

花粉活力染色液(I₂-KI 法)

货号: G4801

规格: 50mL

保存: 2-8°C, 避光保存, 有效期 1 年。

产品介绍:

花粉活力的高低直接影响授粉、受精过程, 与植物的产量密切相关, 通过花粉活力的测定, 可了解花粉的发育, 并掌握不育花粉的形态、生理特征。花粉中所含淀粉的有无和多少可以作为判断花粉发育程度的指标, 大多数正常成熟的花粉呈球形, 含有较多淀粉, 遇见 I₂-KI 溶液可被染成蓝色; 发育不良的花粉常呈畸形, 通常不含淀粉或含淀粉少, 遇见 I₂-KI 溶液不会被染色或被染成黄褐色, 根据花粉染色情况, 可鉴别花粉的活力。

操作步骤: (仅供参考)

1. 取成熟将要开放的新鲜花朵, 小心去除花瓣和雌蕊。
2. 将花药物质置于载玻片, 滴加一滴蒸馏水, 用镊子或其他工具将花药捣碎, 使花粉粒释放出来。
3. 滴加 1-2 滴花粉活力染色液(I₂-KI 法), 盖上盖玻片, 显微镜下观察。
4. 观察 2-3 张片子, 每片取 5-6 个视野, 统计花粉的染色率。

染色结果:

活力强	黄褐色到黑色
活力弱	淡黄色或淡蓝色
无活力或不育	无色

计算:

观察统计 100 粒花粉, 计算有活力花粉的百分数。

其公式为: 花粉活力百分数(%)=有活力花粉数/100×100%

注意事项:

1. 染完色后, 应立即显微镜下观察。
2. 染色时需要将花粉完全浸没于染色液中。
3. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

Pollen Viability Stain Solution (Iodine-Potassium Iodide Method)

Cat: G4801

Size: 50mL

Storage: 2-8°C, avoid light, valid for 1 year.

Introduction

The activity of pollen directly affects the process of pollination and fertilization, which is closely related to the yield of plants. Through the determination of pollen vigor, we can understand the development of pollen and master the morphological and physiological characteristics of sterile pollen. Whether and how much starch contained in pollen can be used as an indicator to judge the degree of pollen development. Most normal mature pollen is spherical and contains more starch. When meeting I₂-KI solution, it can be dyed blue; when meeting I₂-KI solution, the pollen with poor development is often deformed, usually does not contain starch or contains less starch. When meeting I₂-KI solution, it will not be dyed or stained yellow brown. According to the staining of pollen, the activity of pollen can be identified.

Protocol (for reference only)

1. Take fresh flowers that are about to open when they are ripe. Carefully remove petals and pistils.
2. Put the anther on the slide, add a drop of distilled water, and use tweezers or other tools to crush the anther to release the pollen.
3. Add 1-2 drops of Pollen Viability Stain Solution (Iodine-Potassium Iodide Method), cover the cover glass, and observe under the microscope.
4. Observe 2-3 pieces, take 5-6 visual fields from each piece, and count the staining rate of pollen.

Result

Strong Vitality	Yellowish Brown or Black
Low Vitality	Pale Blue or Yellow
No Vitality or Sterility	Colourless

Calculation

Observe and count 100 pollens and calculate the percentage of active pollens.

The formula is: percentage of pollen activity (%) = number of active pollen / 100 × 100%

Note

1. After dyeing, observe under microscope immediately.
2. It is necessary to immerse the pollen completely in the staining solution.
3. For your safety and health, please wear experimental clothes and disposable gloves.