

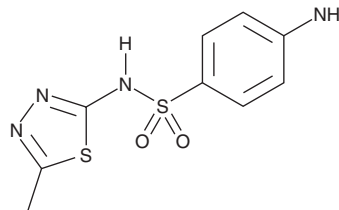
PRODUCT INFORMATION



Sulfamethizole

Item No. 23355

CAS Registry No.: 144-82-1
Formal Name: 4-amino-N-(5-methyl-1,3,4-thiadiazol-2-yl)-benzenesulfonamide
Synonyms: N¹-(5-Methyl-1,3,4-thiadiazol-2-yl)sulfanilamide
MF: C₉H₁₀N₄O₂S₂
FW: 270.3
Purity: ≥98%
UV/Vis.: λ_{max}: 287 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Sulfamethizole is supplied as a crystalline solid. A stock solution may be made by dissolving the sulfamethizole in the solvent of choice. Sulfamethizole is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of sulfamethizole in ethanol is approximately 0.3 mg/ml and approximately 50 mg/ml in DMSO and DMF.

Sulfamethizole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sulfamethizole should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sulfamethizole has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Sulfamethizole is a broad spectrum sulfonamide antibiotic (MIC_{90s} = 1.25-5,000 µg/ml against clinical isolates of *E. coli* and *K. pneumoniae*).¹ It inhibits dihydropteroate synthase, an enzyme involved in folate biosynthesis. Formulations containing sulfamethizole have previously been used to treat urinary tract infections.

Reference

1. Wambaugh, M.A., Shakya, V.P.S., Lewis, A.J., *et al.* High-throughput identification and rational design of synergistic small-molecule pairs for combating and bypassing antibiotic resistance. *PLoS Biol.* **15**(6), e2001644 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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