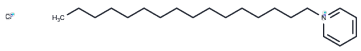
Data Sheet (Cat.No.T6439)

TargetMol

Cetylpyridinium Chloride

Chemical Properties



CAS No. : 123-03-5

Formula: C21H38N·Cl

Molecular Weight: 339.99

Storage: Store under nitrogen
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cetylpyridinium Chloride (Hexadecylpyridinium Chloride) is a cationic quaternary ammonium compound used as oropharyngeal antiseptic.
Targets(IC50)	Antibacterial,HBV
In vitro	Cetylpyridinium chloride (CPC) as active ingredient of antiseptic oral mouthrinses has a broad antimicrobial spectrum with a rapid bactericidal effect on gram-positive pathogens and a fungicide effect on yeasts in particular. Application of CPC at a concentration of 0.05% as a mouthrinse results in an immediate reduction in bacterial counts of 2.0 to 2.5 log steps (which is adequate to > 99%). This reverts to about 1 log step (= 90%) 1 h after application. The ability of CPC to inhibit plaque and thereby reduce gingivitis is assured. In comparison to chlorhexidine, CPC has a lower residual effect, and as a result a lesser effect against plaque and gingivitis. The efficacy of CPC against oropharyngeal candidiasis is assured. CPC mouthrinses can significantly reduce infectious aerosols in dental practice, thereby protecting both staff and the patient. The balance of intra-oral bacterial flora is not disturbed even in the case of relatively long-term use of CPC (up to six weeks). [1]
In vivo	Cetylpyridinium chloride increases the risk of severe allergic reactions, such as swelling of the mouth, face, lips or tongue, labored breathing, rashes, and hives. Ingesting high concentrations of cetylpyridinium chloride can lead to lung damage. Cetylpyridinium chloride is toxic if swallowed or inhaled. [2]

Solubility Information

Solubility	H2O: 62 mg/mL (182.36 mM),Sonication is recommended. Ethanol: 63 mg/mL (185.3 mM),Sonication is recommended. DMSO: 27.78 mg/mL (81.71 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.88 mM),Sonication is recommended. 10% DMSO+90% Saline: 2.78 mg/mL (8.18 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and*

In vivo Formulation	*used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9413 mL	14.7063 mL	29.4126 mL
5 mM	0.5883 mL	2.9413 mL	5.8825 mL
10 mM	0.2941 mL	1.4706 mL	2.9413 mL
50 mM	0.0588 mL	0.2941 mL	0.5883 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Pitten FA, et al. Arzneimittelforschung. 2001, 51(7), 588-595.
Haps S, et al. Int J Dent Hyg, 2008, 6(4), 290-303.