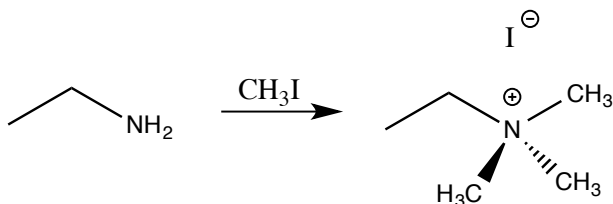


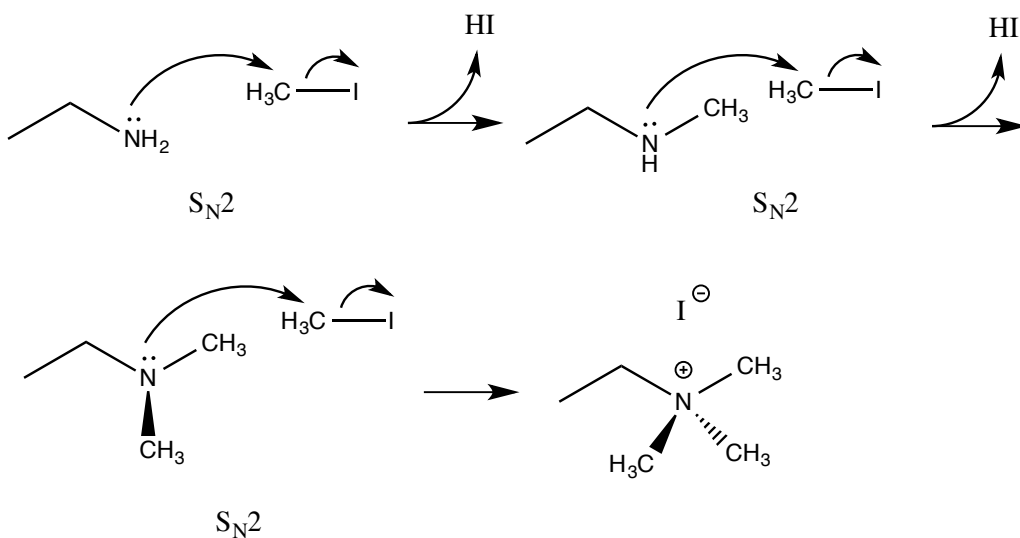
Chem 345 – Organic Reactions Chapter 23
Prepared by José Laboy, MS
[http: www.chem.wisc.edu/areas/clc](http://www.chem.wisc.edu/areas/clc) (Resource page)

Quaternization of Amines

Reaction:



Mechanism:



The reaction occurs through an S_N2 mechanism. The product of the first alkylation is more nucleophilic than the initial reagent so the alkylated amine keeps reacting until a quaternary amine is formed. Consequently, methyl iodide is not a good mono-alkylating agent.