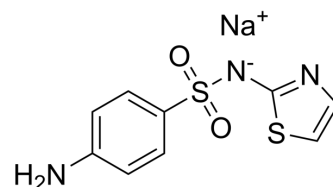


## Sulfathiazole sodium

<b>Cat. No.:</b>	HY-B0507A
<b>CAS No.:</b>	144-74-1
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>8</sub> N <sub>3</sub> NaO <sub>2</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	277.3
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 140 mg/mL (504.87 mM; Need ultrasonic)  
H<sub>2</sub>O : 140 mg/mL (504.87 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	3.6062 mL	18.0310 mL
	5 mM	0.7212 mL	3.6062 mL	7.2124 mL	
	10 mM	0.3606 mL	1.8031 mL	3.6062 mL	

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 10 mg/mL (36.06 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 3.5 mg/mL (12.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 3.5 mg/mL (12.62 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 3.5 mg/mL (12.62 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Sulfathiazole sodium is an organosulfur compound that has been used as a short-acting sulfa drug. Target: Antibacterial. Sulfathiazole (20 µg/L) starts to be degraded between day 31 and day 38 in one of the two batch reactors containing different wastewater matrices. Sulfathiazole is degraded at a substantially faster rate than sulfamethoxazole or sulfamethazine in the nitrification process (S3) [1]. Recovery from spiked manure slurry samples is 64% for Sulfathiazole at pH 9. Sulfathiazole has acidity constant of pKa of 7.1 and retention times (tR) of 7.8. S/N values for Sulfathiazole are above 100 at the 1 mg/kg level [2]. Sulfathiazole sorption to inorganic sorbents exhibits pronounced pH dependence consistent

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with sorbate speciation and sorbent charge properties. Sulfathiazole cations are most important for sorption to clay minerals, followed by neutral species [3].

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## CUSTOMER VALIDATION

- Theranostics. 2022 Jan 1;12(3):1187-1203.
- Chemosphere. 2019 Jun;225:378-387.
- Research Square Preprint. 2021 Aug.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Perez, S., P. Eichhorn, and D.S. Aga, Evaluating the biodegradability of sulfamethazine, sulfamethoxazole, sulfathiazole, and trimethoprim at different stages of sewage treatment. Environ Toxicol Chem, 2005. 24(6): p. 1361-7.
- [2]. Haller, M.Y., et al., Quantification of veterinary antibiotics (sulfonamides and trimethoprim) in animal manure by liquid chromatography-mass spectrometry. J Chromatogr A, 2002. 952(1-2): p. 111-20.
- [3]. Kahle, M. and C. Stamm, Time and pH-dependent sorption of the veterinary antimicrobial sulfathiazole to clay minerals and ferrihydrite. Chemosphere, 2007. 68(7): p. 1224-31.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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