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Reliant® Gel System

Precast agarose minigels that save you time.

Introduction

The Reliant® Gel System consists of precast agarose minigels for rapid and reproducible resolution of DNA sizes from 8 bp to >10 kb in length. Reliant® Gels are available in a variety of well formats and concentrations with and without ethidium bromide. Reliant® Gels fit most mini and medium electrophoresis chambers. Optimal results are achieved when used with the Reusable UV Transparent Tray.

- **Reliable** – Made with high quality molecular biology grade SeaKem® or NuSieve® Type Agaroses.
- **Easy to use** – Remove the lid, peel away the tape, apply tray to the electrophoresis chamber, flood with buffer, and load samples.
- **Fast** – Results can be seen in 30 minutes or less.

Specifications

Tray dimension:	6.8 x 10.2 cm
Gel dimension:	6.0 x 9.5 cm
Gel thickness:	5.5 mm
Number of wells:	8, 12, 18, 20 and 24
Well volume:	<15 µl
Agarose:	No detectable DNase or RNase
Gel performance:	Sharp DNA bands

Storage Conditions

18ºC-24ºC for 6-12 months depending upon agarose concentration.

Electrophoresis Chambers

Reliant Gels in the portrait format (8,12, and 24 well) will fit most minichambers, and all medium/large chambers.
For information on chambers for the landscape format, please refer to the Lonza Catalog, or contact Lonza Technical Service at 800-521-0390 or visit our web site **www.Lonza.com.**

It is sometimes difficult to see all the wells through the back of the tray, don't be alarmed. Some wells may have air pockets and will be more visible while other wells may not.

Peel, Press and Pour, and you're ready to load your samples.

1. Peel the paper backing from the adhesive strips on the bottom of the tray.
2. Peel off the lid. **Leave the gel in the tray.**
3. Place the tray directly onto the chamber platform. Align the wells so the DNA samples will run straight. Press the tray to stick to the chamber platform.
4. Pour electrophoresis buffer (TAE or TBE) into the chamber to a depth of 5mm over the flange of the tray.*
5. Load your samples (≤15 µl volume).
6. Electrophorese the gels at no more than 10 V/cm (interelectrode distance) for 30 minutes; lower voltages for longer times are acceptable.
7. For DNA fragments ≥5 kb, use 1 to 5 V/cm (interelectrode distance) and increase the run time.
8. Remove the gel from the tray to photograph/document and/or stain/destain (for gels **without** ethidium bromide).

***** For best band resolution, add 0.5 µg/ml ethidium bromide to the running buffer.

Caution: Ethidium bromide is a mutagen. Use gloves, lab coat and eye protection when handling solutions or gels containing the dye. Avoid skin and eye exposure to UV light. Refer to Material Safety Data Sheet for complete safety and handling information.

Dye Mobility

Agarose Type & Concentration	Bromophenol Blue	Xylene Cyanol
1X TAE Buffer		
1% SeaKem® Gold Agarose	760 bp	6,100 bp
2% SeaKem® Gold Agarose	250 bp	1,500 bp
4% NuSieve® 3:1 Plus Agarose	40 bp	350 bp
1X TBE Buffer		
1% SeaKem® Gold Agarose	500 bp	4,000 bp
2% SeaKem® Gold Agarose	100 bp	1,000 bp
4% NuSieve® 3:1 Plus Agarose	20 bp	250 bp

Technical Tip

Reliant® Gels are designed to be electrophoresed (10 V/cm for 30 minutes) in the packaging tray. By modifying the tray as described in steps 1-4 and decreasing the amount of buffer overlay you can achieve similar resolution in less than 30 minutes!

Instructions for Tray Modification

1. Remove the gel from the tray.
   If gel contains ethidium bromide or gels are for RNA wear gloves.
2. Using sharp, heavy scissors, make one vertical cut in each corner of the tray.
3. Fold down the ends and cut across.
4. The modified tray has no lip and an edge ≤3 mm, enough to hold a gel in place during electrophoresis.
5. Pour the buffer into the chamber to a depth of ~3 mm over the top of the gel.

Instructions are for the 8-, 12-, or 24-well format.
For 18- and 20-well formats, make the cuts on the long sides of the tray. The modified tray edge should be parallel with the electrodes when placed in the chamber.

Lonza offers UV Transparent Trays that do not require the above modifications, please see ordering information on the back page, or contact Technical Service at (800) 521-0390 or biotechserv@Lonza.com for more information.

Gel Running Protocol using modified Tray

1. Peel the paper backing from the adhesive strips positioned on the back of the midified tray.
2. Press the modified tray directly onto the chamber platform.
3. Each time you run a Reliant® Gel, remove the gel from its tray, and place it in the modified tray holder.
4. **Use a minimal amount of buffer over the top of the gel ~3 mm.**
5. Load your samples. Electrophorese at 10 V/cm, (interelectrode distance).
6. To avoid loss of small fragments, stop the electrophoresis before the dye front reaches the edge of the gel.
7. Tray holder is good for several runs. Replace the tray holder when adhesive backing starts to loosen from the chamber's platform.

Related Products

AccuGENE® TAE, TBE, and MOPS Buffers
RNA Markers
DNA Markers
DNA Ladders
Latitude® Gels
Latitude™ Midigel Chamber
FlashGel® System

For more information contact Technical Service at (800) 521-0390 or visit our website at www.Lonza.com

For Laboratory Use.