

PRODUCT: FORMAZol®

Cat. No. FO-121

Storage: Store at 4 C. Protect from direct light. Use within one year from date of purchase.

PRODUCT DESCRIPTION

FORMAZol® is a specially purified and stabilized formamide for use as an RNA solubilizer. Unlike any other commercially available formamide, FORMAZol® is stable and can be used (without additional purification) for RNA solubilization for one year when stored at 4 C or for two years when stored at -20 C.

Stabilized formamide has several advantages over water as an RNA solubilization agent : 1) RNA solubilized in FORMAZol® is protected from degradation by RNase, 2) It can be stored for at least one year at -20 C instead of at -70 C as required for RNA solubilized in water, 3) A high sample volume (up to 50% of a slot volume) can be applied to a formaldehyde-agarose gel [*P. Chomczynski (1992), Nucleic Acid Res 20, 3791-3792*].

APPLICATION NOTES

RNA solubilization. Drying of RNA to evaporate residual amount of ethanol is not recommended. Add 100 μ l of FORMAZol® to a 40 - 400 μ g RNA sample. Solubilize RNA by repetitive pipetting and incubation at 50-55 C for 10 - 15 minutes. FORMAZol® inhibits reverse transcriptase. For use in RT-PCR, precipitate RNA from FORMAZol® by the addition of 4 volumes of ethanol. Store samples 3-5 minutes at room temperature and centrifuge at 10,000 g for 5 minutes. When samples contain < 20 μ g RNA, add NaCl to final concentration of 0.2 M followed by 4 volumes of ethanol.

RNA quantitation. Mix an aliquot of the RNA sample (3 - 10 μ l) with 1 ml water or 1-3 mM NaH₂PO₄ and measure its A₂₆₀ against a blank sample containing 1 ml water and the same volume of FORMAZol® as the RNA sample.

Formaldehyde-gel electrophoresis. Prepare a formaldehyde reaction solution containing: water (87 μ l), formaldehyde (81 μ l), bromophenol blue (0.25 mg/ml) in 50% glycerol (48 μ l), and 20 x MOPS buffer (24 μ l). The formaldehyde reaction solution is highly unstable and should be prepared immediately before use. Mix equal volumes of the RNA sample solubilized in FORMAZol® and the formaldehyde reaction solution, and incubate at 55 C for 15 minutes. Apply this mixture on a formaldehyde-agarose gel and perform the electrophoresis according to your standard protocol.

MOLECULAR RESEARCH CENTER, INC.

PRODUCT: FORMAZol®

Cat. No. FO-121

Storage: Store at 4 C. Protect from direct light. Use within one year from date of purchase.

PRODUCT DESCRIPTION

FORMAZol® is a specially purified and stabilized formamide for use as an RNA solubilizer. Unlike any other commercially available formamide, FORMAZol® is stable and can be used (without additional purification) for RNA solubilization for one year when stored at 4 C or for two years when stored at -20 C.

Stabilized formamide has been shown to have several advantages over water as a solubilization agent for RNA [P. Chomczynski (1992), *Nucleic Acid Res* 20, 3791-3792]: 1) RNA solubilized in FORMAZol® is protected from degradation by RNase, 2) It can be stored for at least one year at -20 C instead of at -70 C as required for RNA solubilized in water, 3) A high sample volume (up to 50% of a slot volume) can be applied to a formaldehyde-agarose gel.

APPLICATION NOTES

- RNA solubilization. Add 100 μ l of FORMAZol® to a 40 - 400 μ g RNA sample. Drying of RNA to evaporate residual amount of ethanol is not necessary. Solubilize RNA by passing the sample several times through a micropipette, then incubate at 50 - 55 C for 10 - 15 minutes.
- RNA quantitation. Mix an aliquote of the RNA sample (3 - 10 μ l) with 1 ml water and measure its $A_{260}/1$ cm against a blank containing 1 ml water and the same volume of FORMAZol® as the RNA sample.
- Formaldehyde-gel electrophoresis. Prepare a formaldehyde reaction solution containing: water (87 μ l), formaldehyde (81 μ l), bromophenol blue (0.25 mg/ml) in 50% glycerol (48 μ l), and 20 x MOPS buffer (24 μ l). The formaldehyde reaction solution is highly unstable and should be prepared immediately before use. Mix equal volumes of the RNA sample solubilized in FORMAZol® and the formaldehyde reaction solution, and incubate at 55 C for 15 minutes. Apply this mixture on a formaldehyde-agarose gel and perform the electrophoresis according to your standard protocol.
- If necessary, RNA can be precipitated from FORMAZol® by the addition of 4 volumes of ethanol. For samples containing < 20 μ g RNA, add NaCl to a final concentration of 0.2 M and precipitate with 4 volumes of ethanol.

Copyright Molecular Research Center, Inc., 1992.

MOLECULAR RESEARCH CENTER, INC.

F 0121

FACSIMILE TRANSMITTAL SHEET

TO: Mitsu-Shimada / Cosmo Bio
FAX: 011 813 5632 9614
PHONE:

* 送 111 = 211 ?

o Formamide

x

o Formazol

FROM: Karol Mackey / Molecular Research Center, Inc.
FAX: 513-841-0080
PHONE: 513-841-0900

DATE: February 2, 1999
PAGES: 1

MESSAGE: Dear Mitsu,

Thank you for your fax regarding our product Formazol. Formazol is a solution containing stabilized and deionized formamide. It is essentially 100% formamide but it has been treated to make it stable over time and create the deionization. There are a few advantages to using Formazol. (1) It inhibits RNase activity and so is very good for solubilizing and storing RNA. (2) It is very useful for doing reactions prior to running northern analysis and makes these procedures more simple.

I hope this information is useful to your client. If you have any other questions, please contact me at your convenience.

Best Regards,


Karol Mackey