V02

Ehrlich 试剂

货号：G1290
规格：100mL/500mL
保存：室温，避光保存，有效期 6 个月。

产品介绍：

细菌的生化试验(也称生化反应)是指由于不同细菌具有各自的酶系统，对底物的分解能力不同，由此产生的代谢产物也不同，通过生物化学的方法测定这些代谢产物的过程。生化试验主要包括碳水化合物的生化试验、氨基酸和蛋白质的代谢试验、碳源和氮源的利用试验、酶类的代谢试验等。不同的细菌对蛋白质的分解能力不同，一般先由胞外酶把蛋白质分解为短肽或氨基酸，侵入细菌体内后由胞内酶把肽类分解为氨基酸。这一分解过程可以通过氨基酸和蛋白质的代谢试验来检测，其中吲哚试验就是典型的过氨基酸和蛋白质的代谢试验。吲哚试验原理是某些具有色氨酸酶的细菌能够分解蛋白胨水中的色氨酸生成吲哚(靛基质)，吲哚与对二苯甲氨基甲醛结合，形成红色化合物玫瑰吲哚。

Ehrlich 试剂的有效成分为对二苯甲氨基甲醛，加入 Ehrlich 试剂后形成红色的玫瑰吲哚。Ehrlich 试剂特别适用于肠杆菌科细菌、非发酵菌、寄养性细菌、厌氧菌的鉴定。

自备材料：

试管、蛋白胨水培养基、恒温培养箱

操作步骤：(*仅供参考*)

1. 将待检细菌接种于培养基，置于恒温摇床37℃培养24-48小时至对数期。
2. 根据试管或离心管的容积确定分装菌的体积，一般保证菌液在容积的1/4-1/2之间，5ml左右。
3. （可选）沿试管壁缓慢加入少量氯仿或异戊醇，摇匀试管以便提取和浓缩吲哚，静置直至有机层分层（异戊醇在上、氯仿在下）。（见注意事项2）
4. 沿管壁缓慢加入0.2-0.4ml Ehrlich试剂，观察有机层的颜色变化。

染色结果：

阳性	红色
阴性	颜色无变化

注意事项：

1. 培养细菌时，注意避免污染。
2. 有机溶剂仅为萃取作用，鉴于试剂本身具有一定危险性，本步骤可省略。
3. Ehrlich试剂仅用于科研目的，不可用于临床诊断。
4. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Tel: 400-968-6088 https://www.solarbio.com E-mail: sales-china@solarbio.com
Address: No. 85, Liandong U Valley, Middle Zone, 101102, Tongzhou Dist, Beijing, China

Ehrlich Reagent

Cat: G1290
Size: 100mL/500mL
Storage: RT, avoid light,valid for 6 months.

Introduction

Biochemical test of bacteria refers to the experimental method of strain identification by measuring the type and production rate of substrates through biochemical methods, using different bacteria with different decomposition abilities of substrates and different properties of metabolites. Indole test is a typical metabolic test of amino acids and proteins. The principle of indole test is that some bacteria with tryptophan enzyme can decompose tryptophan in peptone to produce indole (indole matrix), which combines with substrate to form red compound rose indole.

The active ingredient of Ehrlich Reagent is para-Dimethylaminobenzaldehyde. The principle of Ehrlich Reagent is that some bacteria with tryptophanase can decompose tryptophan in peptone to product indole (matrix). Then indole binds to para-Dimethylaminobenzaldehyde to form the red rosindole. Ehrlich Reagent is especially suitable for the identification of Enterobacteriaceae, non-fermenting bacteria, foster bacteria and anaerobic bacteria.

Self provided materials

Test tube, Peptone Medium, Constant temperature incubator

Protocol(*for reference only*)

1. Inoculate the bacteria to be tested into the culture medium and place them in a constant temperature shaking table at 37 ℃ for 24-48 hours to logarithmic period.
2. Determine the volume of the subpackaged bacteria according to the volume of the test tube or centrifuge tube, and generally ensure that the bacterial solution is between 1/4-1/2 of the volume, about 5ml.
3. (Optional) Slowly add a small amount of chloroform or isoamyl alcohol along the tube wall, shake the tube evenly to extract and concentrate indole, and let it stand until the organic layer is layered (isoamyl alcohol on top and chloroform on the bottom).(See Note 2)
4. Slowly add 0.2-0.4ml Ehrlich reagent along the tube wall and observe the color change of the organic layer.

Result

Positive	Red
Negative	No change in color

Note

1. When culturing bacteria, pay attention to avoid pollution.
2. The organic solvent is only for extraction. In view of the certain danger of the reagent itself, this step can be omitted.
3. Ehrlich Reagent is only used for scientific research purposes, but not for clinical diagnosis.
4. For your safety and health, please wear experimental clothes and disposable gloves.