DNA Gels using Sodium Boric Acid Buffer

Adapted from Jenkins, K. and Bielec, B. 2006. Running DNA Mini-Gels. The American Biology Teacher 68:9, p. 544-546.

Materials

Sodium Hydroxide (Fisher Scientific S93356 or equivalent)

Boric Acid (Fisher Scientific S78605 or equivalent)

Distilled water

Sodium Hydroxide is used at 10mM

Prepare 20x stock:

8 g NaOH in 700mls of water

Add boric acid (solid) to bring pH to 8.0 (~ 53g)

Adjust the volume to 1 liter and correct to pH 8.0 with boric acid

Dilute to a 1x working solution with water.

2% agarose gel:

2 g agarose in 100ml 1x sodium boric acid buffer

Gels can be run at up to 300 volts.

It is advised not to leave gels running unattended. Gels may be checked in as little as 10 minutes.

Gel Red fluorescent and Fast Blast DNA blue staining methods were used with very good results.