Chem 343 – Organic Reactions
Chapter 11
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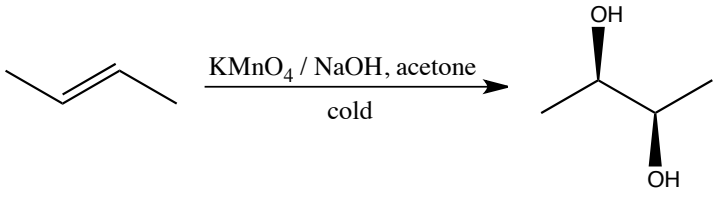
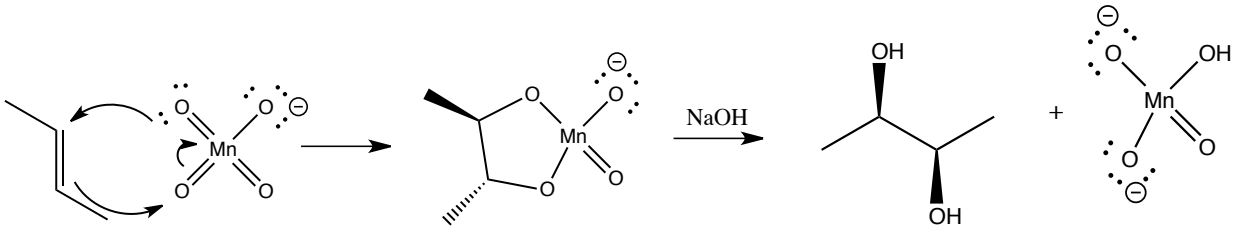
http://www.chem.wisc.edu/areas/clc (Resource page)
Alkene Reactions #12: 1,2-Diol (Glycol) Formation from Alkenes



racemic

Mechanism



racemic

The mechanism of this reaction is concerted, that is, both –OH groups are added at the same time. The mechanism may probably resemble the OsO_4 reaction. The reaction is also stereospecific; *syn* hydroxylation. The permanganate ion is a very powerful oxidizing agent and undesired products usually result from their oxidation reactions. The reaction produces very low yields. In this case the 1,2-diol can be further oxidized.