. *BIOLGY EXPERIMENTS*

EXPERI!ENTS ABOUT ENZYMES

AN EXPERIMENT TO FIND THE OPTIMAL PH OF AN ENZYME

A. *procedure*

· mix pepsin and egg white

· pour them in six tubes each placed at different PH from 1 to 6

· set the test tube in water

Results

· the test tube with clearest mixture is the optimum PH

C. *conclusion*

· since enzyme work best at optimum PH, therefore , the tube with clearest mxtutre indicate the optimal PH as enzyme has worked effciently .

AN EXPERIMENT TO SHOW THE EFFECT OF TEMPERATURE ON ENZYME ACTIVITY

A. *procedure*

i. place 2 of starch soln. in three test tubes labeled A, B and C

ii.to each test tube add 1 of saliva(saliva amylase)

iii. immerse test tube A into a beaker containing cold water with the blocks, using

thermometer put the temperature at

iv. put the second test tube in water bath maintained at

v. boil the content of the 3 test tube

rd

vi. test the contents of 3 test tubes by using iodine solution

B.results

ü the results would show that in test tube A- iodine turns blue black , the enzymes are

inactive and unable to digest starch

ü in test tube B- iodine solution will turn brown enzymes have digested the

starch,enzymes work best at a temperature of 37 degrees

ü in test tube C- iodine turns blue black , the enzymes were unable to digest starch , since

boiling denatured them

C.conclusion

ü the results show that enzymes activity is affected by temperature with 37 degrees as its

best temperature

EXPERIMENT OF ENZYME WHICH DIGEST STARCH ON GERMINATING BEAN SEED

Procedure

1. crush the germinating bean seed in a mortar

2. add water to obtain(enzyme) extract

3.put starch soln. in test tube A and B

4.in a test tube A add extract ,but leave test tube B in intact

5.leave both test tube to stand for some time

6.later add drops of iodine soln. to both test tubes and observe color change

Results

ü in test tube A-there will be brown color. This show that there's no starch present

ü in test tube B –you will observe blue black color. This change indicate presence of

starch

C.conclusion

ü these result lead to a conclusion that the germinating bean seeds contain an enzyme

which digested starch in test tube A

*AN EXPERIMENT TO SHOW THAT ENZYMES ARE SENSITIVE TO PH(EFFECT OF PH ON ENZYMES

ACTIVITY)*

Action Of Saliva On Starch

Procedure

1.take 2 test tubes and label them A and B

2.Put saliva in both test tube A and B

3.Add 2 drops of hydrochloric acid in test tube A and wait for few minute to allow the HCL

destroy active site of enzymes

4.add starch e.g maize flour in both test tubes A and B and shake them

5.leave the mixture to stand for few minutes

6.add iodine soln. to both test tubes and shake them well

7.leave the mixture to stand for few minutes

Results

ü result would show that iodine will turn blue black in test tube A while

brown in test tube B

Conclusion

ü the enzymes is sensitive to PH as it was unable to digest starch in test

tube A where the condition was acidic