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NorthernMax® Formaldehyde Load Dye

Catalog Number AM8552

Pub. No. 4386613 **Rev.** B

Contents	Quantity	Storage conditions
NorthernMax® Formaldehyde Load Dye	6 X 1 mL	Store at —20°C

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from **www.lifetechnologies.com/support**.

Product description

NorthernMax® Formaldehyde Load Dye is a ready-to-use load dye intended for electrophoresis of RNA on denaturing formaldehyde agarose gels. It contains both Xylene Cyanol and Bromophenol Blue. It can also be used with polyacrylamide gels.

Appearance: Dark blue solution

Using NorthernMax® Formaldehyde Load Dye

To use with denaturing formaldehyde agarose gels

1. The sample RNA (up to 20 µg total RNA or poly(A) RNA) should be suspended in nuclease-free water in a volume not more than 1/4 of the capacity of the wells. Otherwise, first precipitate the RNA and resuspend in a smaller volume.
2. Add 3 volumes of NorthernMax® Formaldehyde Load Dye to the sample RNA.
3. Incubate the samples for 15 minutes in a 65°C water bath to denature any RNA secondary structure.
4. Briefly spin down samples in a microcentrifuge and place on ice.
5. (Optional) At this point, ethidium bromide may be added to the samples to a final concentration of 10–50 µg/mL in order to visualize the RNA directly during and after electrophoresis.
6. Load the samples on a denaturing formaldehyde agarose gel using RNase-free pipette tips. To keep the samples as dense as possible, make sure there is no air trapped in the end of the pipette tip, place the tip just inside the top of the well, expel the sample slowly, then gently raise the tip out of the well.
7. Run the gel at 5 V/cm, measured between electrodes. In general, stop electrophoresis when the bromophenol blue dye front (corresponding to approximately 500 nt) has migrated approximately 3/4 the length of the gel.
8. If desired, visualize nucleic acid and/or markers with UV fluorescence before transfer.

   Note: As the mass amount of RNA is incrementally increased (from 5 µg to 30 µg), the mobility of the ribosomal RNA bands generally decreases slightly.

For more information, search for "Agarose Gel Electrophoresis of RNA" at **www.lifetechnologies.com**. For detailed protocols go to **www.invitrogen.com**.

To use with polyacrylamide gels

Follow the procedure for denaturing formaldehyde agarose gels. Please note the following:

- It is not necessary to add urea to polyacrylamide gels run with NorthernMax® Formaldehyde Load Dye.
- The relative size at which the dye front runs varies with the acrylamide concentration of the gel. For a table of dye migrations in the various percent polyacrylamide gels, search for "Gel Electrophoresis Tables" at **www.lifetechnologies.com** or go to **www.invitrogen.com**

- It may be necessary to stain the gel after running, even if ethidium bromide was added to the sample.

Quality Control

Functional testing: Formaldehyde Load Dye is functionally tested using the NorthernMax® Kit (Cat. no. AM1940).

Limited product warranty

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