E-Gel® *96* Gels

QUICK REFERENCE CARD

Catalog nos. G7008-01, G7008-02

25-0419 Version I; 18 April 2005

Instructions are provided below for using E-Gel® *96* Gels with the E-Base™. For more details, refer to the E-Gel® Technical Guide available at www.invitrogen.com or contact Technical Service.

Preparing Samples

- Use 20-100 ng DNA per band for samples containing one unique band or up to 500 ng per lane for samples containing multiple bands.
- Prepare DNA samples in a **total sample volume of 20 µl for E-Gel® *96* gels** in deionized water or loading buffer (recommended final loading buffer concentration is 10 mM Tris-HCl; 1 mM EDTA, pH 7.5; 0.005% bromophenol blue; and 0.005% xylene cyanol FF).
- Dilute **high salt samples** (samples with >50 mM NaCl, >100 mM KCl, >10 mM acetate ions, >10 mM EDTA), 2- to 20-fold in deionized water, TE, or loading buffer in final volume of 20 µl.

Selecting Program On E-Base™

The recommended program for E-Gel® *96* gel is EG and the run time is 12 minutes.

1. Plug the Mother E-Base™ into an electrical outlet. Connect the Daughter E-Base™ to a Mother E-Base™ or another Daughter E-Base™ connected to a Mother E-Base™.
2. Press and release the pwr/prg (power/program) button on the base to select program EG.

Note: The E-Gel® *96* gels are also compatible with the E-Gel® *96* base available previously from Invitrogen. For using E-Gel® *96* gels with E-Gel® *96* base, refer to the E-Gel® Technical Guide.

Loading and Running E-Gel® *96* Gels

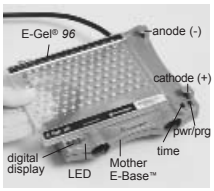
Load each gel within 30 minutes of removing gel from the package and run within 15 minutes of loading.

1. Remove gel from the package and remove plastic comb from the gel.
2. Slide gel into the two electrode connections on the Mother or Daughter E-Base™. If gel is properly inserted, a fan in the base begins to run, a red light illuminates, and digital display shows 12 minutes.
3. Load 20 µl prepared DNA sample into the well. Keep all sample volumes uniform. Load samples manually, with a multichannel pipettor, or use robotic loading devices (8-, 12-, 96-tip).
   Note: To ensure proper sample loading with robotic loading device, align the robotic tip assembly (see E-Gel® Technical Guide for details).
4. Load appropriate DNA markers in the marker wells. Be sure the marker salt concentration is similar to that of the adjacent samples.

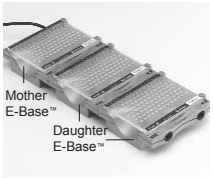
   1% gel: E-Gel® *96* High Range DNA Marker

   2% gel: E-Gel® Low Range Quantitative DNA Marker
5. Load 20 µl sample buffer containing the same salt concentration as the sample into any empty wells.
6. To begin electrophoresis, press and release the pwr/prg button on the E-Base™. The red light changes to green.
7. At the end of the run (signaled with a flashing red light and rapid beeping), press and release the pwr/prg button to stop the beeping.

Mother E-Base™



Daughter E-Base™



Loading Gels

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tech_service@invitrogen.com

invitrogen™

Contact Information for Other Countries:
See our Website: **www.invitrogen.com**

E-Gel® *96* Gels, continued

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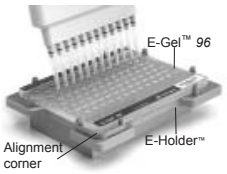
Analyzing Results

1. Remove gel cassette from the base and analyze results on a UV transilluminator.
2. To capture a digital image of the gel, scan the gel on a flatbed scanner or use a UV transilluminator equipped with a digital camera.
3. Analyze the image and align or arrange lanes in the image using the E-Editor™ 2.0 software available for FREE at www.invitrogen.com/egels.

Using E-Holder™ Platform

1. The E-Holder™ is designed to hold E-Gel® *96* gels during robotic loading and allows loading multiple gels on a robotic platform. **Note:** The E-Holder™ is not a power supply unit and cannot be used to run E-Gel® *96* gels.
2. Place the E-Holder™ on the robotic platform.
3. Remove gel from the package and remove comb from the gel.
4. Place E-Gel® *96* cassette on the E-Holder™. Align the bottom left end of the cassette in the lower left alignment corner of the E-Holder™.
5. Set up your robotic system to load samples into the gel placed on the E-Holder™. Program your robotic system to load the samples ~5 minutes prior to the completion of the previous run to ensure that the loaded gel on E-Holder™ will be placed on an E-Base™ within the recommended time of 15 minutes.



Troubleshooting

Problem	Cause	Solution
No current	Gel cassette not properly inserted	Remove the gel cassette and re-insert the cassette properly.
	Expired or defective cassettes	Use properly stored gels before the specified expiration date. Use a fresh gel cassette.
	Only Daughter E-Base™ used	Daughter E-Base™ does not have an electrical plug to connect to an outlet. Always use it with a Mother E-Base™.
Poor resolution or smearing of bands	Sample overloaded	Do not load more than 20-100 ng DNA per band in a total volume of 20 µl.
	High salt samples	Dilute your samples 2-to 20-fold.
	Sample not loaded properly or low sample volume loaded	Load 20 µl of sample per well. Avoid introducing bubbles while sample loading. Keep all sample volumes uniform and add sample buffer containing the same salt concentration as the sample into any empty wells.
Sample leaking from wells	Sample is overloaded	Load 20 µl sample per well. Use Two-Step Loading method (see E-Gel® Technical Guide for details).

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