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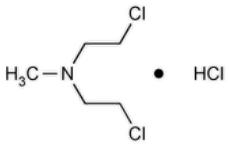
Mechlorethamine Hydrochloride



$C_5H_{11}Cl_2N \cdot HCl$ 192.51

Ethanamine, 2-chloro-*N*-(2-chloroethyl)-*N*-methyl-, hydro chloride.

2,2'-Dichloro-*N*-methyldiethylamine hydrochloride CAS RN®: 55-86-7; UNII: L0MR697HHI.

» Mechlorethamine Hydrochloride contains not less than 97.5 percent and not more than 100.5 percent of $C_5H_{11}Cl_2N \cdot HCl$, calculated on the anhydrous basis.

Packaging and storage—Preserve in tight, light-resistant containers.

Labeling—The label bears a warning that great care should be taken to prevent inhaling particles of Mechlorethamine Hydrochloride and exposing the skin to it.

USP Reference standards ⟨11⟩—
USP Mechlorethamine Hydrochloride RS

Identification—

Change to read:

A: ▲*Spectroscopic Identification Tests* ⟨197⟩, *Infrared Spectroscopy: 197K*▲ (CN 1-May-2020) ·

B: Transfer 100 mg to a test tube containing 1 mL of sodium thiosulfate solution (prepared by dissolving 1 g of sodium thiosulfate and 100 mg of sodium carbonate in 40 mL of water), shake, allow to stand for 2 hours, then add 1 drop of iodine TS: the color of free iodine remains.

Melting range ⟨741⟩**:** between 108° and 111°.

pH ⟨791⟩**:** between 3.0 and 5.0, in a solution (1 in 500).

Water Determination, *Method I* ⟨921⟩ **:** not more than 0.4%.

Ionic chloride content—Dissolve about 30 mg, accurately weighed, in 30 mL of water contained in a beaker. Add 5 mL of nitric acid and stir. Titrate with 0.02 N silver nitrate VS to a potentiometric endpoint, using a silver combination electrode. Perform a blank determination (see *Titrimetry* ⟨541⟩), and make any necessary correction. Each mL of 0.02 N silver nitrate is equivalent to 0.709 mg of ionic chloride: not less than 18.0% and not more than 19.3% of ionic chloride is found.

Assay—Transfer about 100 mg of Mechlorethamine Hydrochloride, accurately weighed, to a 125-mL conical flask. Add 100 mg of sodium bicarbonate and 20.0 mL of 0.1 N sodium thiosulfate VS. Allow to stand for 2½ hours, add 3 mL of starch TS, and titrate the excess sodium thiosulfate with 0.1 N iodine VS. Each mL of 0.1 N sodium thiosulfate is equivalent to 9.626 mg of $C_5H_{11}Cl_2N \cdot HCl$.

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
MECHLORETHAMINE HYDROCHLORIDE	Documentary Standards Support	SM32020 Small Molecules 3

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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