

Starch hydrolysis test reagent

S1508169

Storage: Room Temperature. Store in the dark.

Shipping: Normal.

Introduction:

Bacterial biochemical tests (also known as biochemical reactions) refer to the process of determining metabolic products through biochemical methods. This is based on the fact that different bacteria possess distinct enzyme systems, leading to varying abilities to decompose substrates and thus producing different metabolic products. Biochemical tests mainly include carbohydrate biochemical tests, amino acid and protein metabolism tests, carbon and nitrogen source utilization tests, enzyme metabolism tests, etc. Different bacteria exhibit different capacities for protein decomposition. Generally, extracellular enzymes first break down proteins into short peptides or amino acids, which then enter bacterial cells and are further decomposed into amino acids by intracellular enzymes.

The basic principle of the reagents for the starch hydrolysis test is as follows: if a microorganism can produce amylase (an extracellular enzyme), it can hydrolyze the starch in the culture medium into maltose, glucose, and other substances, which are then absorbed and utilized by the cells. After starch is hydrolyzed, it no longer turns blue when exposed to iodine. This principle is used to determine whether certain bacteria have the ability to decompose starch. This reagent is for research use only and is not suitable for clinical diagnosis or other applications.

Materials to Be Prepared by the User:

1. Starch culture medium.
2. Inoculation loops, constant temperature incubator.

Operating Procedures (For Reference Only):

1. Inoculate the test bacteria onto the starch culture medium plate and incubate it in a constant temperature incubator at 37°C for 2–3 days.
2. Open the Petri dish, add the reagent for the starch hydrolysis test, and gently shake the dish to ensure the iodine solution evenly covers the entire surface of the medium.
3. Observe whether a colorless transparent zone appears around the colonies and measure the size of the zone. A larger transparent zone indicates a stronger starch-hydrolyzing ability of the bacteria.

Staining Results:

A colorless transparent zone is present	Positive
No change observed	Negative

Precautions:

1. When culturing bacteria, care should be taken to avoid cross-contamination.
2. The reagent should be stored in a sealed container. Once opened, its shelf life will be significantly shortened.
3. For your safety and health, please wear a lab coat and disposable gloves during operation.
4. Please use the opened reagent as soon as possible to prevent it from affecting the results of subsequent experiments.

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