



Aug 01, 2023

## Agarose gel for RNA and DNA

DOI

<https://dx.doi.org/10.17504/protocols.io.5qpvo3bm7v4o/v1>

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**Protocol Citation:** kaylee Beine 2023. Agarose gel for RNA and DNA. **protocols.io**

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**Protocol status:** Working

**We use this protocol and it's working**

**Created:** August 01, 2023



**Last Modified:** August 01, 2023

**Protocol Integer ID:** 85764

**Keywords:** agarose gels for rna, running agarose gel, dna sample, dna general method, rna, dna

## Abstract

General method for running agarose gels for RNA and DNA samples

## Protocol materials

⊗ TAE (Tris-Acetate-EDTA) buffer, 1x

⊗ Ethidium bromide, 10mg/mL, 10mL **Amresco Catalog #X328-10ML**

⊗ RNA Loading Dye (2x) - 4.0 ml **New England Biolabs Catalog #B0363S**

⊗ RiboRuler High Range RNA Ladder **Thermo Fisher Catalog #SM1821**

⊗ SyberSafe DNA Gel Stain **Invitrogen - Thermo Fisher Catalog #S33101**

⊗ GeneRuler 1 kb Plus DNA Ladder **Thermo Fisher Catalog #SM1331**



## Preparing the agarose gel and plate

4m 30s

- 1  1 g agarose in  100 mL of  TAE (Tris-Acetate-EDTA) buffer, 1x
- 2 Microwave solution in a flask for  00:03:00 until the agarose is dissolved.  
Microwave for  00:01:00 thereafter  00:00:30
- 3 Allow to cool before adding  1  $\mu$ L  
 Ethidium bromide, 10mg/mL, 10mL **Amresco Catalog #X328-10ML** in the gel medium before completely cool. Then pour into the gel mold
- 3.1 Make sure that your plate is balanced and the teeth are in. Decide if you need a long ladder or a short weather.

4m 30s

## Preparing the chamber

- 4 Add  5  $\mu$ L  Ethidium bromide, 10mg/mL, 10mL **Amresco Catalog #X328-10ML** in the gel medium within the chromatography chamber

## Preparing RNA samples

5m

- 5  250-300 ng /RNA per sample  $C1.V1 = C2.V2$   
  
 $V1 = (10)(50)/\text{RNA conc. (from nanodrop)}$   
  
Add the V1 sample of RNA to 1:1 ratio of  
 RNA Loading Dye (2x) - 4.0 ml **New England Biolabs Catalog #B0363S** to each sample
- 6 Heat up the ladder  
 RiboRuler High Range RNA Ladder **Thermo Fisher Catalog #SM1821** and RNA samples to  70  $^{\circ}$ C for  00:05:00 for the gel

5m



## Preparing DNA samples

7  SyberSafe DNA Gel Stain **Invitrogen - Thermo Fisher Catalog #S33101** is already in the samples for the PCR; then use the

 GeneRuler 1 kb Plus DNA Ladder **Thermo Fisher Catalog #SM1331**

## Setting up the sample gels

**1h 50m**

8 Add  5  $\mu\text{L}$  of ladder and samples to gel wells

9 For RNA: 80V for  01:00:00

**1h 40m**

For DNA: 80V for  00:40:00

10 \*Note: can check gel after  00:10:00 to see if there is product showing on the gel

**10m**