

Tube 3-5 on the experimental tubes

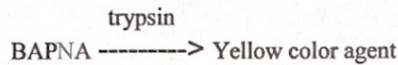
Did a color change happen
 on what color spectrum did color change occur
 why did color change occur
 Trypsin Breakdown of Protein

INTRODUCTION

The following exercise is modified from Exercise 39: Chemical Breakdown of Food.

In this exercise, you are going to observe the breakdown of BAPNA (N-alpha-benzoyl-L-arginine-p-nitroanilide, a protease indicator) by trypsin under several different conditions.

This reaction can be written as follows:



- 1) Is the reaction faster in the presence of the enzyme than without it?
- 2) Whether or not the enzyme performs as well after it has been boiled at 100° C or at 0° C.

MATERIALS

- Rack of test tubes
- Hot plate
- Large beaker for boiling
- Disposable droppers
- Trypsin solution
- BAPNA solution
- Distilled water
- Marker

Trypsin-BAPNA Reaction:

Tube	Milliliters (mls)			Incubation	
	Water	BAPNA	Trypsin	Direction	Color
1	2	0	2	Incubate at 37°C for 1 Hour. Record color.	
2	2	2	0	Incubate at 37°C for 1 Hour. Record color.	
3	0	2	2	Boil trypsin for 4 min; Incubate at 37°C for 1 Hour. Record color.	light yellow faint yellow
4	0	2	2	Incubate at 37°C for 1 Hour. Record color.	light yellow faint yellow
5	0	2	2	Incubate at 0°C for 1 hour. Record color.	the faintest yellow

Control: has enzyme
 Control: has protein
 experimental tubes

should be no color change
 should be no color change

Why are we looking at enzyme breakdown as essential
 How does this affect healthcare