

EchoSAFE RNA Gel Loading Buffer

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

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|----------------------|------------------------|--------------------------|
| 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 2x loading buffer
- Alternatively: 0.5 or 1.5 ml elution tubes
- 20 µl pipets and corresponding pipet tips

Preparation before starting

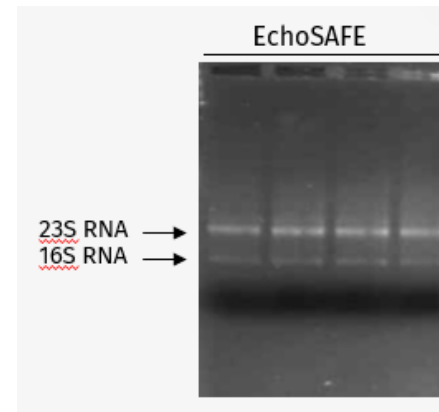
- Prepare an agarose gel containing (optional) nucleic acid staining solution such as SYBR Green, GelRed, Ethidiumbromid

PROTOCOL

1. Aliquot samples for gel loadings in the wells of the microtiter plate (alternatively, use PCR strips or elution 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 denaturing 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 are error-prone and misleading.



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