

# Edexcel (A) Biology A-level

## CP12 - Temperature and the rate of enzyme catalysed reactions

### Flashcards

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What are the four factors affecting rate of enzyme reaction?



What are the four factors affecting rate of enzyme reaction?

Enzyme concentration

Substrate concentration

Temperature                      pH



# What is the temperature coefficient?



## What is the temperature coefficient?

The change in rate of reaction caused by a 10 degree increase in temperature

Formula:  $\text{rate at } T+10 / \text{rate at } T$



How can you measure the rate of reaction using hydrogen peroxide and catalase?



How can you measure the rate of reaction using hydrogen peroxide and catalase?

Measure the volume of oxygen gas produced in a given time



# What is a limitation of Q10?





## What is a limitation of Q10?

It can only be used up to the optimum temperature.



State the word equation for the action of catalase.



State the word equation for the action of catalase.

Hydrogen peroxide  $\rightarrow$  Oxygen + Water



What are the controlled variables of this practical?



What are the controlled variables of this practical?

Enzyme volume and concentration

Substrate volume and concentration

pH



State the hazards and safety precautions involved in this practical.



State the hazards and safety precautions involved in this practical.

Hydrogen peroxide is an irritant. Wear eye protection and avoid contact with skin.

Take care in handling hot water baths, and wash hands after handling peas/ source of catalase.

