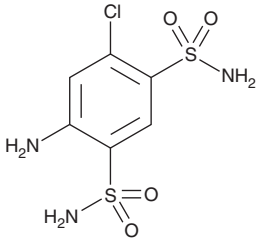
PRODUCT INFORMATION

4-Amino-6-chloro-1,3-benzenedisulfonamide

Item No. 21309

CAS Registry No.: 121-30-2
Formal Name: 4-amino-6-chloro-1,3-benzenedisulfonamide
Synonyms: ACB, Chloraminophenamide, 3-Chloroaniline-4,6-disulfonamide, NSC 93772
MF: $C_6H_8ClN_3O_4S_2$
FW: 285.7
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 264, 312 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

4-Amino-6-chloro-1,3-benzenedisulfonamide is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-amino-6-chloro-1,3-benzenedisulfonamide in the solvent of choice, which should be purged with an inert gas. 4-Amino-6-chloro-1,3-benzenedisulfonamide is soluble in DMSO and dimethyl formamide (DMF), and is slightly soluble in ethanol. The solubility of 4-amino-6-chloro-1,3-benzenedisulfonamide in DMSO and DMF is approximately 30 mg/ml.

4-Amino-6-chloro-1,3-benzenedisulfonamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-amino-6-chloro-1,3-benzenedisulfonamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 4-Amino-6-chloro-1,3-benzenedisulfonamide has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-Amino-6-chloro-1,3-benzenedisulfonamide is a carbonic anhydrase inhibitor.[1] Formulations containing this compound are diuretics.[2] 4-Amino-6-chloro-1,3-benzenedisulfonamide is detected as a hydrolysis product of chlorothiazide (Item No. 17909) in the urine.[2] Diuretics, including chlorothiazide, have been abused as performance-enhancing drugs and masking agents in sports doping.[3]

References

1. Nishimori, I., Vullo, D., Minakuchi, T., *et al.* Carbonic anhydrase inhibitors: Cloning and sulfonamide inhibition studies of a carboxyterminal truncated α-carbonic anhydrase from *Helicobacter pylori*. *Bioorg. Med. Chem. Lett.* **16(8)**, 2182-2188 (2006).
2. Deventer, K., Pozo, O.J., Van Eenoo, P., *et al.* Detection of urinary markers for thiazide diuretics after oral administration of hydrochlorothiazide and altizide-relevance to doping control analysis. *J. Chromatogr. A* **1216(12)**, 2466-2473 (2009).
3. 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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