QUICK REFERENCE

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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 or contact Technical Support.

Prepare Samples

Reagent	Sample
Sample	x µL
TBE Hi-Density Sample Buffer (5X)	2 µL
Deionized Water	to 8 µL
Total Volume	10 µL

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 ± 5 bp