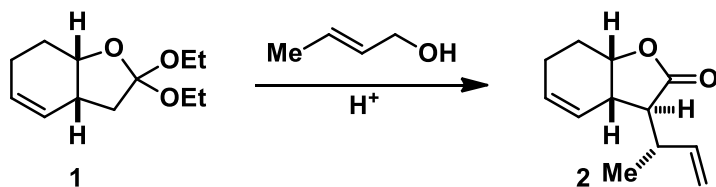




Quiz 4

1. **Problem:** When treated with 2-butene-1-ol in the presence of an acid catalyst, **1** is stereoselectively transformed into lactone **2** (Kozlowski, *JOC* **1987**, 52, 3541). Provide a mechanism for the transformation below. In your mechanism, you **are not** required to deal with the issue of stereochemistry. (4 PTS)



Answer:



## CHEM 8410\_6410\_4410 – Organic Synthesis

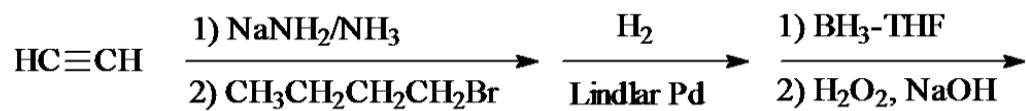
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2. **Problem:** From either of the Eschenmoser Fragmentation or the Feist-Benary Synthesis reactions, provide a) the reaction sequence and b) the reaction mechanism. (4 PTS)



3. **Problem:** What is the product of the following reaction sequence? (2 PTS)



- A. 1-hexanol
- B. 2-hexanol
- C. 1,2-hexanediol
- D. 1-hexene