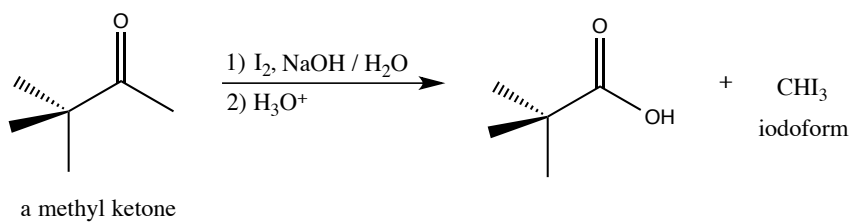


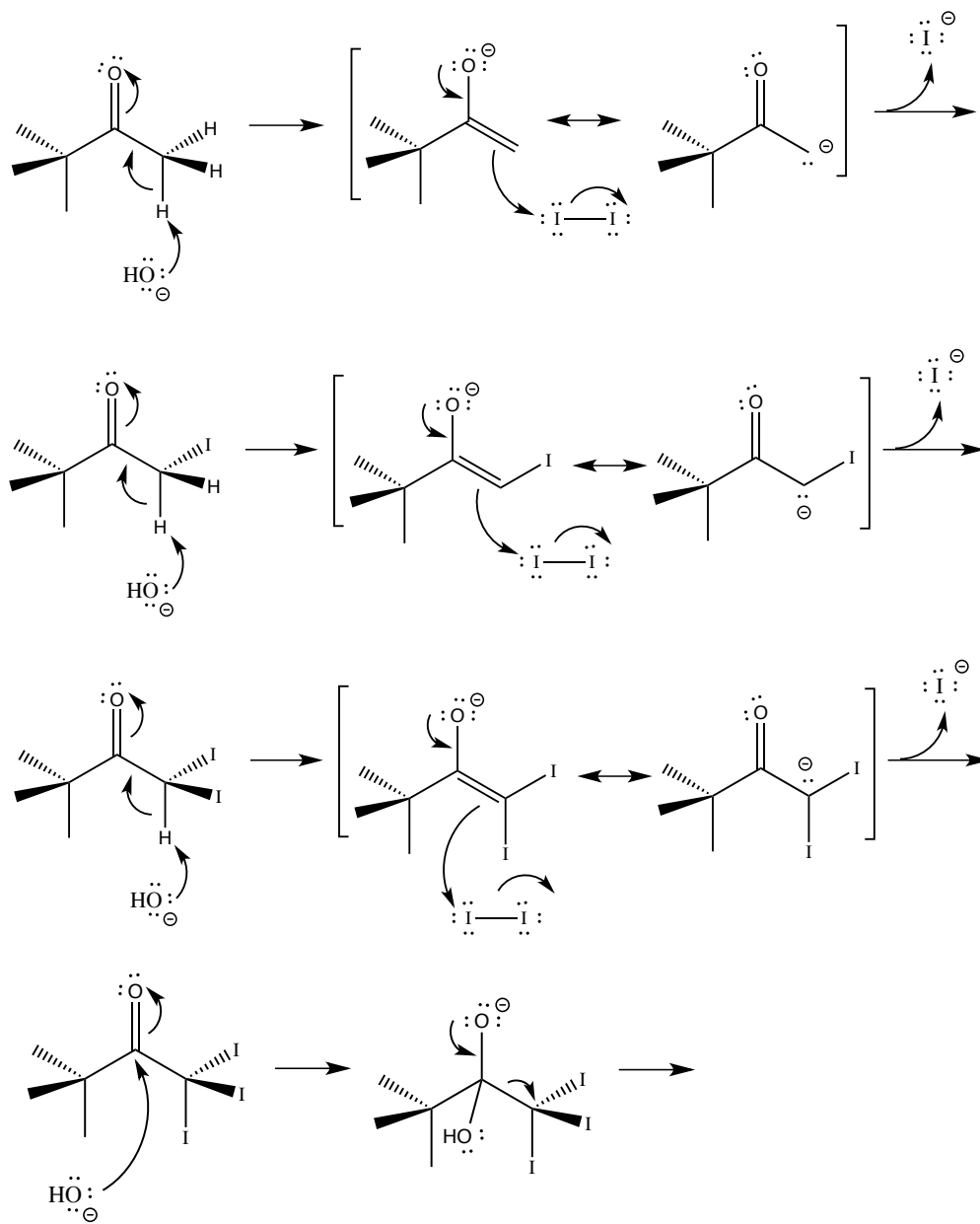
**Chem 345 – Organic Reactions Chapter 22**  
Prepared by José Laboy, MS  
<http://www.chem.wisc.edu/areas/clc> (Resource page)

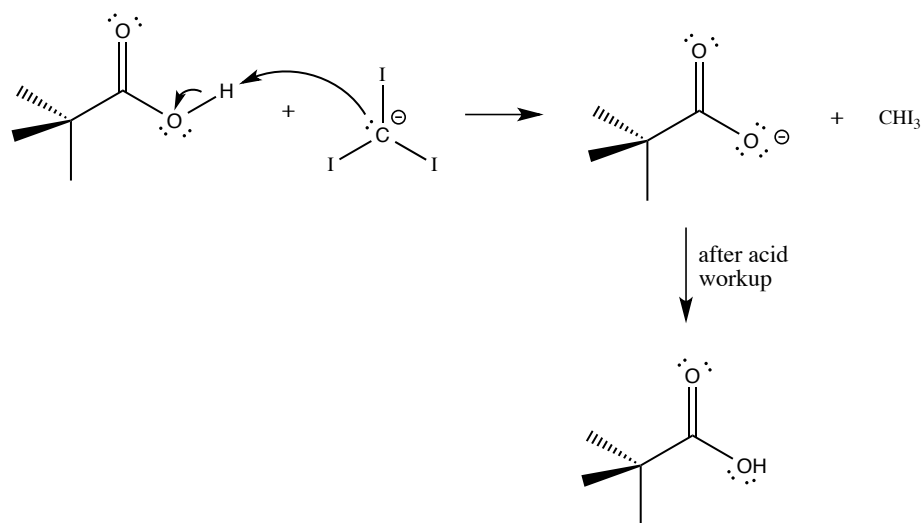
The Haloform Reaction

Reaction:



Mechanism:





Under strong basic conditions methyl ketones undergo halogenation sequentially until the *haloform* is formed, which is more base than a carboxylate. The reaction can also be performed with  $\text{Br}_2$  and  $\text{Cl}_2$ ; which will give you  $\text{CHBr}_3$  (bromoform) and  $\text{CHCl}_3$  (chloroform), respectively. This occurs because the  $\alpha$ -carbon to the carbonyl becomes more acidic as halogen atoms are substituted. This reaction is not for synthetic purposes; it's used as a diagnostic of a methyl ketone.