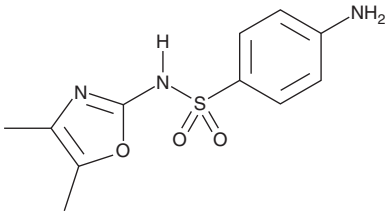
PRODUCT INFORMATION

Sulfamoxole

Item No. 19537

CAS Registry No.:	729-99-7
Formal Name:	4-amino-N-(4,5-dimethyl-2-oxazolyl)-benzenesulfonamide
Synonym:	NSC 683535
MF:	$C_{11}H_{13}N_3O_3S$
FW:	267.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 249, 270 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

Sulfamoxole is supplied as a crystalline solid. A stock solution may be made by dissolving the sulfamoxole in the solvent of choice, which should be purged with an inert gas. Sulfamoxole is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of sulfamoxole in these solvents is approximately 30 mg/ml.

Sulfamoxole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sulfamoxole should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sulfamoxole has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Sulfamoxole is a sulfonamide antibiotic.[1] It is inactive or weakly active against bacteria when used alone but acts synergistically with trimethoprim (Item No. 16473) against a variety of bacteria *in vitro*, including strains of *S. pyogenes*, *E. coli*, and *P. vulgaris* when used at concentrations of 1.95-7.8, 0.12-1.95, and 0.48-0.97 µg/ml, respectively. Sulfamoxole, in combination with trimethoprim, is effective in mouse models of *E. coli* or *P. vulgaris* infection. It inhibits *P. carinii* recombinant dihydropteroate synthase (DHPS), an enzyme required for the biosynthesis of folate, with an IC_{50} value of 0.089 µM.[2]

References

1. Böhni, E. Bacteriostatic and bactericidal activity of two trimethoprim-sulfonamide combinations. *Chemotherapy* **22(3-4),** 262-273 (1976).
2. Hong, Y.-L., Hossler, P.A., Calhoun, D.H., *et al.* Inhibition of recombinant *Pneumocystis carinii* dihydropteroate synthetase by sulfa drugs. *Antimicrob. Agents Chemother.* **39(8),** 1756-1763 (1995).

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