Sodium Borate EDTA Electrophoresis Buffer Recipe, version 1/7/17
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SB (Sodium Borate or Sodium Boric Acid) buffer is an agarose gel electrophoresis buffer for DNA gels. It has low conductivity and allows for less heat buildup and thus higher voltage and faster runs.

Adapted from: http://openwetware.org/wiki/SB and The Meyer Lab

Reagents Needed

- Sodium Tetraborate Decahydrate (Borax) [Fisher S2480-500 CAS 1303-96-4 Crystalline]
- Boric Acid
- DEPC
- EDTA 0.5M

Protocol

A simple version of this buffer can be easily made as a 20X (100 mM) concentrate.

- 38.2g Borax
- 33g Boric Acid
- pH to 8.0
    - Add ~40ml of EDTA 0.5M 8.0 pH
    - Add pellets of Sodium Hydroxide to get to 8.0
- Add DEPC to reach 1L
- Dilute to 1x and use for gels and running buffer

Use 1% agarose gels to analyze RNA fragmentation and 2% to analyze and size select libraries

Run gels at 150V for 10-15 minutes (can be up to 300V according to literature)