
Technical Information

Products for Molecular Biology

Prehybridization/Hybridization Buffer (Molecular Biology Grade)

Catalog #: 351-077-101 500 ml

Store at: 15 - 30°C

Shipped at: ambient temperature

Composition: 6X SSC (0.9M NaCl, 0.09M sodium citrate);
5X Denhardt's Reagent (1 g each Ficoll, polyvinyl
pyrrolidone, BSA per Liter); SDS 0.5% (w/v), 5.0 g/L
in Molecular Biology Grade (MBG) Water

Notes:

- QBI's Prehybridization/Hybridization Buffer is qualified for DNA applications only. For RNA applications Hybridization Buffer for Nylon Membrane (Cat#: 351-078-101 500 ml) is recommended.
- If Prehybridization/Hybridization Buffer gels at low temperature, warm at 30-40°C until the solution clears. This gelling will not affect the performance of the product.

For more information, contact Technical Services.

DESCRIPTION

Quality Biological's (QBI) Prehybridization/Hybridization Buffer is prepared from QBI's 20X SSC, 50X Denhardt's Reagent and 20% SDS using Quality Biological's Molecular Biology Grade (MBG) Water. The final product is sterile filtered using a 0.1 µm filter.

APPLICATION

Prehybridization/Hybridization Buffer is a general purpose buffer for DNA prehybridization and hybridization procedures. It is particularly useful for procedures involving DNA immobilized on nitrocellulose membrane. It should not be used with nylon membranes.

DIRECTIONS

Use 0.1 ml of Prehybridization/Hybridization Buffer per 1 cm² of filter area.

Note: To further reduce nonspecific background, denatured, fragmented salmon sperm DNA at 100 µg/ml may be added to this hybridization buffer.

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

Prehybridization/Hybridization Buffer is routinely tested for the absence of DNase activity. The protocol is 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. Prehybridization/Hybridization Buffer 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.

The test results of individual lots of Prehybridization/Hybridization Buffer are available upon request from Technical Services.

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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RELATED PRODUCTS

10% (w/v) Sodium Dodecyl Sulfate

(10% SDS)

Catalog #	351-032-721	4x100ml, 100 ml
	351-032-101	500 ml

20% (w/v) Sodium Dodecyl Sulfate

(20% SDS)

Catalog #	351-066-721	4x100ml, 100 ml
	351-066-101	500 ml

50X Denhardt's Reagent

Catalog #	351-076-061	100 ml
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5X DNA Gel Loading Solution

Catalog #	351-028-661	5x10ml, 10 ml
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20X SSC

Catalog #	351-003-101	500 ml
	351-003-131	1000 ml (1.0 L)

20X SSPE

Catalog #	351-015-131	1000 ml (1.0 L)
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10X Tris Acetate Buffer (10X TAE)

Catalog #	351-009-101	500ml
	351-009-131	1000ml

50X Tris Acetate Buffer (50X TAE)

Catalog #	351-008-101	500ml
	351-008-131	1000ml
	351-008-131CS	10x1000ml

5X Tris Borate EDTA Buffer (5X TBE)

Catalog #	351-002-131	1000ml
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10X Tris Borate Buffer (10X TBE)

Catalog #	351-001-101	500ml
	351-001-131	1000ml
	351-001-131CS	10x1000ml

DNA Neutralizing Solution

Catalog #	351-014-131	1000ml
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DNA Denaturing Solution

Catalog #	351-013-131	1000ml
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DEPC Treated Water

Catalog #	351-068-721	4x100ml, 100ml
	351-068-101	500ml
	351-068-101CS	10x500ml
	351-068-131	1000ml
	351-068-131CS	10x1000ml
	351-068-491	4 Liter
	351-068-151	10 Liter
	351-068-161	20 Liter

Molecular Biology Grade (MBG) Water

Catalog #	351-029-721	4x100ml, 100ml
	351-029-101	500ml
	351-029-101CS	10x500ml
	351-029-131	1000ml
	351-029-131CS	10x1000ml
	351-029-491	4 Liter
	351-029-151	10 Liter
	351-029-161	20 Liter

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