

Product Information

n-BUTANOL Molecular Biology Reagent

Product No. **B 7906**
[71-36-3]

Product Description

n-Butanol is useful for the removal of ethidium bromide from DNA purified by CsCl gradient ultracentrifugation (Sambrook, p. 1.46). It is also suitable for use in the concentration of dilute nucleic acid solutions by repeated extractions. Increased nucleic acid concentration improves recovery by ethanol precipitation.

n-Butanol extraction of aqueous solutions decreases volume, but does not remove salts. As a result salt concentration will increase as the volume decreases.

If all the water is removed from the solution, the nucleic acid will precipitate. When this happens add additional water to the n-butanol until an aqueous phase appears. The nucleic acid will be in the aqueous phase.

Procedure

Aqueous solutions containing 0.1 µg/µl pBR322 DNA and λ Hind III digest DNA were prepared and an aliquot of each was diluted 10-fold. The volume of the 10-fold dilutions were decreased 10-fold by repeated n-butanol extractions as follows:

1. Add an equal volume of n-butanol and mix by vortexing for 1 minute.
2. Centrifuge the solution at 12,000 x g for 30 seconds.
3. Remove and discard the upper (n-butanol) phase.
4. Repeat steps 1, 2, and 3 until the desired volume of aqueous phase is achieved.

Based on a comparison of the DNA (pBR322 and λ Hind III digest) from n-butanol-concentrated solutions and the DNA from the original solutions by agarose gel electrophoresis, there was no loss or degradation of DNA (pBR322 or λ Hind III digest) detected.

Product Profile

Purity: 99+%

Water: <0.05%

Suitable for use in the extraction of nucleic acid solutions.

Reference

Sambrook, J., *et al.*, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory, (1989) p. E.16 and 1.46

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