

Kovac Reagent

K1506554

Storage: Room Temperature. Store in the dark.

Introduction:

Bacterial biochemical tests (also referred to 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 vary in their capacity to decompose proteins. Generally, extracellular enzymes first break down proteins into short peptides or amino acids. After these substances enter bacterial cells, intracellular enzymes further decompose the peptides into amino acids. This decomposition process can be detected via amino acid and protein metabolism tests, among which the indole test is a typical example of such tests. The principle of the indole test is that certain bacteria with tryptophanase can decompose tryptophan in peptone water to produce indole (indican). Indole combines with p-dimethylaminobenzaldehyde to form a red compound called rosindole.

Aladdin Kovac's Reagent, also known as Kovac's Reagent or Indole Reagent, works on the principle that tryptophanase contained in microorganisms can decompose tryptophan in peptone into indole. Colorless indole reacts with p-dimethylaminobenzaldehyde to form red rosindole. Kovac's Reagent is particularly suitable for the identification of Enterobacteriaceae, non-fermenting bacteria, parasitic bacteria, and anaerobic bacteria. This reagent is intended for research use only and not for clinical diagnosis or any other purposes.

Materials to be Prepared by the User:

1. Test tubes.
2. Peptone water medium.
3. Constant-temperature incubator.

Operating Procedures (For Reference Only):

1. Inoculate the test bacteria into the culture medium and incubate it in a constant-temperature incubator.
2. Slowly add Kovac Reagent along the inner wall of the test tube, then shake the tube thoroughly to extract and concentrate indole. A red color indicates a positive result, while a colorless appearance indicates a negative result.

Note: Do not shake the tube again after adding the indole reagent; otherwise, the liquid interface will mix, and the red ring will become indistinct.



Staining Results:

Red	Positive
No color change	Negative

Precautions:

1. Avoid contamination when culturing bacteria.
2. Do not shake the tube again after adding the indole reagent.
3. Kovac Reagent is intended for research purposes only and not for clinical diagnosis.
4. For your safety and health, wear a lab coat and disposable gloves during operation.
5. This product is strictly for research use only, and any other use is prohibited.

