Laboratory Quiz  
Chemistry 51 DS  
Spring 1999

1. What will be the effect on the boiling point of liquid water if (Indicate by + for increase, - for decrease, 0 for no change.)
   a- sodium chloride added to the water  
   b- methanol added to the water  
   c- silver chloride (very insoluble) added to the water  
   d- the boiling is done under artificially high pressure

2. Prior to recrystallization from ethanol the triphenylmethanol is washed several times with sodium bicarbonate. What is the purpose of this washing? What is likely to happen if it is omitted?

3. An unknown compound melts at 134 - 140. There are three possible choices for the unknown A (mp 130), B(135), and C (145). Which would you choose as the unknown compound and why?

4. The $K_D$ for the extraction of a compound with ether is 10.0. What volume of ether is required to extract 99% of the compound from 100.0 mL of aqueous solution?

5. Why is it important to keep the temperature of the reaction mixture between 20 and 40 degrees when oxidizing a secondary alcohol with dichromate?

6. During the preparation of cyclohexene from cyclohexanol the alkene is removed from the reaction mixture by distillation. Why is this done instead of carrying out a reflux and then a simple distillation?