

## Methyl Green Stain Solution (2%)

### Introduction

Methyl Green, also known as Duplex Green SF, is a basic dye supplied as green micro-crystals or a powder. The 2% Methyl Green Stain Solution is a common reagent used to stain nuclei in tissues and cells. It is widely used to identify DNA, which stains blue-green when bound by this dye. Additionally, this stain is suitable for use in immunofluorescence and immunohistochemistry procedures.

One 100 mL bottle typically stains up to 200 samples.

### Storage

Store at room temperature protected from light, stable for 6 months.

### Protocol

#### 1. Sample Preparation

- 1) For paraffin sections: Deparaffinize in xylene twice, 5-10 min each. Rehydrate through a graded ethanol series (100%, 95%, 85%, 75%), 3 min per step. Rinse in distilled water for 2 min.
- 2) For frozen sections: Warm to room temperature. Rinse in distilled water for 2 min.
- 3) For cultured cells: Fix with 4% paraformaldehyde for at least 10 min. Rinse twice with distilled water, 2 min each.

#### 2. Methyl Green Staining

- 1) Dilute the Methyl Green Stain Solution (2%) 2-10 times with distilled water before use.
- 2) Stain the samples with the diluted Methyl Green solution for 5-10 min.
- 3) Rinse twice with distilled water, 1 min each. Observe under a microscope or proceed with the following dehydration and mounting steps for preservation.
- 4) (Optional) If proceeding with immunofluorescence staining, buffer the sample with dye-diluting buffer (e.g., PBS, normal saline, or TBS) for 5 min.
- 5) (Optional) Perform immunofluorescence staining.
- 6) Dehydrate through a graded ethanol series, 1 min per step. Clear in xylene twice, 1 min each.

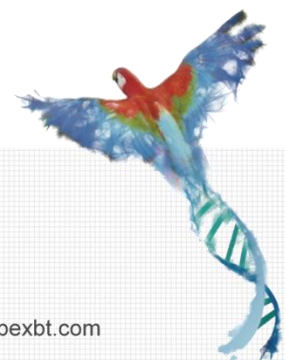
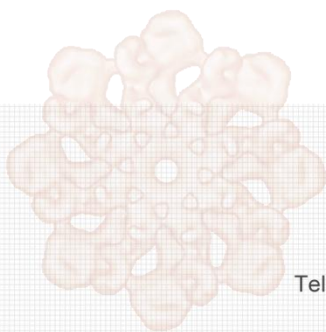
7) Mount with neutral balsam.

**3. Staining result**

Nucleus	Green or blue-green
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**Note**

1. Adjust the Methyl Green staining time according to the results and experimental requirements.
2. For your safety and health, please wear lab coats and gloves during the experiment.
3. For research use only. Not to be used in clinical diagnostic or clinical trials.



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