

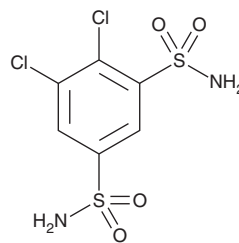
# PRODUCT INFORMATION



## Dichlorphenamide

Item No. 23658

**CAS Registry No.:** 120-97-8  
**Formal Name:** 4,5-dichloro-1,3-benzenedisulfonamide  
**Synonym:** Diclofenamide  
**MF:** C<sub>6</sub>H<sub>6</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>4</sub>S<sub>2</sub>  
**FW:** 305.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 213 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

Dichlorphenamide is supplied as a crystalline solid. A stock solution may be made by dissolving the dichlorphenamide in the solvent of choice, which should be purged with an inert gas. Dichlorphenamide is soluble in organic solvents such as methanol and DMSO.

### Description

Dichlorphenamide is a sulfonamide and an orally bioavailable carbonic anhydrase (CA) inhibitor ( $K_s = 1.20, 38, 50, \text{ and } 50 \text{ nM}$  for the human CA isoforms CAI, CAII, CAIX, and CAXII, respectively).<sup>1</sup> It lowers intraocular pressure in rabbits when 50  $\mu\text{l}$  of a 10% solution is applied topically to the eye.<sup>2</sup> Dichlorphenamide rescues the potassium deficiency and prevents insulin-induced paralysis in a rat model of familial hypokalemic periodic paralysis when administered at a dose of 5.6 mg/kg per day for ten days.<sup>3</sup> Formulations containing dichlorphenamide have been used in the treatment of glaucoma and primary periodic paralysis.

### References

1. Brzozowski, Z., Slawiński, J., Innocenti, A., *et al.* Carbonic anhydrase inhibitors. Regioselective synthesis of novel 1-substituted 1,4-dihydro-4-oxo-3-pyridinesulfonamides and their inhibition of the human cytosolic isozymes I and II and transmembrane cancer-associated isozymes IX and XII. *Eur. J. Med. Chem.* **45(9)**, 3656-3661 (2010).
2. Lotti, V.J., Schmitt, C.J., and Gautheron, P.D. Topical ocular hypotensive activity and ocular penetration of dichlorphenamide sodium in rabbits. *Graefes. Arch. Clin. Exp. Ophthalmol.* **222(2)**, 13-19 (1984).
3. Tricarico, D., Mele, A., and Conte Camerino, D. Carbonic anhydrase inhibitors ameliorate the symptoms of hypokalaemic periodic paralysis in rats by opening the muscular Ca<sup>2+</sup>-activated-K<sup>+</sup> channels. *Neuromuscul. Disord.* **16(1)**, 39-45 (2006).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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