OCR (B) Biology GCSE

PAG 04 - Enzyme-controlled reactions

Flashcards

Write the word equation for the action of catalase.

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Hydrogen peroxide → Water + Oxygen

How is the rate of catalase activity indicated?

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By measuring the volume of oxygen gas released in a fixed time.

What is the function of potato in this practical?

What is the function of potato in this practical?

It provides the source of catalase.

State the independent variable of this practical and how it is varied.

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Concentration of hydrogen peroxide.

By making a simple dilution through mixing with distilled water in the correct proportions.

State the controlled variables of this practical.

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Temperature pH

Volume of hydrogen peroxide solution

Time allowed to measure gas volume

Length and width of potato discs

How is the apparatus set up to measure the volume of gas produced?

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Fill a trough with water. Invert a measuring cylinder and place in the trough, and make sure it is full of water.

Connect the measuring cylinder to a conical flask with a delivery tube.

Why must the bung connecting the conical flask and measuring cylinder be airtight?

Why must the bung connecting the conical flask and measuring cylinder be airtight?

So that all of the gas produced by an enzymatic reaction displaces the water in the measuring cylinder.

How is the rate of reaction calculated?

How is the rate of reaction calculated?

Rate of reaction = volume of gas produced / time

State the hazards and safety precautions involved in this practical.

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Hydrogen peroxide is an irritant, wear safety goggles and avoid contact with skin.

Take care when handling the sharp cork borer and scalpel.