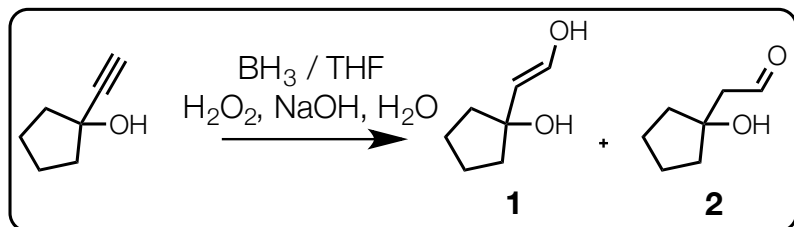


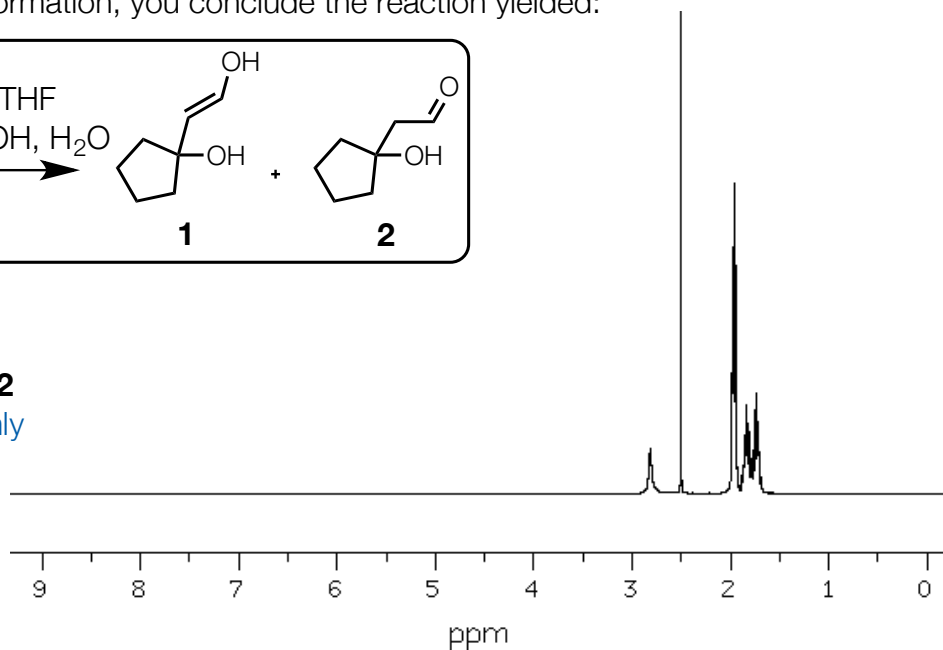
Lecture 22: NMR Problems

WOW Your Neighbors: Part 1

1. We have learned that hydroboration of terminal alkynes can yield aldehydes after keto-enol tautomerization. After running the following reaction in the lab, you obtain a ^1H NMR spectrum. From this information, you conclude the reaction yielded:



- (a) Enol **1** only
- (b) Aldehyde **2** only
- (c) A mixture of **1** and **2**
- (d) Starting material only



2. You know that ionic electrophilic addition of HCl to molecule **A** can yield two different products, **B** and **C**. Match the following ^{13}C NMR spectra to molecule **A**, **B**, or **C**.

