# EchoSAFE RNA Gel Loading Buffer

**for stabilization of RNA and for RNA gel electrophoresis without toxic formaldehyde or formamide**

| **Product no.** (volume) | **030-003-0005** (500 µl) | **030-003-0025** (2x 500 µl) |
|---|---|---|
| Kit contents | RNA Gel Loading Buffer | |

## Handling protocol for EchoSAFE RNA Gel Loading Buffer

### Product information

EchoSAFE Gel Loading Buffer **comes ready-to-use.**

- Is 2 x concentrated
- Contains glycerol for easy loading
- Contains Bromo-phenol blue for visualization of electrophoresis migration
- 500 µl EchoSAFE RNA Gel Loading Buffer last for 100 RNA samples to be analyzed (10 µl gel well size)

### Materials and equipment needed

RNA samples (total RNA, mRNA) in Tris buffer, water or in standard elution buffer provided by your RNA purification kit supplier.

- Agarose gel chamber with combs
- Agarose and TAE or TBE buffers for gel preparation
- Vortexer
- Microtiter plate or PCR strips for mixing samples with the 2x loading buffer
- Alternatively: 0.5 or 1.5 ml elution tubes
- 20 µl pipets and corresponding pipet tips

### Preparation before starting

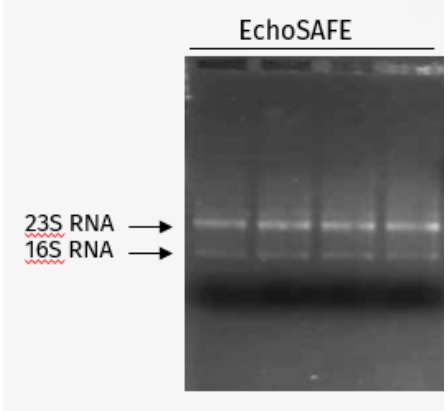
- Prepare an agarose gel containing (optional) nucleic acid staining solution such as SYBR Green, GelRed, ethidium bromide

### PROTOCOL

1. Aliquot samples for gel loading in the wells of the microtiter plate (alternatively, use PCR strips or reaction tubes).
2. **Add the same amount of EchoSafe Gel Loading Buffer** to the sample.
3. **Mix** by pipetting up and down.
4. **Load the sample** into the pockets of the agarose gel as usual and perform electrophoresis as usual.
5. **Visualize RNA** on a standard UV or blue light table, depending on your imaging system.

### Recommendations for electrophoresis

- All standard agarose gels for analysis of DNA gels are recommended (TAE or TBE buffered)
- Optimal agarose concentration ranges from 0.8 % to 1.5%
- DNA and RNA samples can be run and analyzed on the same gel
- **RNA samples show the same pattern as running on denaturating gels** containing formaldehyde (see fig below).
- **Note:** DNA markers are double-stranded and RNA molecules are single-stranded. Therefore, size analysis based on DNA markers may be misleading.




Gel analysis of total RNA fractions on a regular 0.8% agarose gel.

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