**Rubric for simple distillation lab notebook grading**

Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_/3 Industry Standard Format followed**

\_\_\_/4 **Intro (Purpose)** Key ideas underlying distillation:

0) way to separate high boiling from low boiling components

1) enrichment of vapor phase and notion of theoretical plates

2a) mixtures have slowly rising boiling point as # mL collected increases since `pot’ enriches in higher boiling phase when volatile component leaves. Initial drops are mostly volatile phase; last few mL are mostly less volatile phase . In between…mixtures enriched in volatile phase.

2b) pure substances have ~ constant boiling pt since no enrichment occurs in vapor phase

\_\_\_/**10 Observations**

 \_\_\_distillation apparatus sketched **and** pieces labeled clearly

 \_\_\_Brief text on what you did (can be very short). Include any critical details of actual experiment.

 (voltage setting of Variac; volume of sample used)

 \_\_\_ well-labeled table of collected mL vs ToC for pure ethanol

\_\_\_ well-labeled table of collected mL vs ToC for 1:1 mixture of ethanol: water

\_\_\_/**8 Results**

 \_\_nD and d for pure ethanol

 \_\_nd and d for 1:1 ethanol water

 \_\_well labeled Plot of mL vs boiling temperature for pure ethanol

 \_\_ well labeled plot of mL vs boiling temperature for 1:1 ethanol: water mixture

**Rubric for simple distillation lab notebook grading**

Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_/3 Industry Standard Format followed**

\_\_\_/4 **Intro (Purpose)** Key ideas underlying distillation:

0) way to separate high boiling from low boiling components

1) enrichment of vapor phase and notion of theoretical plates

2a) mixtures have slowly rising boiling point as # mL collected increases since `pot’ enriches in higher boiling phase when volatile component leaves. Initial drops are mostly volatile phase; last few mL are mostly less volatile phase . In between…mixtures enriched in volatile phase.

2b) pure substances have ~ constant boiling pt since no enrichment occurs in vapor phase

\_\_\_/**10 Observations**

 \_\_\_distillation apparatus sketched **and** pieces labeled clearly

 \_\_\_Brief text on what you did (can be very short). Include any critical details of actual experiment.

 (voltage setting of Variac; volume of sample used)

 \_\_\_ well-labeled table of collected mL vs ToC for pure ethanol

\_\_\_ well-labeled table of collected mL vs ToC for 1:1 mixture of ethanol: water

\_\_\_/**8 Results**

 \_\_nD and d for pure ethanol

 \_\_nd and d for 1:1 ethanol water

 \_\_well labeled Plot of mL vs boiling temperature for pure ethanol

 \_\_ well labeled plot of mL vs boiling temperature for 1:1 ethanol: water mixture