Chem 343   Name_____

Quiz 8   Section_____

sodium ethoxide   1-bromobutane
                       bp 101°C
                       density 1.27 g/mL

1-ethoxybutane

bp 91-92ºC

density 0.75 g/mL

1. If you began the reaction with 50 mmol of 1-bromobutane (MW: 137.02) and excess sodium ethoxide, what is the theoretical yield of 1-ethoxybutane (MW 102.18)? Express in mL, please. Remember sigfigs.

2. Why was it especially important last week to remember to grease your glassware joints for the Williamson synthesis under reflux conditions? What happens if you don't?

3. After extraction and drying, you are directed to isolate your product from the liquid mixture using short path distillation. What is in the mixture at that point?

4. Again, visualize what is happening as you begin heating to distill the first fraction. Why do you think it is prudent to rest your **receiving flask** in a beaker of ice water?

5. Short path distillation is just what it says. Picture a simple distillation set up in your mind and remove the water condenser from the apparatus. With that visual in mind, tell me why we can use this set-up to separate the diethyl ether from the 1-ethoxy-butane.