PRODUCT INSERT

PUREGENE GENETIX BRAND

2X RNA Loading Dye

Store at -20°C

Cat. No.
PGN064

Pack Size
1ml

Description
The 2X RNA Loading Dye is recommended for the preparation of RNA Ladders and RNA samples for electrophoresis on agarose or polyacrylamide gels. It contains electrophoresis tracking dyes; bromophenol blue, xylene cyanol FF, and the intercalating dye ethidium bromide. In most denaturing agarose gel systems, bromophenol blue migrates slightly faster than human 5S rRNA, whereas xylene cyanol FF migrates slightly slower than 18S rRNA.
2X RNA Loading Dye contains the denaturing agent formamide, thus in most cases RNA molecules are separated according to their size even during non-denaturing electrophoresis. In addition, formamide stabilizes RNA.

Composition
95% formamide
0.025% SDS
0.025% bromophenol blue
0.025% xylene cyanol FF
0.025% ethidium bromide
0.5 mM EDTA.

Usage Recommendations
• RNA ladders, as well as any RNA, are extremely sensitive to degradation by ribonucleases. The use of fresh electrophoresis buffers, freshly poured gels, diethyl pyrocarbonate-treated solutions and protective gloves is recommended. Gloves are also necessary when solutions containing ethidium bromide are handled.
• Both the sample RNA and ladder RNA should be loaded under the same conditions.
• Use the supplied 2X RNA Loading Dye both for sample RNA and ladder RNA.
• Loading equal volumes of sample RNA and ladder RNA is recommended. The needed volume of sample RNA can be obtained by diluting with a mixture (1:1) of DEPC-treated Water and 2X RNA Loading Dye.
• The 2X RNA Loading Dye allows for RNA visualization without additional staining of denaturing agarose gels. If RNA fragments are separated on native agarose gels, additional staining with ethidium bromide is recommended.
• For optimal results, add ethidium bromide to both the native agarose gel and electrophoresis buffer at a final concentration of 0.5 µg/ml. Run gels at 5 V/cm.
• When visualizing a gel under UV light, an additional dark zone of ethidium bromide can sometimes be observed. However, this has no influence on the quality of RNA separation.
• After electrophoresis in polyacrylamide gels, an RNA ladder should be stained with ethidium bromide (0.5 µg/ml) for 20 min, or by any other staining technique.

Recommendations for Loading
1. Add an equal volume of 2X RNA Loading Dye to RNA sample and mix well.
2. Heat the mixture at 70°C for 10 min.
3. Chill on ice and spin down prior to loading on a gel.

SAFETY INFORMATION

2X RNA Loading Dye

T Toxic
Hazard-determining component of labeling:
formamide

Risk phrases
R61 May cause harm to the unborn child.

Safety phrases
S53 Avoid exposure - obtain special instructions before use.
S20 When using do not eat or drink.
S23 Do not breathe gas/fumes/vapor/spray.
S36/39 Wear suitable protective clothing and eye/face protection.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60 This material and its container must be disposed of as hazardous waste.