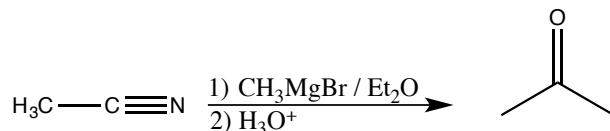


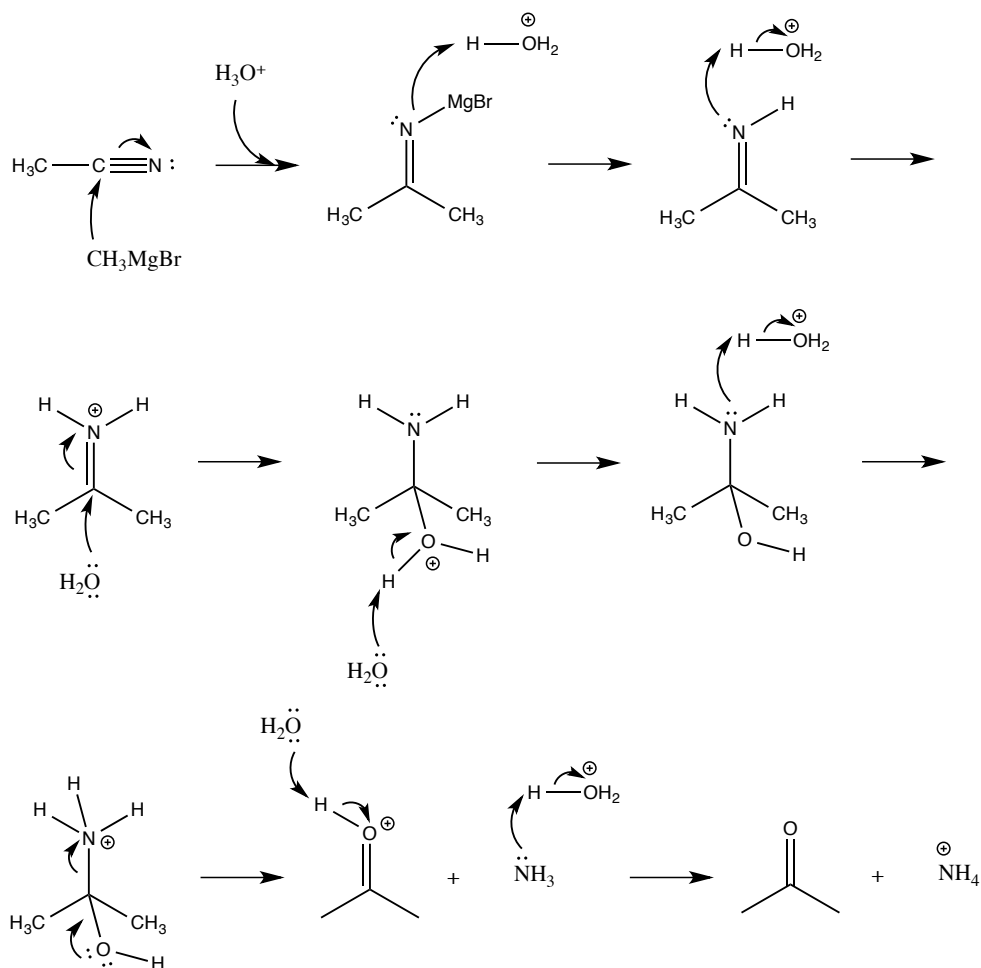
**Chem 345 – Organic Reactions Chapter 21**  
Prepared by José Laboy, MS  
[http: www.chem.wisc.edu/areas/clc](http://www.chem.wisc.edu/areas/clc) (Resource page)

Reaction of Nitriles With Grignard Reagents

Reaction:



Mechanism:



Grignard reagents are strong bases and good nucleophiles. Although nitriles are quite unreactive under such harsh conditions nitriles produce ketones. The first

step is nucleophilic attack on the electrophilic carbon atom of the nitrile. Acid workup then results in the formation of the ketone.