Visualizing a Mole

Recommended for Chapter(s): 3

Demo #011

**Procedure**

1. Show students the bottles containing 1 mole of water (H$_2$O), 1 mole of mercury (Hg), 1 mole of copper (I) oxide (Cu$_2$O), and 1 mole of potassium chromate (K$_2$CrO$_7$) (to make a mole you need all three bottles of K$_2$CrO$_7$).
2. Show students the bars made from 1 mole of zinc (bar A), 1 mole of aluminum (bar B), 1 mole of iron (bar C), and 1 mole of copper (bar d).

**Clean Up**

1. Return the materials to the cart in the demonstration library room.

**Stockroom Notes**

1. Return all items to the demonstration tube.
2. Return tub to the demonstration library.

**Discussion**

This demonstration shows the students what 1 mole of different materials looks like and is an excellent way of reinforcing the idea that a mole is only an indication of the number of particles and does not indicate the volume or weight of a material.

A fun youtube video to go along with this demo is “A Mole is Unit”

[http://www.youtube.com/watch?v=PvT51M0ek5c](http://www.youtube.com/watch?v=PvT51M0ek5c)

This video discusses how much volume a mole of other objects would take up.
Materials in the box

1. Bottle with 1 mol Hg
2. Bottle with 1 mol H₂O
3. Bottle with 1 mol Cu₂O
4. 3 bottle containing a total of 1 mol K₂CrO₇
5. 1 mole of Zn, Al, Cu, and Fe