 22℃ resulted in essentially the same amount of product compared to incubation at 37℃. All had 1.0 ml of normal pectinase.
- Yes. The results using enzyme that had been previously frozen resulted in less product than using the same quantity of normal pectinase, both incubated at 22℃.
- Very little. Likely most binding sites for enzyme occupied with 0.5 ml of pectinase.
- 37℃, because all the complex carbohydrates had been digested into disaccharides. 22℃ is an acceptable temperature condition but not the best because some complex carbohydrates remain.

Term 5 of 8

What temperature condition represented above is best for the activity of amylase? Explain.

- The negative control confirms there is no contamination in the reagents. In most experiments this should yield no product (negative result). In this case it also indicates how much juice can be separated from plain applesauce. The positive control confirms that the reagents are working. Results from the two experiments should be remarkably different.
- 37℃, because all the complex carbohydrates had been digested into disaccharides. 22℃ is an acceptable temperature condition but not the best because some complex carbohydrates remain.
- Incubation at 4C and 22℃ resulted in essentially the same amount of product compared to incubation at 37℃. All had 1.0 ml of normal pectinase.
- Very little. Likely most binding sites for enzyme occupied with 0.5 ml of pectinase.

Term 6 of 8

What influence did the quantity of enzyme have on the amount of filtrate produced?

- A significant increase. more enzyme led to more binding sites available.
- No effect at all. the amount of enzyme does not influence filtrate production.
- Very little. Likely most binding sites for enzyme occupied with 0.5 ml of pectinase.
- Complete inhibition. excess enzyme completely blocked the reaction.

Term 7 of 8

Did boiling have any effect on the activity of pectinase? Explain.

- Yes, the result was much less than the control applesauce with 1.0 ml enzyme incubated at 22℃
- Yes, the results using enzyme that had been previously boiled were less than the control (1.0 ml enzyme at 22℃) and were relatively similar to the negative control.
- Incubation at 4C and 22℃ resulted in essentially the same amount of product compared to incubation at 37℃. All had 1.0 ml of normal pectinase.
- Yes. The results using enzyme that had been previously frozen resulted in less product than using the same quantity of normal pectinase, both incubated at 22℃.

Term 8 of 8

Did the lack of acidic preservative (higher pH) have any effect on the activity of pectinase? Explain.

- Yes, but the effect was negligible and did not alter the outcome.
- No, the activity increased significantly compared to the control applesauce.
- Yes, the result was much less than the control applesauce with 1.0 ml enzyme incubated at 22℃
- No, the lack of acidic preservative had no measurable impact on enzyme activity.