How to Prepare and Run RNA Samples on Bleach Agarose Gels

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Step 1 Prepare the 1% Bleach Agarose Gel

1) Add 0.5 g agarose in 50 mL 1× TAE buffer.
2) Microwave the suspension mix to melt the agarose.
3) Add 1.0% v/v **Clorox® bleach** (500 µl) into the bottle.
4) Incubate at room temperature for 5 minutes, with occasional swirling.
5) Allow solution to cool before adding ethidium bromide to a final concentration of about 0.5 µg/mL
6) Pour solution into a clean gel box and allow the 'bleach gel' to solidify.

Step 2 Load and Run RNA Samples

1) Load RNA sample mixed with 6× DNA loading buffer to a final concentration of 1×. Also, load DNA ladder. [**Note:** To prevent potential RNA degradation in 6x GSB buffer, you can add 60 µl of 1% Bleach to 1.0mL 6x GSB buffer]
2) Electrophorese gel in 1× TAE buffer at 60-100 V for 30-45 minutes, and visualize on UV trans-illuminator.

REFERENCE:

*Patrick S. Aranda, Dollie M. LaJoie, and Cheryl L. Jorcyk: Bleach Gel: A Simple Agarose Gel for Analyzing RNA Quality. **Electrophoresis**. 2012 January; 33(2): 366–369. doi:10.1002/elps.201100335:*