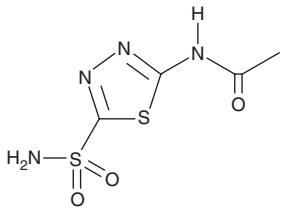
PRODUCT INFORMATION

Acetazolamide

Item No. 21218

CAS Registry No.:	59-66-5
Formal Name:	N-[5-(aminosulfonyl)-1,3,4-thiadiazol-2-yl]-acetamide
Synonyms:	L-579,486, NSC 145177
MF:	$C_4H_6N_4O_3S_2$
FW:	222.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 263 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Acetazolamide is supplied as a crystalline solid. A stock solution may be made by dissolving the acetazolamide in the solvent of choice. Acetazolamide is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of acetazolamide in these solvents is approximately 15 mg/ml.

Acetazolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, acetazolamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Acetazolamide 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

Acetazolamide is structurally categorized as a sulfonamide. It is a non-specific carbonic anhydrase inhibitor with diverse physiological effects that are cell and tissue specific.[1-3] Diuretics, including acetazolamide, have been abused as performance-enhancing drugs and masking agents in sports doping.[4]

References

1. Heming, N., Urien, S., and Faisy, C. Acetazolamide: A second wind for a respiratory stimulant in the intensive care unit? *Crit. Care* **16(4)**, 318 (2012).
2. Leaf, D.E. and Goldfarb, D.S. Mechanisms of action of acetazolamide in the prophylaxis and treatment of acute mountain sickness. *J. Appl. Physiol.* **102(4)**, 1313-1322 (2007).
3. Low, E.V., Avery, A.J., Gupta, V., *et al*. Identifying the lowest effective dose of acetazolamide for the prophylaxis of acute mountain sickness: Systematic review and meta-analysis. *B.M.J.* **345**, e6779 (2012).
4. Cadwallader, A.B., de la Torre, X., Tieri, A., *et al.* The abuse of diuretics as performance-enhancing drugs and masking agents in sport doping: Pharmacology, toxicology and analysis. *Br. J. Pharmacol.* **161(1)**, 1-16 (2010).

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