

**RNA Gel Loading Solution (10X)  
(Molecular Biology Grade)**

<b>Catalog #:</b>	351-081-661EA	10mL
	351-081-661	5 x 10mL
<b>Store at:</b>	15°C to 30°C	
<b>Shipped at:</b>	ambient temperature	

**Caution:** Quality Biological's formulation does not contain formaldehyde or formamide. It is strongly recommended that freshly deionized formamide be used.

**Description**

Quality Biological's (QBI) RNA Gel Loading Solution (10X) is prepared according to Sambrook, Fritsch, & Maniatis (1989)<sup>1</sup>. The purpose of this reagent is to ensure that the RNA samples remain submerged in the wells of the gel, by making them denser than the electrophoresis buffer.

**Applications**

- RNA Gel Electrophoresis<sup>3</sup>
- Northern Blot Analysis<sup>4</sup>

**Quality Control***General*

All Quality Biological products for Molecular Biology are prepared according to standard published protocols.<sup>1,2</sup> All products are subjected to a variety of quality control procedures, including pH and osmolality determinations in order to validate the product is within its specifications.

*Product Specific Testing*

RNA Gel Loading Solution (10X) is routinely tested for the absence of DNase and RNase activity.

*The test results of individual lots of RNA Gel Loading Solution (10X) are available on the Quality Biological website.*

**References**

1. Sambrook, J., Fritsch, E.F. & Maniatis, T. (1989) *Molecular Cloning, A Laboratory Manual*, 2<sup>nd</sup> Ed. Cold Spring Harbor Laboratory Press.
2. Ausubel, F.M. et al., eds. (1993), *Current Protocols in Molecular Biology*, Greene Publishing Associates, Inc., in association with John Wiley & Sons, Inc.
3. Miller, K., (1985) *BRL FOCUS*, 9(3), Life Technologies, Inc.
4. Davis, L.G., Dibner, M.D., & Battey, J.F. (1986), *Basic Methods in Molecular Biology*, Elsevier Science Publishing Company, Inc.

### Directions

*For Native Conditions (without formaldehyde and formamide)*

- Using all the precautions necessary when working with RNA, add the following items to an RNase free microcentrifuge tube:
  - \_\_\_\_\_  $\mu\text{L}$  sample
  - 2.5  $\mu\text{L}$  RNA Gell Buffer (10X) (Cat. # 351-059-101)
  - 1.0  $\mu\text{L}$  1mg/mL Ethidium Bromide (optional)
  - \_\_\_\_\_  $\mu\text{L}$  DEPC Treated Water (Cat # 351-068-131) to bring volume to 22.5  $\mu\text{L}$
- Heat the samples at 65°C for 15 minutes
- Immediately chill he samples on ice for 5 minutes
- Add 2.5  $\mu\text{L}$  of RNA Gel Loading Solution (10X). The total volume should now be 25  $\mu\text{L}$ .
- Mix thoroughly
- Load the samples into the wells of either an agarose or polyacrylamide gel
- Run the gel according to the specifications provided by the manufacturer of the electrophoresis equipment

*For Denaturing Conditions (with formaldehyde and formamide)*

- Using all the precautions necessary when working with RNA, add the following items to an RNase free microcentrifuge tube:
  - \_\_\_\_\_  $\mu\text{L}$  sample
  - 2.5  $\mu\text{L}$  RNA Gell Buffer (10X) (Cat. # 351-059-101)
  - 1.0  $\mu\text{L}$  1mg/mL Ethidium Bromide (optional)
  - \_\_\_\_\_  $\mu\text{L}$  DEPC Treated Water (Cat # 351-068-131)
  - 4.5  $\mu\text{L}$  formaldehyde (37%, 12.2M)
  - 12.5  $\mu\text{L}$  formamide (freshly deionized)
  - Bring volume to 22.5  $\mu\text{L}$
- Heat the samples at 65°C for 15 minutes

- Immediately chill he samples on ice for 5 minutes
  - Add 2.5  $\mu\text{L}$  of RNA Gel Loading Solution (10X). The total volume should now be 25  $\mu\text{L}$ .
  - Mix thoroughly
  - Load the samples into the wells of either an agarose or polyacrylamide gel
- Run the gel according to the specifications provided by the manufacturer of the electrophoresis equipment

### Related Products

#### DEPC Treated Water

Catalog #	351-065-721EA	100mL
	351-068-721	Pack of 4 x 100mL
	351-068-131	1000mL
	351-068-131CS	10 x 1000mL
	351-068-491	4 Liters
	351-068-151	10 Liters
	351-068-161	20 Liters

#### Molecular Biology Grade Water

Catalog #	351-029-721EA	100mL
	351-029-721	Pack of 4 x 100mL
	351-029-101	500mL
	351-029-101CS	10 x 500mL
	351-029-131	1000mL
	351-029-131CS	10 x 1000mL
	351-029-491	4 Liters
	351-029-151	10 Liters
	351-068-161	20 Liters

**All products sold by Quality Biological are intended for research use only. This product has not been approved for diagnostic or IVD use.**