The DNA can also be electrotransferred or vacuum blotted.

Not Recommended:
Loading buffers containing glycerol are not advised. Ficoll® containing loading buffers, such as Orange-G, cat# 9850-250-6, are preferred.

V. Related Products

PARP Assay Kits:

Catalog #	Description	Size
9804-50-P	TeviGel™ 500 (50-1500 bp)	50 g
9850-250-6	5X Orange G Loading Buffer	6 x 250 µl
9860-500-2	50X TAE Electrophoresis Buffer	2 x 500 ml
4850-20-GD	Genomic DNA Isolation Kit	20 Samples
4850-20-ET	TACS® Apoptotic DNA Laddering Kit	20 Samples

The product accompanying this document is intended for research use only and is not intended for diagnostic purposes.

Trevigen, Inc.
8405 Helgerman Ct. Gaithersburg, MD 20877
Tel: 1-800-873-8443 • 301-216-2800
Fax: 301-560-4973
e-mail: info@trevigen.com
www.trevigen.com

Please Recycle

P5/28/10v1

TREVIGEN® Instructions
For Research Use Only. Not For Use In Diagnostic Procedures

TreviGel™ 5000 Powder

DNA Fragment Separation Medium

Cat#s: 9806-050-P
9806-100-P
9806-250-P

Excessive bubbles in the gel mix while still in the flask can be removed by a brief microwaving (e.g. 30s).

Carefully pour the gel mix avoiding the addition of bubbles. If bubbles are formed, they can be removed by a gentle flaming on the top of the gel. (BE CAREFUL NOT TO MELT THE GEL CASTING APPARATUS!).

Ethidium bromide can be added to a final concentration of 0.5 µg/ml in the liquified gel mixture, but we do not recommend it for critical applications, since the increased background will reduce sensitivity.

Use very gentle mixing, and microwave (above) as necessary.

CRITICAL: (For Optimal Results)
Due to the viscosity of the TBE TreviGel™ 5000 solution small bubbles can form affecting the quality of results. We STRONGLY recommend that you wait for all bubbles to stop forming, then wait an additional minute or two, before casting your TreviGel™. For highly viscous solutions briefly microwave (30 s) after swirling to remove bubbles, wait an additional two minutes, then cast the gel.

5. Allow the gel mixture to harden. It is now ready for electrophoresis, however, cooling the gel at 4°C for 20 to 30 minutes increases the resolving power.

IV. Protocol for Electrophoresis and Detection of DNA Samples

1. Add the DNA samples with loading buffer to the gel and separate by electrophoresis.

We do not recommend loading dye containing bromophenol blue. The bromophenol blue dye “blocks” the DNA bands migrating at the same position, and may not be visible in the gel photograph. A dye that migrates faster than the DNA bands being analyzed, such as Orange-G (cat# 9850-10) is preferred.

While the DNA can be separated by electrophoresis at the maximum speed possible in the gel apparatus, we recommend slower electrophoresis to optimize resolution. (For example: 100 volts for about 2 to 3 hours for a 20 cm long gel.)

2. To visualize DNA bands we recommend staining the gel with a solution of 0.5 µg/ml of ethidium bromide for about 30 minutes, followed by destaining in water or TAE buffer for about 30 minutes.

Southern Transfer Recommendations:
The DNA can be capillary transferred if the thickness of the gel is kept to 3 to 4 mm thick.

top of the gel. (BE CAREFUL NOT TO MELT THE GEL CASTING APPARATUS!).
Ethidium bromide can be added to a final concentration of 0.5 µg/ml in the liquefied gel mixture, but we do not recommend it for critical applications, since the increased background will reduce sensitivity.

CRITICAL: (For Optimal Results)
Due to the viscosity of the TreviGel™5000 solution small bubbles can form affecting the quality of results. We STRONGLY recommend that you wait for all the bubbles to stop forming, then wait an additional minute or two, before casting your TreviGel™. For highly viscous solutions briefly microwave (30 s) after swirling to remove bubbles wait an additional two minutes, then cast the gel.

5. Allow the gel mixture to harden. It is now ready for electrophoresis, however, cooling the gel at 4°C for 20 to 30 minutes improves the resolving power.

III. Instructions for Use with TBE Buffer

Preparation of Gel Solution and Casting:

1. Setup a gel casting tray typically used for horizontal agarose gel electrophoresis.

2. Make up an aqueous solution of the gel powder and distilled water in an Erlenmeyer flask (e.g. a 1% gel uses 1 gram of TreviGel™5000 in 100 ml of distilled water).

Use the appropriate amount of solution for the gel casting tray used. Gels should be approximately 0.5 cm thick.

3. Heat the aqueous gel solution in a microwave until the powder is in solution. The TreviGel™ powder will go into solution almost as quickly as an agarose powder. The time will vary with the volume heated, the concentration of the gel mix and the power of the microwave. Typically, two or three minutes are adequate to allow the gel mix to go into solution.

Be careful that the flask does not over-boil.
For best results, tare the solution before boiling, and make up any lost volume with deionized water. (Taring can be accomplished by either zeroing the balance to the final mass of the flask and solution, or recording the mass and making the final volume up to the recorded mass).

Be sure to account for the volume of 10X TBE that will be added in step 4.

4. Carefully add TBE buffer concentrate (typically 10X) to the dissolved solution. This solution will be viscous and care must be used to avoid generating bubbles. Pour the solution gently into the casting tray.

TreviGel™ 5000 Powder

Cat#s: 9806-050-P
9806-100-P
9806-250-P

Table of Contents

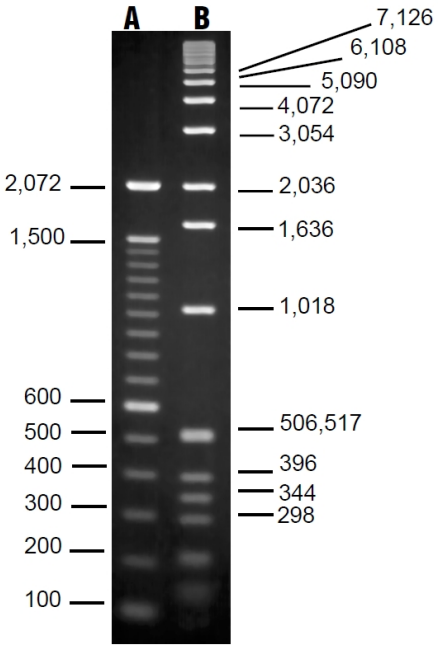
I. Introduction

TreviGel™5000, a blend of polysaccharides, is ideal for separating and sharply resolving a wide range of DNA fragments generated by PCR, restriction digestion or other DNA manipulation. This product is available as a powder, which is quickly and easily prepared by heating in TAE buffer, and casting in a horizontal "submarine" format that is typically used for agarose gel electrophoresis. This product offers a non toxic alternative to acrylamide for separation or analysis of DNA up to 25 kbp.

The concentration of the powder can be adjusted to allow the optimal separation of DNA fragments from 100 to 25,000 bp in size. TreviGel™ has the advantage of being clear, reducing the background typical of agarose gels used at high concentrations, and increasing the sensitivity of detection. TreviGel is also extremely strong, and is difficult to rip or tear in comparison to an acrylamide oragarose gels.

FEATURES:

- •Resolves 0.1 kbp to > 25 kbp
- •Transparent
- •Great Gel Strength
- •Easy to Prepare
- •Southern/Northern Blot Compatible
- •Recovery of PCR fragments
- •Submarine Gel Format
- •Non-toxic
- •Cost Effective



Typical electrophoretic results using TreviGel™ 5000. A photograph of a 1.2% TreviGel 5000 for the separation of a wide range of sizes of DNA fragments. Two micrograms of a 100 bp ladder (A), and a 1 kb ladder (B) were electrophoresed in a 1.2% TreviGel 5000 gel, prepared in 1X TAE buffer with 0.5 μg/ml ethidium bromide, and separated by electrophoresis at 4.5 V/cm.

II. Instructions for Use with TAE Buffer

Choice of Gel Concentration:

Gel Concentration (%)	Recommended Size of DNA Separation (kbp)
0.5	2 - 25
0.6	1 - 20
0.7	0.8 - 10
0.9	0.5 - 7
1.2	0.4 - 6
1.5	0.2 - 3
2.0	0.1 - 2

Preparation of Gel Solution and Casting:

1. Set up a gel casting tray typically used for horizontal agarose gel electrophoresis.

2. Make up an aqueous solution of the gel powder and 1X TAE buffer in an Erlenmeyer flask (e.g. a 1% gel uses 1 gram of TreviGel™ 5000 in 100 ml of 1X TAE buffer).

   Add powder to buffer and swirl vigorously to fully suspend powder.
   Use the appropriate amount of solution for the gel casting tray used.
   Other buffers such as TBE can be used, see instructions on page 4.

3. Heat the aqueous gel solution in a microwave until the powder is in solution. The TreviGel™ powder will go into solution almost as quickly as an agarose powder. The time will vary with the volume heated, the concentration of the gel mix and the power of the microwave. Typically, two to three minutes are adequate to allow the gel mix to go into solution.

   Be careful that the flask does not over-boil.

   For best results, tare the solution before boiling, and make up any lost volume with deionized water. (Taring can be accomplished by either zeroing the balance to the final mass of the flask and solution, or recording the mass and making the final volume up to the recorded mass).

4. Allow the solution to cool at room temperature for approximately five minutes, then, pour the gel in the casting tray. For higher concentration gel mixes (i.e. 1.5 and 2.0%), the gel cannot be allowed to cool for five minutes before casting, as it is extremely viscous and will form bubbles, therefore higher concentration gels should be cast within two to three minutes.

   Carefully pour the gel mix avoiding the addition of bubbles. If bubbles are formed they can be removed by a gentle flaming on the