Chem 343 **Name: _____**

Quiz 3 **Section: _____**

What is the purpose of using a boiling stone/stir stick when heating a liquid?

There seem to be so many 'caveats' for conducting a safe distillation in the lab. Which of the following should you always remember?

A. **Place a boiling chip or two in the distillation flask**
B. **Never, never distill to dryness; always discontinue heating when there are a few mL of liquid left in the distillation flask**
C. **Lightly grease the glassware joints**
D. **Use clamps to support your apparatus**
E. **Duh!!! Do all of these things.**

Decide whether you should use simple or fractional distillation to separate the following miscible liquids. (You may assume that an azeotrope is not formed)

A. **water (bp 100°C) and methanol (bp 65°C)**
B. **ethyl acetate (bp 77°C) and tetrahydrofuran (66°C)**

Think back to the pictures Zubrick showed you for simple and fractional distillation set-ups. Where should the bulb of the thermometer be placed to get an accurate reading?

A. **It should be aligned directly with the opening of the 3-way adapter leading to the condenser.**
B. **It should be slightly below the opening of the 3-way adapter leading to the condenser.**
C. **It should be just slightly above the opening of the 3-way adapter leading to the condenser.**
D. **It should be submerged in the liquid boiling in the distilling flask**
E. **It should be just slightly above the liquid boiling in the distilling flask**

What is an azeotrope?