Difenoxin (hydrochloride)

CAS Registry No.: 35607-36-4
Formal Name: 1-(3-cyano-3,3-diphenylpropyl)-4-phenyl-4-piperidinecarboxylic acid, monohydrochloride
Synonyms: Diphenoxylate, R 15403
MF: C_{28}H_{28}N_{2}O_{2} • HCl
FW: 461.0
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

## Laboratory Procedures

For long term storage, we suggest that difenoxin (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Difenoxin (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the difenoxin (hydrochloride) in the solvent of choice. Difenoxin (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of difenoxin (hydrochloride) in these solvents is approximately 0.1 and 1 mg/ml, respectively.

Difenoxin (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, difenoxin (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Difenoxin (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Diphenoxylate is an opioid used to treat diarrhea. It also has analgesic actions and, at supratherapeutic doses, psychoactive effects. Difenoxin is the active metabolite of diphenoxylate. It is thought to act primarily as a preferential agonist of enteric opiate receptors. This product is intended for forensic and research applications.

## References


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