Xpert Green DNA Stain direct

#GS02.0001 (1ml 20,000X) | GS02s (trial size)
(FOR RESEARCH ONLY)

Product: Xpert Green DNA Stain direct is a new and safe alternative to ethidium bromide (EtBr) for the visualization of DNA (double-stranded and single-stranded DNA) and RNA in agarose and polyacrylamide gels. The dye has been developed for direct loading and is compatible with both UV and Blue LED transilluminators. Xpert Green DNA Stain direct is provided as a sample loading dye. There is no need to add any dye to the gel or running buffer: just add Xpert Green DNA Stain direct to your sample and perform electrophoresis.

Quantity: #GS02.0001 consists of 1ml of ready-to-use Xpert Green DNA Stain direct.
#GS02s is a trial sample (50 µl). One ml is sufficient for to load 1000 samples (of 10µl).

Properties: Xpert Green DNA Stain direct has 2 fluorescence excitation wavelengths in the UV range (~270nm; ~290nm) and one in the blue light range (~490nm). Maximum fluorescence emission is at ~515nm (green). Therefore, Xpert Green DNA Stain direct is compatible with a large variety of gel documentation systems. Yellow/orange or green filters should be used for photography.

Sensitivity: The detection limit of Xpert Green DNA Stain is in the range of 0.5-5.0 ng/band (depending on agarose type and percentage, thickness of the gel, electrophoresis buffer, transilluminator, photo camera quality and settings, etc). Band intensity can be improved by adding Xpert Green DNA Stain to the electrophoresis buffer, especially in case of small DNA fragments that migrate farther. Xpert Green DNA Stain can be used for post-staining, however, with less sensitivity.

Safety: Xpert Green DNA Stain direct is non-mutagenic as determined by the Ames-test. Moreover, genotoxicity analysis shows negative results for both the mouse marrow chromophilous erythrocyte micronucleus test and mouse spermatocyte chromosomal aberration test. The complete safety report can be found on the product page at our website. Xpert Green DNA Stain direct is non-hazardous, however, one should always exercise common safe laboratory practices. Use goggles and gloves as Xpert Green DNA Stain direct may cause skin or eye irritations.

Waste: Xpert Green DNA Stain direct is not classified as hazardous waste and some institutions have approved the disposal of gels and solutions containing Xpert Green DNA Stain direct directly into their wastewater systems. GRiSP recommends to dispose of Xpert Green DNA Stain direct as you would of any other non-carcinogenic fluorescent dye (like propidium iodide). Naturally, always dispose in accordance to all Federal, state, and local environmental regulations.

Storage: This product is stable for at least a few days at room temperature. Transport is carried out at room temperature. Upon arrival, product can be stored at +2ºC to +8ºC, protected from light, for at least 2 years. Do not freeze. Gently spin down before use.

Usage

Agarose Gels

1. Prepare agarose solution by mixing the desired amount of agarose and desired volume of electrophoresis buffer, and dissolving the agarose by heating.
2. Once the solution has become clear, remove from the microwave or heater, swirl gently, and allow the solution to cool down to ~60°C. Pour to cast the gel.
3. Mix samples (and DNA marker) with Xpert Green DNA Stain direct in a 10:1 ratio (e.g. 10µl of sample with 1µl of Xpert Green DNA Stain direct) and load onto gel. There is no need to add any other loading buffer.
4. Run gel according to normal procedure and visualize using either UV or Blue LED light.

Polyacrylamide Gels

.

1. Prepare polyacrylamide solution by mixing all components except APS and TEMED.
2. Add APS and TEMED, swirl gently, avoiding formation of air bubbles, and cast the gel.
3. Mix samples (and DNA marker) with Xpert Green DNA Stain direct in a 1':1 ratio (e.g. 10µl of sample with 1µl of Xpert Green DNA Stain direct) and load onto gel. There is no need to add any other loading buffer.
4. Run gel according to normal procedure and visualize using either UV or Blue LED light.