

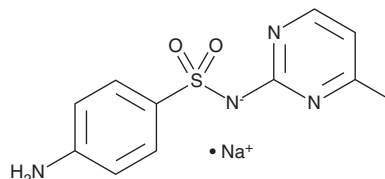
# PRODUCT INFORMATION



## Sulfamerazine (sodium salt)

Item No. 23380

**CAS Registry No.:** 127-58-2  
**Formal Name:** 4-amino-N-(4-methyl-2-pyrimidinyl)-benzenesulfonamide, monosodium salt  
**MF:** C<sub>11</sub>H<sub>11</sub>N<sub>4</sub>O<sub>2</sub>S • Na  
**FW:** 286.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 268 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

Sulfamerazine (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the sulfamerazine (sodium salt) in the solvent of choice, which should be purged with an inert gas. Sulfamerazine (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of sulfamerazine (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 sulfamerazine (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sulfamerazine (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

Sulfamerazine is a sulfonamide antibiotic.<sup>1</sup> It inhibits dihydropteroate synthase (DHPS; IC<sub>50</sub> = 11.26 ng/ml for the *S. pneumoniae* enzyme) and bacterial carbonic anhydrase by ~20% when used at a concentration of 500 μM.<sup>2,3</sup> *In vivo*, sulfamerazine (500 mg/L) reduces severity of peribronchitis and inhibits cilia-associated respiratory *Bacillus* colonization in mice.<sup>4</sup> It also prevents death of *Toxoplasma*-infected mice.<sup>1</sup> Formulations containing sulfamerazine have been used in the treatment of coccidiosis and acute fowl cholera in poultry.

### References

1. Summers, W.A. The effects of oral administration of aureomycin, sulfathiazole, sulfamerazine and 4,4'-diamino diphenyl sulfone on toxoplasmosis in mice. *Am. J. Trop. Med. Hyg.* **29**(6), 889-893 (1949).
2. Wang, Z., Liang, X., Wen, K., et al. A highly sensitive and class-specific fluorescence polarisation assay for sulphonamides based on dihydropteroate synthase. *Biosens. Bioelectron.* **70**, 1-4 (2015).
3. al-Rashida, M., Hussain, S., Hamayoun, M., et al. Sulfa drugs as inhibitors of carbonic anhydrase: New targets for the old drugs. *Biomed. Res. Int.* 162928 (2014).
4. Matsushita, S. and Suzuki, E. Prevention and treatment of cilia-associated respiratory bacillus in mice by use of antibiotics. *Lab. Anim. Sci.* **45**(5), 503-507 (1995).

#### 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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