




Gene to Protein Pvt. Ltd.

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GreenTrack 6X Loading Dye (With GreenR)



Cat#PCRD11

Pack Size: 1mL (500 μ L X 2)

Storage: At room temperature or at 4 °C for periods up to 12 months. For longer periods, store at -20 °C.

Introduction

GreenTrack 6X Loading Dye is a premixed solution used for loading DNA samples onto agarose gels. It contains two tracking dyes, xlenecyanol FF and tartrazine, which help to monitor the progress of electrophoresis. The loading dye also contains glycerol, which makes the DNA sample denser and easier to load, and EDTA, which chelates divalent metal ions and helps to prevent DNA degradation.

Protocol

1. Prepare your DNA sample for electrophoresis by mixing it with the appropriate volume of GreenTrack 6X Loading Dye. The recommended ratio is 1:5 (v/v), meaning for every 1 part of loading dye, add 5 parts of DNA sample.
2. Load your DNA sample onto an agarose gel.
3. Run electrophoresis according to your experiment's protocol.
4. Monitor the progress of the electrophoresis by observing the migration of the DNA through the gel.
5. Once the electrophoresis is complete, visualize the DNA by staining the gel with an appropriate dye.

Component

Color: Xylene cyanol and tartrazine are used as two tracking dyes used in the loading dye which are brightly colored dyes that are easily visible during electrophoresis. Xylene cyanol is typically blue, while tartrazine is yellow.

On a 1% agarose gel, xylene cyanol and tartrazine will migrate through the gel at different rates depending on the size and charge of the DNA fragments being analyzed. Tartrazine is typically used as a faster-migrating dye, while Xylene cyanol migrates more slowly. The distance that each dye migrates through the gel can be used to estimate the size of the DNA fragments being analyzed.

During electrophoresis, the DNA fragments will migrate through the gel towards the positive electrode, driven by the electric field. As the fragments move through the gel, the xylene cyanol and tartrazine dyes will also migrate, allowing you to monitor the progress of the electrophoresis and track the migration of the DNA fragments. Once the electrophoresis is complete, the DNA bands can be visualized using a staining agent and the size of the fragments can be estimated based on their migration distance relative to the tracking dyes.

Density agent: Glycerol is used in the loading dyes as it helps to load the sample into the gel and prevents it from diffusing out of the well.

