

### Gold-N-Gel™ RNA Dye

Code	Description	Size
N734-12.5ML	Gold-N-Gel™ RNA Dye, 200X	12.5 mL (25 x 100 mL gels)
N734-15ML	Gold-N-Gel™ RNA Dye, Dropper Bottle	15 mL (30 x 100 mL gels)
N734-5ML	Gold-N-Gel™ RNA Dye, Dropper Bottle	5 mL (10 x 100 mL gels)

#### General Information

Gold-N-Gel™ RNA Dye is a non-mutagenic, fluorescent in-gel stain for visualization of RNA bands on denaturing agarose gels. Bands are visualized on a standard UV transilluminator with an ethidium bromide filter immediately after electrophoresis, without the need for post-run staining or destaining. Supplied as a 200X gel additive, it is available in a standard bottle and in two convenient dropper bottle sizes. Gold-N-Gel™ RNA Dye is ideal for environments that require a safer alternative to ethidium bromide.

- Safer alternative to ethidium bromide
- In-gel additive for immediate staining results
- Easy-to-use: Simply add to melted agarose prior to casing gel

#### Storage/Stability

Store at room temperature (18 – 26°C), protected from light.

#### Product Use Limitations

For research use only. Not for therapeutic or diagnostic use.

## Protocol/Procedure

### Gel casting a 1.5% denaturing agarose gel with Gold-N-Gel™ RNA Dye

**Notes:** Cast the gel in a fume hood to avoid inhaling vapors from addition of 37% formaldehyde. The protocol shown below is only a suggestion. Other denaturing gel protocols may be used with Gold-N-Gel™ RNA Dye.

1. Mix Gold-N-Gel™ RNA Dye by vortex prior to use.
2. Weigh 1.5 g of agarose into 72 mL deionized water.
3. Heat until the agarose is molten and the solution is clear.
4. Cool the molten agarose to 60°C.
5. Add 10 mL of 10X MOPS buffer and gently swirl to mix.
6. Add 18 mL of 37% formaldehyde and gently swirl to mix.
7. Add 0.5 mL of Gold-N-Gel™ RNA Dye, 200X (N734-12.5ML) or 10 drops of Gold-N-Gel™ RNA Dye, Dropper Bottle (N734-5ML, N734-15ML) and gently swirl to mix.
8. Pour the agarose into the gel casting tray, insert the gel comb and allow the gel to solidify.

### RNA sample preparation

1. Mix 1 – 10 µg RNA samples with RNase-free water to a final volume of 6 µL.
2. To each 6 µL RNA sample, add :
  - 2 µL 10X MOPS buffer
  - 2 µL 37% formaldehyde
  - 9 µL deionized formamide
  - 1 µL Loading Dye Mix (0.2% bromophenol blue, 10 mM EDTA, 50% glycerol)
3. Mix the samples and incubate for 10 minutes at 65°C.
4. Briefly centrifuge samples to collect condensate and chill the samples on ice for 1 minute before loading on the gel.

### Electrophoresis and gel visualization

1. Submerge the gel in 1X MOPS buffer (1 mm depth of buffer on top).
2. Load the RNA samples.
3. Run the gel with the voltage set at 5 V/cm (calculated as the distance between electrodes). Use the tracking dyed **Note: Do not let the RNA migrate beyond the Gold-N-Gel™ RNA Dye front.**
4. After electrophoresis is complete, place the gel on a UV transilluminator for immediate visualization of the RNA. A standard ethidium bromide filter may be used for gel documentation.

### Frequently Asked Questions

#### Why did the RNA samples remain stuck in the wells?

- The Gold-N-Gel™ RNA Dye concentration was too high.
  - Cast the gel with a lower dye concentration.
- The RNA samples were too concentrated.
  - Load 30 µg or less per lane. Ideally, less than 20 µg RNA should be loaded to obtain good resolution.

#### Why is the RNA not detected on the gel?

- The RNA was allowed to migrate past the Gold-N-Gel™ dye front.
  - Perform electrophoresis with a shorter run time.
- The RNA concentration was too low.
  - For best results, load at least 1 µg RNA per lane.

#### At which wavelength does Gold-N-Gel™ RNA Dye emit fluorescence when bound to RNA?

- Gold-N-Gel™ RNA Dye bound to RNA emits fluorescence at 522 nm. The RNA bands will appear with a yellow color. Gel documentation can be done using an ethidium bromide filter.



## For Technical Support

Toll Free: 1-800-610-2789 (USA & Canada)

Fax: (440) 349-0235

Email: [techinquiry@amresco-inc.com](mailto:techinquiry@amresco-inc.com)

## AMRESKO, LLC

### A VWR Company

Corporate Headquarters  
28600 Fountain Parkway  
Solon, Ohio USA 44139-4300

Tel: 440/349-1199

Fax: 440/349-1182

[www.amresco-inc.com](http://www.amresco-inc.com)

## Gold-N-Gel™ RNA Dye

ZY0685

Rev. 1 01/2016

© Copyright 2015 by AMRESKO, LLC

All Rights Reserved.

AMRESKO® is a registered trademark of AMRESKO, LLC