

Dabsyl Chloride

TS-21720

1294.2

Number	Description
TS-21720	Dabsyl Chloride (4- <i>N,N</i> -dimethylaminoazobenzene-4'-sulfonyl chloride), 500 mg Molecular weight: 323.80 Maximum absorbance: 436 nm Note: Dabsyl Chloride is crystallized twice for high quality. Storage: Upon receipt store at 4°C. Product is shipped at ambient temperature.

Introduction

Dabsyl Chloride (Figure 1) is a pre-column derivatization reagent that allows detection of amino acids in visible light by reverse-phase HPLC with sensitivity down to nanomolar levels.

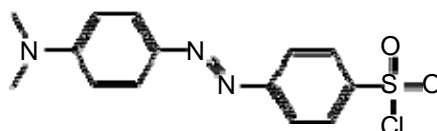


Figure 1. Chemical structure of Dabsyl Chloride.

General Conditions for using Dabsyl Chloride

The following protocol was adapted from Chang, *et al.* (1981).

Note: Dabsyl Chloride is a dark, reddish powder.

1. Dissolve 1 mg of protein in 100 μ l of 0.2 M sodium bicarbonate buffer, pH 9.0.
2. Add 100 μ l Dabsyl Chloride at 2 nmol/ ∞ l in acetone to the protein solution. If analyzing amino acids, add a 5- to 10-fold molar excess of Dabsyl Chloride.
3. Heat for 10 minutes at 70°C.
4. Dry under vacuum.
5. Redissolve in 2 ml of 70% (v/v) ethanol.

Note: The concentration of derivatized product will be approximately 1 nmol/10 ∞ l, as 5-10% of the Dabsyl Chloride added is usually hydrolyzed to the sodium salt. Determine the exact concentration by analyzing each derivatized amino acid by HPLC. Derivatized amino acids are stable at -20°C for up to one year without detectable degradation.

Reference

Chang, J-Y., *et al.* (1981). Amino acid analysis at the picomole level. *Biochem. J.* **199**:547-55.

Current versions of product instructions are available at www.thermo.com/columns.

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