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Product Information

Benzyl DEAE Cellulose

Product Number **B 2654**
Store at Room Temperature

Product Description

CAS Number: 56508-80-6

The basic structure of cellulose is polyglucose with β -1,4 linkages.¹ This product has diethylaminoethyl (DEAE, $-\text{CH}_2\text{CH}_2\text{N}(\text{CH}_2\text{CH}_3)_2$) and benzyl ($-\text{CH}_2\text{C}_6\text{H}_5$) groups substituted on some of the sugar hydroxyl groups.

BD-Cellulose has been used as an abbreviation for a related product, Benzoylated DEAE-cellulose.² Benzyl DEAE-cellulose is prepared using benzyl bromide (which would yield an ether linkage), whereas the BD-cellulose was prepared with benzoyl chloride (which would yield an ester linkage). The benzyl product should have the same utility as the benzoylated one and would not be susceptible to alkaline hydrolysis that is associated with esters of BD-Cellulose.

Benzyl DEAE cellulose has been used in the purification of acetylcholinesterase.³ The column is equilibrated with 0.01 M sodium phosphate buffer, pH 7, and the gradient used is buffer solutions containing increasing amounts of sodium chloride starting with 0.20 M solution. At 0.50 M NaCl, acetylcholinesterase with a higher specific activity was sharply eluted.

Methods for using benzyl DEAE cellulose for the purification of methionyl-tRNA have also been published.^{2,4}

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

References

1. The Merck Index, 11th ed., Entry# 1963.
2. Gillam, I., et al., The Separation of Soluble Ribonucleic Acids on Benzoylated Diethylaminoethylcellulose. *Biochemistry* **6(10)**, 3043-3056 (1967).
3. Kremzner, L. T., and Wilson, I. B., A Chromatographic Procedure for the Purification Of Acetylcholinesterase. *J. Biol. Chem.*, **238(5)**, 1714-1717 (1963).
4. Vogel, Z., et al., The Specific Resistance of N-substituted Initiator Methionyl-tRNA to Enzymatic Hydrolysis. *Biochem. Biophys. Res. Commun.*, **33(1)**, 94-98 (1968).

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