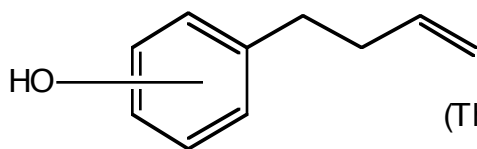


Problem 94 - Chemistry 301X - 2006

You have a flask containing one - only one - of the three isomers of **1**. Your job is to use the following reactions that lead to **2** to tell which isomer is the structure of **1**. Please be sure to give a structure for **2** and to explain carefully how you used the data to make your choice of isomer.



(The OH is attached somewhere on the ring)

**1**

(a) Draw the three possible isomers of **1**.

(b) Here are the data - explain how you can make the choice among the three possibilities. Please note: HO groups attached to benzene (cyclohexatriene) rings are slower than other OH groups to react with TsCl.

