

# E-Gel<sup>®</sup> Opener

## General Information

### Introduction

The E-Gel<sup>®</sup> Opener is an easy-to-use device specifically designed to open any E-Gel<sup>®</sup> for excision of DNA fragments or for blotting.

### Ordering Information

To order additional E-Gel<sup>®</sup> Openers or replacement blades, please refer to the table below. For additional information, please call Technical Service (see below).

Item	Quantity	Catalog No.
E-Gel <sup>®</sup> Opener	1	G5300-01
E-Gel <sup>®</sup> Opener Replacement Blades	10	G5350-10

### Before Use

Before using the E-Gel<sup>®</sup> Opener for the first time, we recommend that you practice opening a few used E-Gels<sup>®</sup> to familiarize yourself with the process. Practice on E-Gels<sup>®</sup> that will not be used further for preparative purposes.



### Important

Electrophoresis must be complete before opening the E-Gel<sup>®</sup>. We recommend that you place the E-Gel<sup>®</sup> on the transilluminator and photograph the gel before proceeding further. If you plan to isolate DNA from the E-Gel<sup>®</sup>, we recommend that you open the gel and excise the gel fragment immediately after electrophoresis as bands will diffuse within 20 minutes. If you plan to blot the gel, you should have your blotting apparatus ready before opening the gel.



E-Gels<sup>®</sup> contain ethidium bromide, a known mutagen. As a precaution, wear protective clothing, safety goggles, and gloves when opening and handling the gel. Dispose of opened E-Gels<sup>®</sup> as hazardous waste.

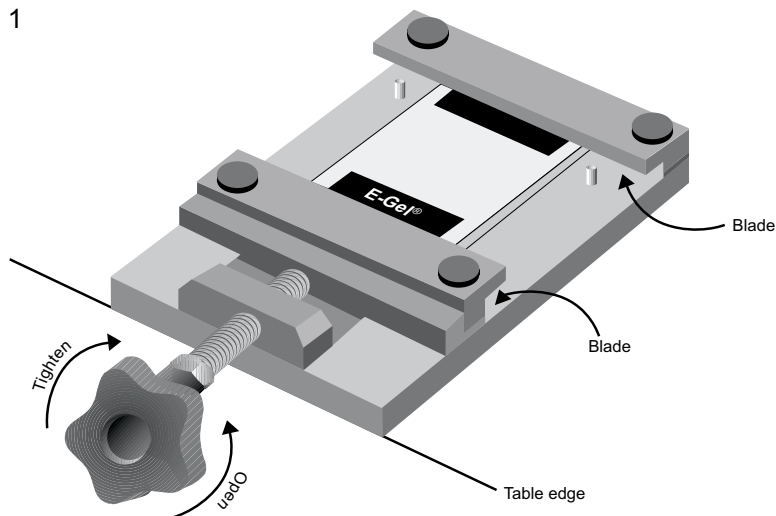
The blades on the E-Gel<sup>®</sup> Opener are extremely sharp. **Do not insert your fingers into the area housing the blades!** Pick up the E-Gel<sup>®</sup> Opener by holding the large knob only (see Figure 1 on the next page). Exercise caution when handling and cleaning the E-Gel<sup>®</sup> Opener. Dispose of blades in a needle disposal container or a Sharps disposal box.

# Instructions for Use

## Description of Opener

The E-Gel<sup>®</sup> Opener consists of an anodized aluminum platform housing two recessed steel blades, one which is stationary and one which is movable. The blades are brought into contact with the E-Gel<sup>®</sup> cassette by turning the large knob clockwise (see Figure 1).

Figure 1



## Opening the E-Gel<sup>®</sup>

The following section provides instructions to open an E-Gel<sup>®</sup> cassette. Before beginning, you should wear safety goggles and gloves.

1. Place the E-Gel<sup>®</sup> Opener on a flat surface, with the knob extending off the edge of the laboratory bench and facing the user. Set the E-Gel<sup>®</sup> Opener to its widest open position by turning the knob counterclockwise.
2. Insert the E-Gel<sup>®</sup> into the E-Gel<sup>®</sup> Opener so that two opposing sides of the gel cassette are aligned with the blades (see Figure 1). The E-Gel<sup>®</sup> should be positioned such that the two sides fit into the grooves housing the blades.
3. Turn the knob steadily clockwise to bring the blades in contact with the E-Gel<sup>®</sup> cassette. As the knob is tightened, you will hear a series of pops. Continue to turn the knob until the resistance increases. Stop turning the knob as soon as you see the E-Gel<sup>®</sup> cassette begin to lift off the surface of the platform. Two sides of the E-Gel<sup>®</sup> will now be unsealed. **Note:** Once you observe the E-Gel<sup>®</sup> cassette begin to lift off the surface of the platform, do not continue to tighten the knob as you will damage the E-Gel<sup>®</sup>.
4. Unscrew the knob and remove the E-Gel<sup>®</sup>. The E-Gel<sup>®</sup> cassette fits snugly in the recessed groove, and you may have to carefully work the cassette from the housing. Turn the E-Gel<sup>®</sup> 90° and re-insert the gel cassette into the Opener so that the two remaining sealed sides can be opened.
5. Repeat Step 3 to open the remaining two sides of the E-Gel<sup>®</sup>. Stop turning the knob when you see the top of the E-Gel<sup>®</sup> cassette begin to lift off the gel.
6. Unscrew the knob and carefully remove the E-Gel<sup>®</sup> cassette. The 4 sides of the cassette should be unsealed. If not, repeat Steps 2-5 as necessary. Remove the E-Gel<sup>®</sup> and set the opened cassette on your bench.

*continued on next page*

## Instructions for Use, continued

### Opening the E-Gel<sup>®</sup>, continued

- 7a. If you plan to blot the gel, do not pick up the gel from the cassette. Lift off the top of the gel cassette. Place the nitrocellulose membrane on the gel and pick up the cassette with the gel and membrane. Flip the gel and membrane out of the cassette onto your gloved hand and then flip the gel and the membrane directly onto your wet blotting paper.
- 7b. If you plan to purify DNA from the gel, lift off the top of the gel cassette and excise the gel fragment. Transfer the gel slice to a microcentrifuge tube.
8. After using the opened E-Gel<sup>®</sup>, discard it as hazardous waste.

### Cleaning and Storage

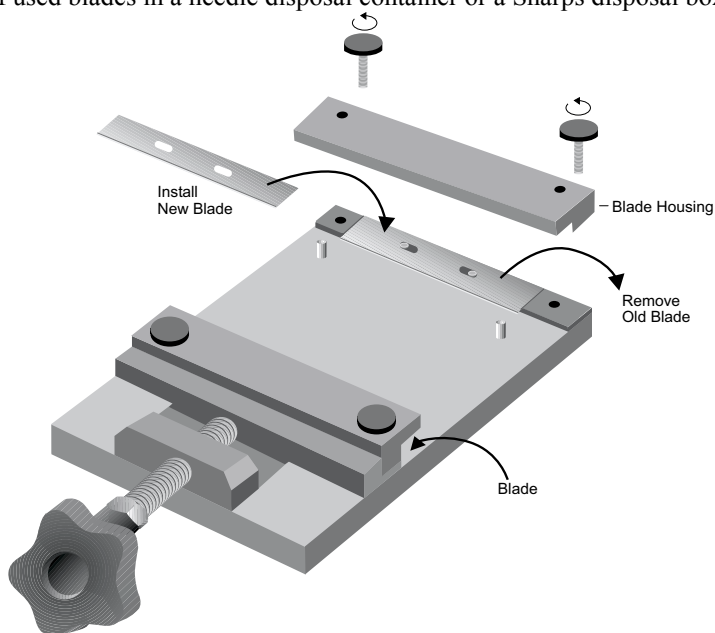
After use, clean the E-Gel<sup>®</sup> Opener with mild detergent and water to remove excess agarose, ethidium bromide, and plastic from the platform. Use a squirt bottle and wipe the platform dry with a clean tissue. Do not insert your fingers into the area housing the blades, and do not immerse the E-Gel<sup>®</sup> Opener in water as the blades may rust. Store the E-Gel<sup>®</sup> Opener at room temperature.

### Replacing the Blades

Each E-Gel<sup>®</sup> Opener contains two blades designed to be replaced easily when they become dull. Dull blades will prevent the E-Gels<sup>®</sup> from opening cleanly. Remember to use caution when replacing and disposing of the blades.

1. To replace a blade, unscrew the knobs on each side of the blade housing and remove the housing to expose the blade (see Figure 2).
2. Remove the used blade and insert a new blade by aligning it with the metal pins.
3. Replace the housing on the blade and screw the two knobs back in place.
4. Tighten the knobs until the housing is securely attached to the Opener.
5. Repeat the procedure to replace the other blade.
6. Dispose of used blades in a needle disposal container or a Sharps disposal box.

Figure 2



# Technical Service

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...and the program will connect directly. Click on underlined text or outlined graphics to explore. Don't forget to put a bookmark at our site for easy reference!

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## Contact us

For more information or technical assistance, please call, write, fax, or email. Additional international offices are listed on our Web page ([www.invitrogen.com](http://www.invitrogen.com)).

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