

## TBE Gels

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Instructions are provided below for electrophoresis of TBE Gels using the XCell *SureLock*® Mini-Cell. For details, refer to the *Novex*® *Technical Guide* available at [www.lifetechnologies.com/manuals](http://www.lifetechnologies.com/manuals) or contact Technical Support.

### Prepare Samples

**Reagent****Sample**

Sample

x  $\mu$ L

TBE Hi-Density Sample Buffer (5X)

2  $\mu$ LDeionized Waterto 8  $\mu$ L

Total Volume

10  $\mu$ L

### Prepare 1X Buffer

Add 200 mL 5X TBE Running Buffer to 800 mL deionized water to prepare 1X TBE Running Buffer.

### Load Sample

Load the appropriate concentration and volume of your DNA sample on the gel.

### Load Buffer

Fill the Upper Buffer Chamber with 200 mL and the Lower Buffer Chamber with 600 mL of 1X TBE Running Buffer.

### Run Conditions

Voltage: 200 V constant

Run Time: 30–120 minutes (dependent on gel percentage)

Expected Current: 10–18 mA/gel (start); 4–6 mA/gel (end)

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## Blotting Conditions

For blotting TBE gels, use 0.5X TBE Running Buffer. Perform transfer with nylon membranes at 30 V constant for 1 hour using the XCell II™ Blot Module. The expected start current is 360 mA and end current is 270 mA.

## Dye Front Migration

The size of DNA fragments visualized at the dye fronts of the different TBE Gels is shown in the table below.

Gel Type	Dye Front*	
	Bromophenol Blue (dark blue)	Xylene Cyanol (blue green)
6%	65 bp	250 bp
8%	25 bp	220 bp
10%	35 bp	120 bp
20%	15 bp	50 bp
4–12%	35 bp	400 bp
4–20%	25 bp	300 bp

\*Accuracy  $\pm$  5 bp

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