

## Methyl Green Staining Solution (2%)

### M1508541

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**Storage:** Room Temperature. Store in the dark.

#### Introduction:

Methyl Green Staining Solution (2%) is a commonly used staining solution in tissue or cell staining that colors the nucleus green. Methyl Green binds to DNA in the nucleus, resulting in nuclear staining. This staining solution can be used in combination with immunofluorescence staining or immunohistochemical staining. On one hand, immunofluorescence staining or staining with other dyes can be performed after staining with this Methyl Green solution; on the other hand, Methyl Green can also be used as a counterstain after immunohistochemical staining.

10 mL of staining solution can stain approximately 20 samples. This reagent is intended for research use only and is not suitable for clinical diagnosis or other purposes.

#### Instructions for Use:

1. Sample Processing:
  - 1.1 For Paraffin Sections:
    - Deparaffinize in xylene or dewaxing clearing solution for 5–10 minutes.
    - Replace with fresh xylene or dewaxing clearing solution and deparaffinize for another 5–10 minutes.
    - Absolute ethanol for 5 minutes.
    - 90% ethanol for 2 minutes.
    - 70% ethanol for 2 minutes.
    - Distilled water for 2 minutes.
  - 1.2 For Frozen Sections:
    - Distilled water for 2 minutes
  - 1.3 For Cultured Cells:
    - Fix with 4% paraformaldehyde for at least 10 minutes.
    - Wash with distilled water for 2 minutes.
    - Replace with fresh distilled water and wash for another 2 minutes.
2. Methyl Green Staining:
  - For the processed samples above, stain with Methyl Green Staining Solution (2%) for 5–10 minutes.
  - Rinse twice with distilled water. The samples will appear blue at this stage.
  - Treat with 95% ethanol for 5 seconds.
  - At this point, if direct observation is desired, wash twice with 70% ethanol. If dehydration, clearing, and mounting are required, proceed with the following steps. Even after washing with 70% ethanol, dehydration, clearing, and mounting can still be performed.

### 3. Staining of Tissue Sections.

- Dehydrate with 95% ethanol for 2 minutes.
- Replace with fresh 95% ethanol and dehydrate for another 2 minutes.
- Clear with xylene or dewaxing clearing solution for 5 minutes.
- Clear again with xylene or dewaxing clearing solution for 5 minutes.
- Mount with neutral balsam or other mounting medium.
- Observe under a microscope: nuclei appear green or bluish-green.

### 4. Fluorescence Staining:

- If performing immunofluorescence staining, after staining with Methyl Green Staining Solution, wash twice with 70% ethanol, 2 minutes each time.
- Dehydrate with 95% ethanol for 2 minutes.
- Soak in PBS, physiological saline, TBS, or other solutions used for immunostaining or fluorescent dye staining for 5 minutes.
- Proceed with immunofluorescence staining or other fluorescent dye staining.

### **Staining Results:**

Nuclei appear green or bluish-green.

### **Notes:**

1. Users need to prepare 4% paraformaldehyde, distilled water, graded ethanol series, xylene, etc., themselves.
2. When using this kit for the first time, it is recommended to perform a preliminary experiment with 1–2 samples.
3. Use the reagents as soon as possible after opening to avoid affecting subsequent experimental results.
4. This product is restricted to scientific research by professionals and must not be used for clinical diagnosis or treatment, nor for food or pharmaceuticals. It should not be stored in ordinary residential areas.
5. For your safety and health, please wear a lab coat and disposable gloves during operation.