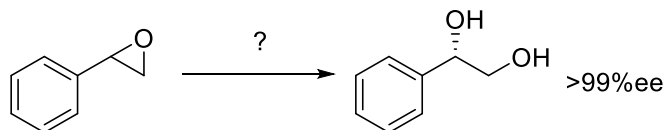


1. Consider a kinetic resolution with a selectivity factor of $s = 10$. What conversion do you need at least, to achieve an ee $> 99\%$ for the recovered starting material? What will be the ee of the product at this conversion? What is the chemical yield for the recovered starting material?
2. The hydrolytic kinetic resolution of styrene oxide with Jacobsen's Co-salen catalyst has a selectivity of $s = 20$. What is the enantiomeric excess of the hydrolysis product at low conversion? How can you get the hydrolysis product with an ee $\geq 99\%$ and a reasonable chemical yield?



3. Show that in the kinetic resolution of a racemate at 50% conversion the ee of the product is always the same as the ee of the remaining starting material. Assume that there are no side reactions.
4. How can you prepare the following compounds in high enantiomeric purity?

