鞭毛染色液（Leifson 法）

货号：G1135
规格：3×50mL
保存：2-8℃，避光保存，有效期 6 个月。

产品组成：

名称	3×50mL	保存
试剂(A)： Leifson 缓冲液	50mL	2-8℃
试剂(B)： Leifson 稀释液	50mL	2-8℃
试剂(C)： 复红染色液	50mL	2-8℃，避光
临用前，按试剂(A)：(B)：(C)=1：1：1 混合，即为 Leifson 染色液，立即使用，不宜久置。		

产品介绍：

细菌鞭毛是细菌的运动器官，幽门螺杆菌能够从强酸性的胃内腔穿过胃上皮细胞上的黏液层达到胃上皮细胞的中性环境，这就是鞭毛运动作用的很好例证。通过鞭毛染色，可以观察到鞭毛形态、数量和鞭毛在菌体分布的位置，鞭毛数量和在菌体上的分布位置是鉴定细菌的重要依据之一。

鞭毛染色液(Leifson 法)采用 Leifson 法，又称利夫森氏染色(Leifson's flagella stain)法，试剂比较灵敏，操作简单，结果判断更可靠。

自备材料：

酒精灯、载玻片、蒸馏水、接种环、显微镜

操作步骤：（*仅供参考*）

1. 在洁净无油脂的载玻片上滴加蒸馏水。
2. 用接种环挑取无菌蒸馏水，再与血平板上菌落接触，允许细菌游到接种环蒸馏水中，再将接种环移到玻片上蒸馏水顶部轻点数次。
3. 轻轻摇动玻片，使细菌分布均匀。切勿研磨和搅动，以防鞭毛脱落。
4. 滴加刚配制的 Leifson 染色液于载玻片上染色，当染色液的一半以上面积出现金属光泽膜时，一般染色 3-10min，用蒸馏水轻轻冲洗染色液，自然干燥。
5. 镜检：从涂片边缘开始，由外及里，逐渐移至中心。细菌分布少的地方，鞭毛容易观察。细菌密集的地方，鞭毛被菌体挡住，不易观察。

染色结果：

菌体和鞭毛	不同程度的红色

注意事项：

1. 玻片应洁净，无油污。
2. 染色的菌种应连续传代多次，处于生长活跃期。
3. 染色过程应小心操作，防止鞭毛脱落。
4. 配制好的 Leifson 染色液不宜久置，尽量在 2h 内使用。
5. 固定时不宜用高热火焰固定。
6. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Flagella Stain Kit(Leifson Method)

Cat: G1135
Size: 3×50mL
Storage: 2-8℃, avoid light, valid for 6 months.

Kit Components

Reagent	3×50mL	Storage
Reagent(A): Leifson buffer	50mL	2-8℃
Reagent(B): Leifson Diluent	50mL	2-8℃
Reagent(C): Fuchsin Solution	50mL	2-8℃, avoid light
Before use, mix Reagent (A):(B):(C) with the radio of 1:1:1 to form Leifson Staining Solution. Use it immediately, not for a long time.		

Introduction

Bacterial flagellum is the motor organ of bacteria. Helicobacter pylori can pass through the mucus layer of gastric epithelial cells from the strongly acidic gastric cavity to the neutral environment of gastric epithelial cells, which is a good example of flagellum movement. Flagella morphology, quantity and location of flagella in bacteria can be observed by flagella staining. Flagellum quantity and its distribution on bacteria are one of the important bases for identifying bacteria.

This kit uses Leifson method, also known as Leifson's flagella stain method. The reagent is more sensitive, the operation is simple and the result is more reliable.

Self Provided Materials

Alcohol Lamp, Slide, Distilled Water, Inoculation Ring, Microscope

Protocol(*for reference only*)

1. Drop 2 drops of distilled water on a clean, fat-free slide.
2. Select the sterile distilled water with the inoculation ring, then contact the colony on the blood plate, allow the bacteria to swim into the inoculation ring distilled water, and then move the inoculation ring to the top of the distilled water on the slide twice.
3. Shake the slide to distribute the bacteria evenly. Do not grind and stir with the slide to avoid flagella falling off.
4. Drip Leifson Staining Solution on the slide. When more than half of the area of the Leifson Staining Solution appears metallic gloss film, generally dye for 3-10 min. Gently wash the staining solution with distilled water and air-dry naturally.
5. Microscopic examination should begin at the edge of the smear and gradually move to the center from the outside to the inside. Where bacteria are less distributed, flagellum is easy to observe. Where bacteria are concentrated, flagellum is blocked by fungi and is not easy to observe.

Result

Thalli and Flagellum	Red in Different Degree

Note

1. Slides should be clean and free from oil pollution.
2. The bacteria sample for staining must be in the active stage of growth, which should be successive subculture for many times.
3. Operate carefully in the dyeing process to prevent flagella falling off.
4. The prepared Leifson Staining Solution should be used within 2 h as far as possible avoid storing for a long time.
5. It is not appropriate to fix with high-temperature flame.
6. For your safety and health, please wear experimental clothes and disposable gloves.