V02

# 植物胼胝质染色液（苯胺蓝法）

**货号：**G4805
**规格：**50mL
**保存：**室温，避光保存，有效期 1 年。

## 产品组成：

| 名称 | 50mL | 保存 |
|---|---|---|
| 试剂(A):浓缩液 | 10mL | 室温，避光 |
| 试剂(B):稀释液 | 40mL | 室温 |
| 试剂 A、B 按照 1：4 的比例混合即为胼胝质染色工作液，现配现用，注意避光。 | | |

## 产品介绍：

胼胝质（callose）是一种以β-1,3-键结合的葡聚糖。在植物的筛管代谢、配子体发育等生命活动中发挥着重要的调节作用，其合成、分解直接关系植物正常的生长代谢过程，因此，胼胝质的代谢是植物研究中的重要内容。

植物胼胝质染色液（苯胺蓝法）利用苯胺蓝可特异性和植物胼胝质结合，在特定波长下激发出荧光的原理进行染色，试剂操作简单快捷。

## 自备材料：

AAF 固定液或 Carnoy 固定液、50%乙醇、无水乙醇、1×PBS

## 操作步骤：（*仅供参考*）

1. 新鲜植物组织切成 2mm 左右的薄片，植物叶片推荐裁剪成 1cm*2cm，幼嫩植物叶片可直接浸于 AAF 固定液或 Carnoy 固定液固定 24 小时。（见注意事项 1）
2. 使用无水乙醇浸洗两次，每次 1 分钟，然后转入至少 10 倍体积的 100%乙醇中保存。（见注意事项 2）
3. 染色前取出组织，浸于 50%乙醇中平衡 30min，取出稍沥干。
4. 随后浸于 1×PBS 中平衡 30min，取出稍沥干。
5. 临用前配置染色工作液，组织切片滴加或浸于胼胝质染色工作液中，室温避光染色 1 小时。（见注意事项 3）
6. 于载玻片上滴加 25ul 水性明胶封片剂或抗荧光衰减封片剂，小心的将染色后的组织转移至载玻片上，继续滴加少量封片剂后封片观察。（见注意事项 4）

## 染色结果：

| | |
|---|---|
| 胼胝质（紫外下） | 亮蓝色或亮绿色荧光 |
| 背景 | 无色或淡蓝色 |

## 注意事项：

1. 在条件允许下，推荐将浸于固定液中的植物组织负压真空处理 20min，有助于固定液的渗透。
2. 如暂时不进行实验或需同时处理大量样本，浸于 100%乙醇的样本可于 2-8℃保存至少 1 周。
3. 染色液有效成分易分解，建议临用前配置，在 3 小时内使用。使用过程中可能出现试剂颜色少量变浅，属于正常现象。
4. 荧光染色容易发生光淬灭，在染色和转移以及观察过程中注意避免激发光以外的环境光。
5. 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

# Plant Callose Staining Solution(Aniline Blue Method)

**Cat:** G4805
**Size:** 50mL
**Storage:** RT, avoid light, valid for 1 year.

## Kit components

| Reagent | 50mL | Storage |
|---|---|---|
| Reagent(A):Concentrated Solution | 10mL | RT, avoid light |
| Reagent(B):Diluent Solutiuon | 40mL | RT |
| Mix reagent A and B in the ratio of 1:4, which is Plant Callose Staining Working Solution. It is ready to use. Pay attention to avoid light. | | |

## Introduction

Callose is a kind of β- 1,3-bonded glucan. It plays an important regulatory role in plant life activities such as sieve tube metabolism and gametophyte development. Its synthesis and decomposition are directly related to the normal growth and metabolism of plants. Therefore, the metabolism of callose is an important content in plant research.

Plant Callose Staining Solution (Aniline Blue Method) uses the principle that aniline blue can specifically combine with plant callose and excite fluorescence at a specific wavelength for dyeing. The reagent operation is simple and fast.

## Self Provided Materials

AAF fixative or Carnoy fixative, 50% ethanol, absolute ethanol, 1 × PBS

## Protocols*(for reference only)*

1. Cut fresh plant tissue into 2mm thin slices. Plant leaves are recommended to be cut into 1cm * 2cm. Young plant leaves can be directly immersed in AAF fixative or Carnoy fixatice for 24 hours. (*see note 1*)
2. Soak twice with absolute ethanol for 1 minute each time, and then transfer to 100% ethanol at least 10 times the volume for storage. (*see note 2*)
3. Before dyeing, take out the tissue, soak it in 50% ethanol for 30min, take it out and drain it slightly.
4. Then immerse in 1 × Balance in PBS for 30min, take it out and drain it slightly.
5. Prepare the staining solution before use, drop or immerse the tissue sections in the Plant Callose Staining Working Solution, and dye at room temperature without light for 1 hour. (*see note 3*)
6. Drop 25ul Glycerol Gelatin aqueous slide mounting medium(*S2150*) or Mounting Medium, antifading(*S2100*) on the glass slide, carefully transfer the stained tissue to the glass slide, and continue to drop a small amount of sealing agent for sealing observation. (*see note 4*)

## Result

| | |
|---|---|
| Callose(under ultraviolet light) | Bright Blue or Bright Green Fluorescence |
| Background | Non-colored |

## Note

1. If conditions permit, it is recommended to exhaust the plant tissue immersed in the fixative under negative pressure and vacuum for 20min, which is conducive to the penetration of the fixative.
2. If the experiment is not conducted temporarily or a large number of samples need to be processed at the same time, the samples immersed in 100% ethanol can be stored at 2-8 ℃ for at least 1 week.
3. The effective components of the dyeing solution are easy to decompose. It is recommended to configure it before use and use it within 3 hours. It is normal that a small amount of reagent color may become lighter during use.
4. Fluorescent dyeing is prone to light quenching. Pay attention to avoid ambient light other than excitation light during dyeing, transfer and observation.
5. For your safety and health, please wear experimental clothes and disposable gloves.