

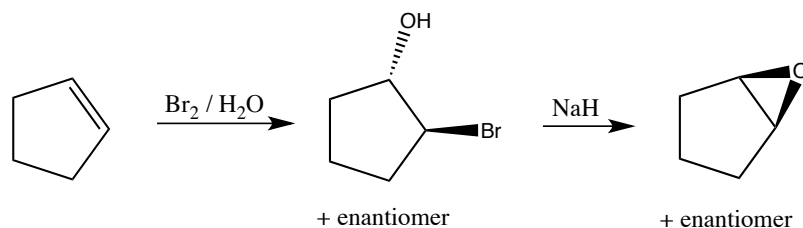
Chem 343 – Organic Reactions

Chapter 11

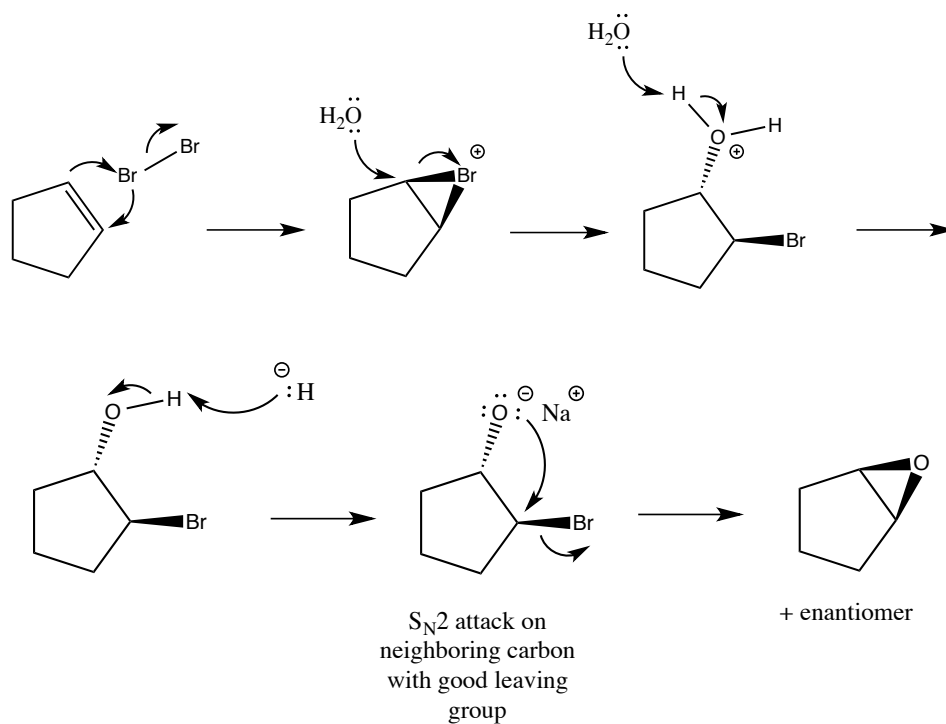
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[http: www.chem.wisc.edu/areas/clc](http://www.chem.wisc.edu/areas/clc) (Resource page)

Synthesis and Reactions of Epoxides #2: Synthesis of Epoxides with Halohydrins



Mechanism



Epoxides can also be synthesized by using a halohydrin as the starting reagent. The halohydrin is produced from an anti attack; therefore the product has the two substituents groups, the OH and the halogen, in opposite to each other. The alkoxide formed, by the use of a strong base, i.e., OH^- , H^- , or NH_2^- , then proceeds to react with the neighboring carbon in an S_N2 fashion to yield an epoxide. Only the β -carbon to the alkoxide that bears the leaving group is the only whose configuration is inverted.