

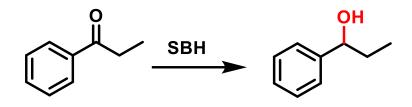


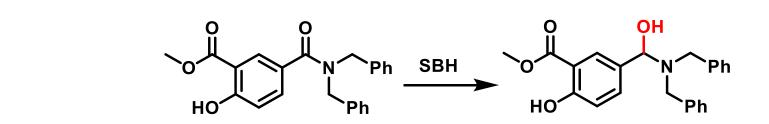
- NaBH₄ is an odorless white to gray-white microcrystalline powder that often forms lumps.
- NaBH₄ is soluble in <u>protic solvents</u> such as water and lower alcohols.
- It also reacts with these protic solvents to produce H₂; however, these reactions are fairly slow.
 Complete decomposition of a methanol solution requires nearly 90 min at 20 °C

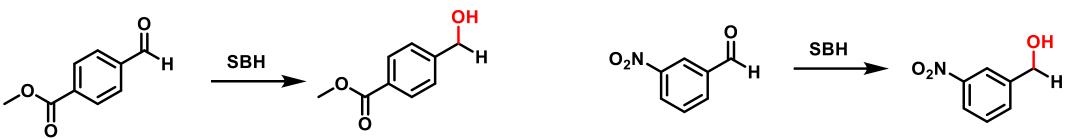
• It decomposes in neutral or acidic aqueous solutions, but is stable at pH 1¹

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B(OCH_3)_3 + 4 NaH \rightarrow NaBH_4 + 3 NaOCH_3
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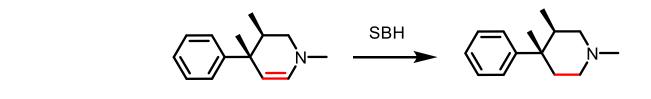






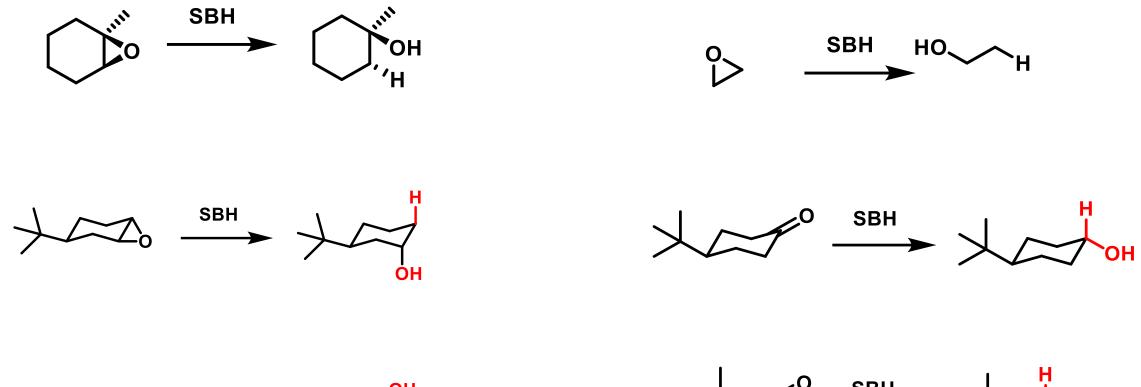




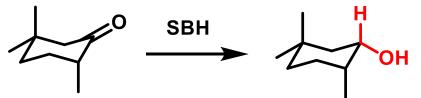






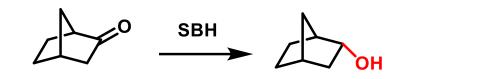




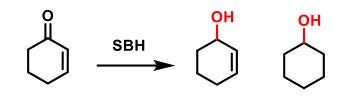


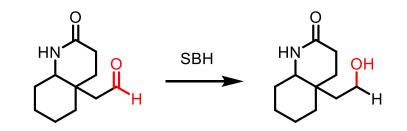




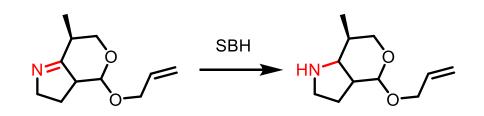










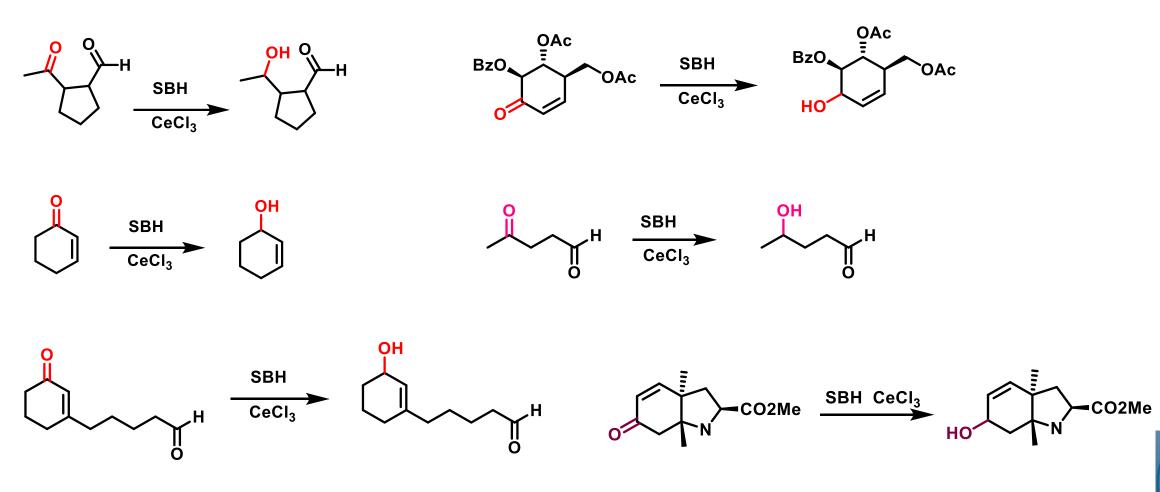






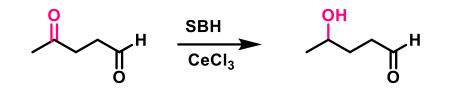


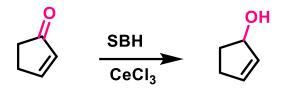
LUCHE REDUCTION

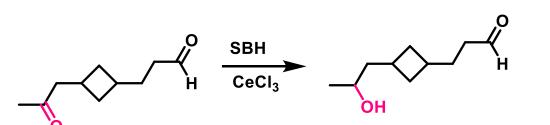


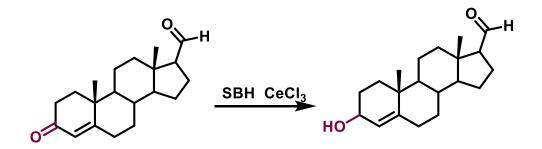


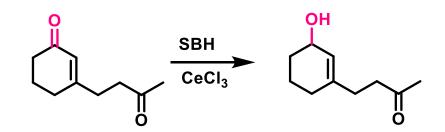


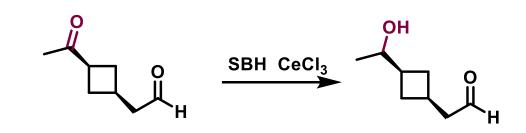






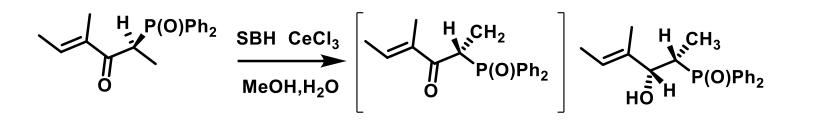


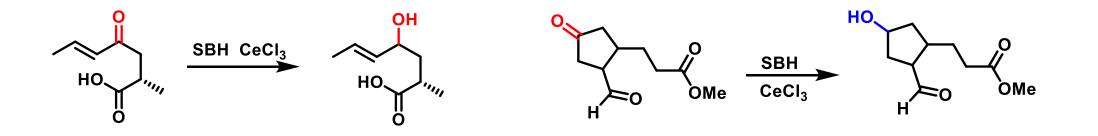


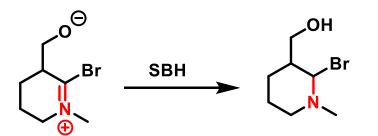


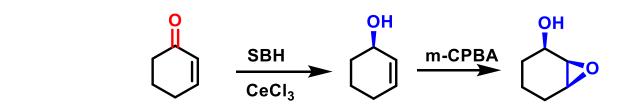






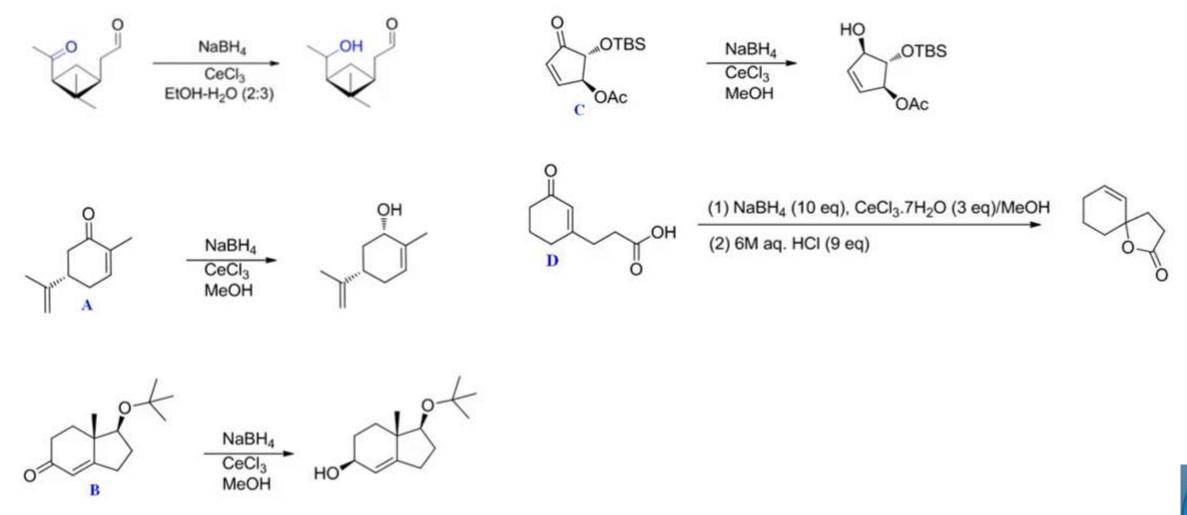








Stereochemistry of LUCHE reduction





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