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Acetylcholine Chloride

(Trimethylethanaminium Chloride; Acecoline), $[\text{CH}_3\text{COOCH}_2\text{CH}_2\text{N}(\text{CH}_3)_3]\text{Cl}$ 181.66 CAS RN[®]: 60-31-1.—White, crystalline powder.

Very deliquescent; very soluble in water; freely soluble in alcohol.

MELTING RANGE (741): When previously dried at 110° in a capillary tube for 1 hour, it melts between 149° and 152°.

Reaction: A solution (1 in 10) is neutral to litmus.

Residue on Ignition (Reagent test): negligible, from 200 mg.

Solubility in Alcohol: A solution of 500 mg in 5 mL of alcohol is complete and colorless.

Percent of Acetyl (CH_3CO): Weigh accurately about 400 mg, previously dried at 105° for 3 hours, and dissolve in 15 mL of water in a glass-stoppered conical flask. Add 40.0 mL of 0.1 N sodium hydroxide VS, and heat on a steam bath for 30 minutes. Insert the stopper, allow to cool, add phenolphthalein TS, and titrate the excess alkali with 0.1 N sulfuric acid VS. Determine the exact normality of the 0.1 N sodium hydroxide by titrating 40.0 mL after it has been treated in the same manner as in the test. Each mL of 0.1 N sodium hydroxide is equivalent to 4.305 mg of CH_3CO . Between 23.2% and 24.2% is found.

Percent of Chlorine (Cl): Weigh accurately about 400 mg, previously dried at 105° for 3 hours, and dissolve in 50 mL of water in a glass-stoppered, 125-mL flask. Add with agitation 30.0 mL of 0.1 N silver nitrate VS, then add 5 mL of nitric acid and 5 mL of nitrobenzene, shake, add 2 mL of ferric ammonium sulfate TS, and titrate the excess silver nitrate with 0.1 N ammonium thiocyanate VS: each mL of 0.1 N silver nitrate is equivalent to 3.545 mg of Cl. Between 19.3% and 19.8% of Cl is found.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
ACETYLCHOLINE CHLORIDE	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

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