

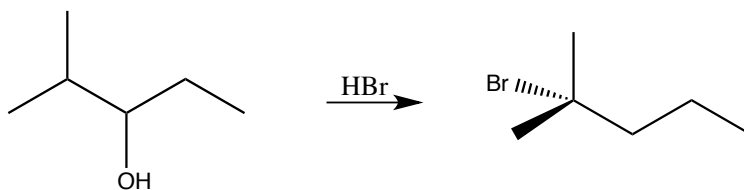
## Chem 343 – Organic Reactions

### Chapter 10

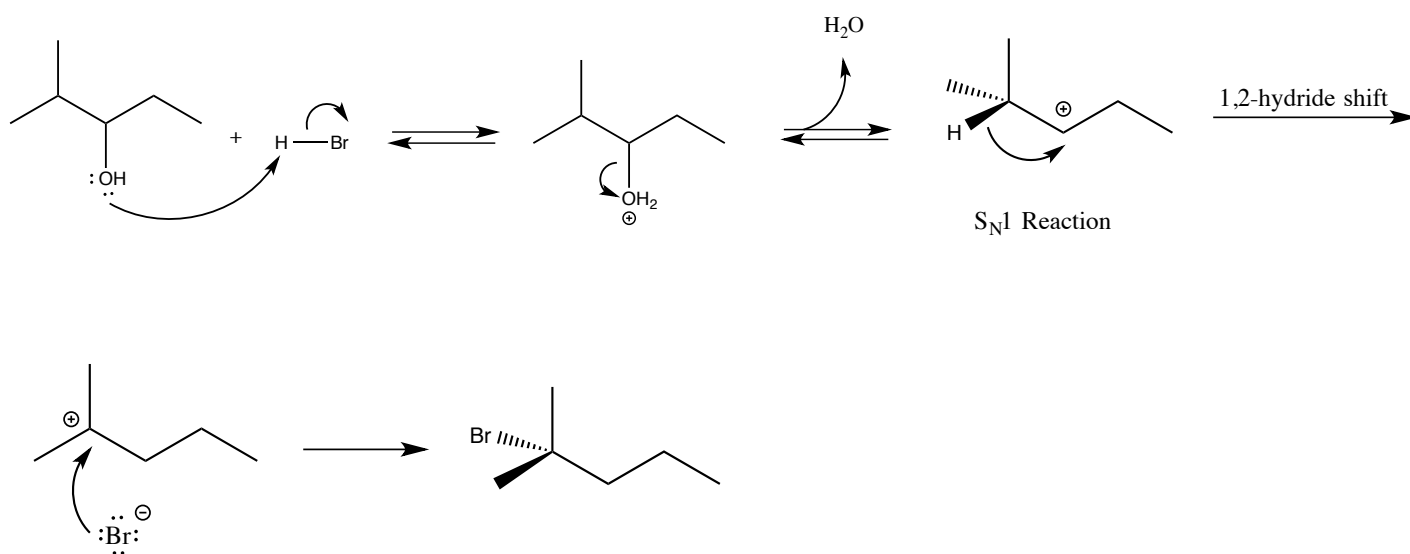
Prepared by José Laboy, MS

<http://www.chem.wisc.edu/areas/clc> (Resource page)

#### Reaction of a 2° Alcohol with Hydrogen Halides



#### Mechanism



Although secondary alcohols can undergo conversion to alkyl halides by the use of hydrogen halides the mechanism involves the formation of a carbocation. A disadvantage of this reaction is that if there is a possibility of carbocation rearrangement – to a 3° carbocation – yield will decrease dramatically. Because the rearranged carbocation is more stable the activation energy required for its formation is lower and therefore less likely to rearrange back to the less stable form.

If the initial 2° alcohol is stereogenic the product will be a racemic mixture.

There is always some alkene product that results from the E1 mechanism.