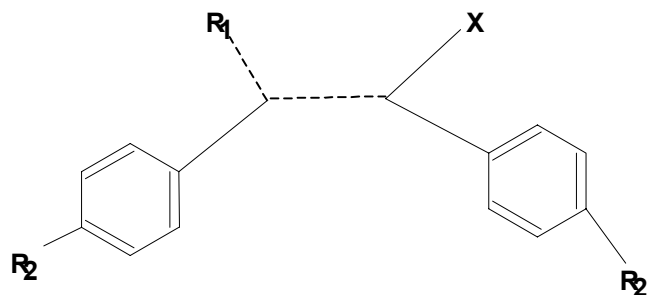


## Chem602 – Week 4 Assignment Spring 2003

Name: \_\_\_\_\_

Return completed assignments to Leah Solla, electronically to lrm1@cornell.edu, print copy in person or to the circulation desk in the Physical Sciences Library

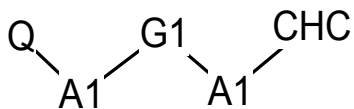
1. Using SciFinder Scholar, draw the compound below. Preview a sample of answers. You may be asked to “AutoFix” your structure, this narrows your search by excluding structures with fused ring systems. How many structures did the system predict for your search? Analyze the X and R groups and indicate which compositions are most frequent in each position.



R1 = O, S  
R2 = H, OH, OMe, Me,  
---- = any bond value  
X = any halogen

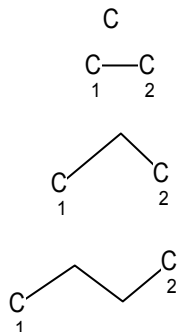
2. Run a reaction search in SciFinder Scholar to find preparation information on Valium (RN# 439-14-5). How many results?

3. Search for the following structure in Beilstein. (Q= any atom except C, CHC = any heterocycle). How many hits? Identify A1 in the results and list which atoms you find.

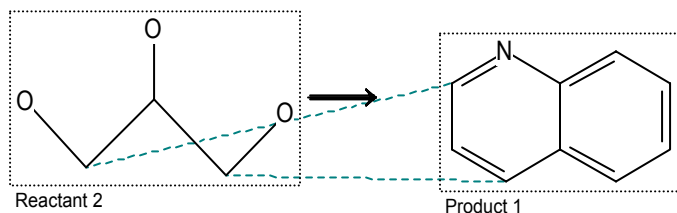
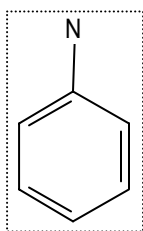


[A1]: O, N, S, Se, P

[G]:



4. Use Beilstein to search for the preparation of quinolines starting from anilines and glycerol **without** the atom mapping at first. How many hits? Allow substitution at the original ring carbons in both the aniline and quinoline. How many hits? Finally, add the atom mapping shown below and write down how many hits.



5. Search for the following structure in Gmelin. How many substances do you find? What combinations of halogens and metals are found at X and M?

