Technical Information
Products for Molecular Biology

Nondenaturing Protein Gel Buffer (5X)
Tris-Glycine (5X)
(Molecular Biology Grade)

Catalog #: 351-083-131 1000 ml (1.0 L)

Store at: 15 to 30°C

Shipped at: ambient temperature

Composition: Tris base 15.1 g/L, 0.125M; Glycine 93.84 g/L, 1.25M in Molecular Biology Grade (MBG) Water

DESCRIPTION

Quality Biological's (QBI) Nondenaturing Protein Gel Buffer (5X) is prepared from molecular biology grade Tris base [tris(hydroxymethyl)aminomethane] and USP Grade glycine using Quality Biological's Molecular Biology Grade (MBG) Water. The final product is sterile filtered through a 0.1 µm filter.

APPLICATIONS

Nondenaturing Protein Gel Buffer (5X) is used in polyacrylamide gel electrophoresis of proteins under nondenaturing or native conditions. That is, electrophoresis conditions without any SDS (sodium dodecyl sulfate).

QUALITY CONTROL

General

All QBI products for Molecular Biology are prepared according to standard published protocols[1, 2] or to formulations provided by customers. In addition, all products are subjected to a variety of quality control procedures, including pH and conductivity determinations, in order to validate that the test product is within its specifications.

Product Specific Testing

Nondenaturing Protein Gel Buffer (5X) is routinely tested for the absence of DNase and RNase activity. Protocols are shown on the next page.

REFERENCES

1. Sambrook, J., Fritsch, E.F. & Maniatis, T. (1989) *Molecular Cloning, A Laboratory Manual, 2nd Edition.* Cold Spring Harbor Laboratory Press.
2. Ausubel, F.M. et al., eds. (1993) *Current Protocols in Molecular Biology.* Greene Publishing Associates, Inc., in association with John Wiley & Sons, Inc.
3. Davis, L.G., Dibner, M.D. & Battey, J.F. (1986) *Basic Methods in Molecular Biology.* Elsevier Science Publishing Company, Inc.

Product Specific Testing Protocols

Deoxyribonuclease (DNase) Activity Testing

1. Nondenaturing Protein Gel Buffer (5X) is incubated at 37°C with 1.0 µg of pBR322 and *Pst I*-digested X174 DNA for 16-20 hours.
2. Subsequently, the test nucleic acids are subjected to agarose gel electrophoresis and SYBR® Green I staining.
3. The test DNA is evaluated relative to the untreated DNA (negative control) for degradation and changes in fragment size and/or banding pattern which are both indicative of DNase activity.

Ribonuclease (RNase) Activity Testing

1. Nondenaturing Protein Gel Buffer (5X) is incubated at 37°C with prokaryotic MS2 ribosomal and eukaryotic 18S/28S ribosomal RNA substrates for 4 hours.
2. The test RNA is evaluated by non-denaturing agarose gel electrophoresis and SYBR® Green II staining.
3. RNA degradation is evidenced by broadening and smearing of the RNA banding pattern.

The test results of individual lots of Nondenaturing Protein Gel Buffer (5X) *are available upon request from Technical Services.*

RELATED PRODUCTS

SDS Protein Gel Buffer
Tris-Glycine-SDS (5X)

Catalog #	351-084-131	1000 ml (1.0 L)

SDS Protein Gel Loading Solution (2X)

Catalog #	351-082-661	5x10ml, 10ml

Transblot Buffer (10X)

Catalog #	351-087-101	500ml
	351-087-131	1000ml

Blocking Solution

Catalog #	351-080-101	500ml

All products sold by Quality Biological are intended for research use only. This product has not been approved for diagnostic or IVD use.
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