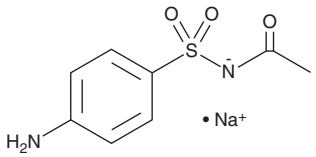
PRODUCT INFORMATION

Sulfacetamide (sodium salt)

Item No. 20377

CAS Registry No.: 127-56-0
Formal Name: N-[(4-aminophenyl)sulfonyl]-acetamide, monosodium salt
Synonyms: N-acetyl Sulfanilamide
MF: $C_8H_9N_2O_3S \bullet Na$
FW: 236.2
Purity: ≥98%
UV/Vis.: λ_{max}: 267 nm
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Sulfacetamide (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the sulfacetamide (sodium salt) in the solvent of choice, which should be purged with an inert gas. Sulfacetamide (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of sulfacetamide (sodium salt) in these solvents is approximately 1, 15, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sulfacetamide (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sulfacetamide (sodium salt) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sulfacetamide is a sulfonamide antibiotic that is bacteriostatic against Gram-positive and Gram-negative bacteria. It inhibits dihydropteroate synthase (IC_{50} = 9.6 µM), blocking the synthesis of dihydrofolic acid, and also inhibits bacterial 4-aminobenzoic acid (Item No. 18659) , which is required for the synthesis of folic acid.[1]

Reference

1. Prabhu, V., Lui, H. and King, J. Arabidopsis dihydropteroate synthase: General properties and inhibition by reaction product and sulfonamides. *Phytochemistry* **45(1)**, 23-27 (1997).

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