

Boiling Water at 40C

Boiling Water at 40⁰C

MATERIALS

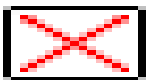
- 25mL syringe
- Overhead projector
- Hot plate
- 400mL beaker
- Thermometer

PRESENTATION

1. Before the beginning of class fill the 400ml beaker with about 100mL of D.I. water
2. Place it on the hot plate and turn it on low heat
 1. Measure the temperature of the D.I. water and show the class that it is not even close to boiling (it should be around 40⁰C)
 2. Draw about 15mL of D.I. water into the syringe and expel it back into the beaker at least 3 times (or have the syringe in the beaker for a minute or two)
 3. Draw 5mL of D.I. water into the syringe and cap it
 4. Place the syringe horizontally on the overhead projector
 5. Begin drawing a vacuum inside of the syringe by pulling the plunger out

6. The D.I. water will begin to boil after the plunger is about at the 20mL graduation

DISCUSSION

- 
- Van der Waals equation
- Phase diagrams
- Intermolecular attraction/repulsion
- Triple points

[Undergraduate](#)^[1]

Department of Chemistry and Biochemistry at The University of Arizona
P.O. Box 210041, 1306 East University Blvd., Tucson, AZ 85721-0041
Phone: 520.621.6354 Fax: 520.621.8407

[UA NetID Login](#)

Source URL (retrieved on 01/12/2013 - 4:59am): http://www.chem.arizona.edu/lecture_demos/liquid-vapor_equilibrium_and_phase_diagrams

Links:

[1] <http://www.chem.arizona.edu/taxonomy/term/11>