

CHEMISTRY

Advanced Edit

Acetamidines are the starting materials of many ~~compound entities~~, that ~~in turn~~ ~~can be used to prepare~~ ~~find usage for~~ compounds ~~with~~ biochemical activity ~~manufacture~~. However, the free acetamidine base absorbs moisture from the atmosphere, decomposes at elevated temperatures, and is converted into acetamidinium carbonate when stored in contact with air for ~~a~~ short while at room temperature. ~~Hence, so~~ acetamidinium salts are preferred alternatives to acetamidines. Many synthetic routes ~~to~~ acetamidinium salts have been reviewed. Among the various acetamidinium salts available, acetamidinium chloride is the most commonly used ~~salt of acetamidine~~, and ~~it is~~ prepared by ~~mixing acetonitrile with an alcohol in the presence of hydrogen chloride, followed by~~ the addition of ammonia to the intermediate imine ether ~~after the mixing of acetonitrile and alcohol in the presence of hydrogen chloride~~. The main disadvantage of acetamidinium chloride is ~~that its release of~~ the free base ~~is released when the salt is dissolved in methanol~~ in the presence of a methoxide, producing sodium chloride, which is partly soluble in methanol. This conversion is unfavourable in certain syntheses, ~~and because~~ the complete removal ~~of sodium chloride~~ is tedious.

Comment [A1]: If you are referring to chlorides specifically, please change this term accordingly and add the necessary citations.

Comment [A2]: I have reordered the sequence of processes used in the synthesis for better clarity. I hope the change is correct.