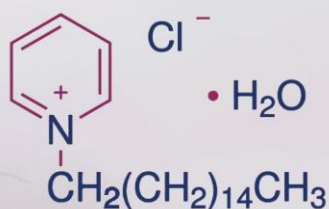


# Cetylpyridinium Chloride Monohydrate, USP



## PRODUCT IN FOCUS



## Cetylpyridinium chloride monohydrate

### INTRODUCTION

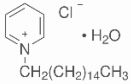
Cetylpyridinium chloride is the chloride salt form of cetylpyridinium, a quaternary ammonium with broad-spectrum antimicrobial activity. Upon topical administration, cetylpyridinium chloride is positively charged and reacts with the negatively charged microbial cell surfaces, thereby destroying the integrity of the cell membrane.

### MANUFACTURE

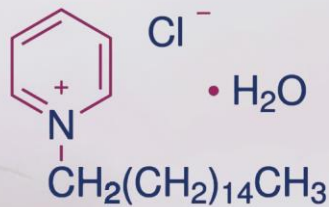
The process involves reacting cetyl chloride with pyridine under nitrogen atmosphere in an autoclave pressure followed by agitation.

### APPLICATIONS

- Used as an active ingredient in mouthwashes, toothpastes, lozenges, throat sprays, breath sprays, and nasal sprays. In these products, it generally mediates an antiseptic activity and protective action against dental plaque and reducing gingivitis.
- Used on raw and fully cooked foods including, poultry, red meat, fish and shellfish, eggs, fruits, vegetables, cereal grains, nutmeats, and dairy products as an antimicrobial agent at levels not to exceed 1.0%.
- It has also been used as an ingredient in certain pesticides.

<b>Synonym</b>	Hexadecylpyridinium chloride monohydrate
<b>CAS no.</b>	6004-24-6
<b>EINECS No</b>	204-593-9
<b>Molecular formula</b>	$\text{C}_{21}\text{H}_{38}\text{ClN} \cdot \text{H}_2\text{O}$
<b>Molecular weight</b>	358.00 g/mol
<b>Structure</b>	

# Cetylpyridinium Chloride Monohydrate, USP



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### SPECIFICATIONS...USP

Test	Unit	Specification
Description	-	White to almost-white powder, having a slight, characteristic odour.
Solubility	-	Very soluble in water, alcohol and chloroform; slightly soluble in benzene and ether.
Identification		To comply with USP tests (A,B & C)
A. IR test	-	Positive
B. HPLC test	-	Positive
C. Chloride test	-	Positive
Acidity	-	Not more than 2.5 ml of 0.02N NaOH solution is required for neutralization.
Residue on ignition	%	NMT 0.20
Organic impurities		
1. Myristylpyridinium	%	NMT 0.45
2. Stearylpyridinium	%	NMT 0.15
3. Any unspecified Impurity	%	NMT 0.1
4. Total impurities	%	NMT 1.0
Water determination	%	4.5 to 5.5
Assay (on anhydrous basis)	%	Cetyl pyridinium chloride contains NLT 98.0 and NMT 102.0 of C <sub>21</sub> H <sub>38</sub> ClN.

### PACKING

25 kg Fiber drum.

### STORAGE

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.

### CERTIFICATION

WHO-GMP and WC

No matter the quantity you need, our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.