Tube 3-5 are 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:

$$\text{BAPNA} \xrightarrow{\text{trypsin}} \text{Yellow color agent}$$

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:

	Milliliters (mls)			Incubation	
Tube	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

should be no color change

should be no color change

experimental tubes

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