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ProductInformation

MIXED BED RESIN
Molecular Biology Reagent

Product No. **M 8032**
Store at room temperature

Procedure

Applications for mixed bed resin include deionizing formamide, acrylamide, glyoxal, PEG and urea. Anion resin beads will change from blue to gold when the resin capacity is exhausted*. If all the beads change color, the quantity of resin should be increased. Although this product can be used for column techniques, a batch method is more commonly used.

For most applications **(except glyoxal):**

1. Add 10 grams of resin to 100 ml of sample.
2. Stir or shake 1 hour.
3. If all the resin has changed color, add more resin and repeat steps 1 and 2.
4. Filter or decant the sample from the resin.

When deionizing glyoxal solutions use about 1-2 grams of resin to 1 ml sample and follow the above method. Check the pH with pH test paper; glyoxal is ready for use when pH is 5 or above.

* Formamide interferes with the color change, but does not affect deionization. Each lot of mixed bed resin is tested with formamide by monitoring the change in conductivity.

Product Profile

Appearance: Blue and gold beads
Suitability: Tested for deionizing formamide and glyoxal
DNase, RNase: None detected
For nuclease testing 1 gram of resin was mixed with 10 ml water and allowed to stand for 30 minutes. The resin was filtered and the filtrate was used for testing.

Endonuclease-exonuclease
One µg of λ Hind III fragments was incubated for 16 hours at 37 °C with 25 µl of filtrate in a 50 µl reaction mixture containing 30 mM Trizma®-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$. No degradation of the DNA fragments was detected by agarose gel electrophoresis. Detection limit: Degradation of 10% of the DNA substrate is detectable.

Endonuclease (Nickase)
One µg of pBR322 DNA was incubated with 25 µl of filtrate in a 50 µl reaction mixture containing 30 mM Trizma®-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$ for 16 hours at 37 °C. No conversion of the covalently closed circular DNA to the nicked or linear form was observed by agarose gel electrophoresis. Detection limit: Conversion of 1% of the DNA substrate is detectable.

RNase
Two µg of transfer RNA were incubated with 25 µl filtrate in a 50 µl reaction mixture containing 30 mM Trizma-HCl, pH 7.8, 50 mM NaCl and 10 mM $MgCl_2$ for 16 hours at 37 °C. No degradation of the tRNA was detected by polyacrylamide gel electrophoresis. Detection limit: Degradation of 10% of the tRNA substrate is detectable.

Reference

Sambrook, J., *et al*., *Molecular Cloning: A Laboratory Manual*, (Cold Spring Harbor Laboratory 1989)

1/98