Salts and Solubility Activity 2

Learning Goals: Students will be able to:

- Write the dissolving reaction for salts
- Describe a saturated solution microscopically and macroscopically with supporting illustrations
- Calculate solubility in grams/100ml
- Distinguish between soluble salts and slightly soluble salts macroscopically.
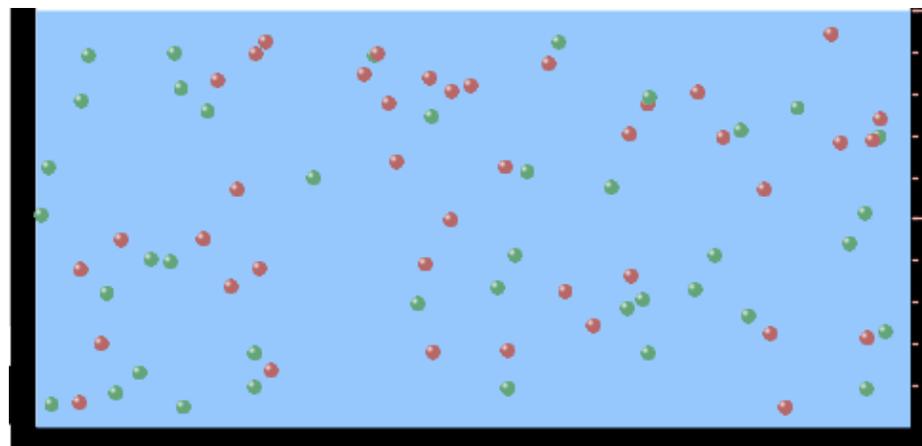
Trish Loeblein July 2008

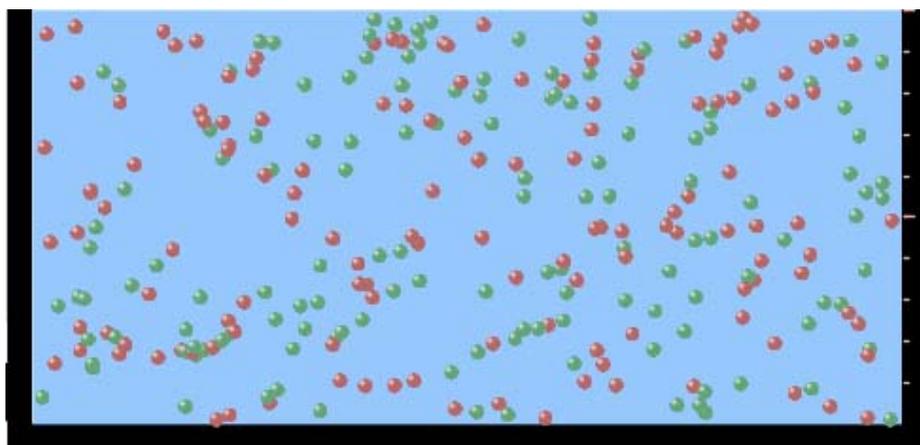# 1. Which is correct for dissolving barium iodide in water ?

A. $BaI_{2(s)} \rightarrow Ba_{(aq)} + 2I_{(aq)}$

B. $BaI_{(s)} \rightarrow Ba_{(aq)} + I_{(aq)}$

C. $BaI_{2(s)} \rightarrow Ba^{+2}{}_{(aq)} + 2I^{-}{}_{(aq)}$

D. $BaI_2 \rightarrow Ba^{+2} + 2I^{-}$

2. Sue used *Salts* to learn about "saturated solution". Which image best shows a saturated solution?
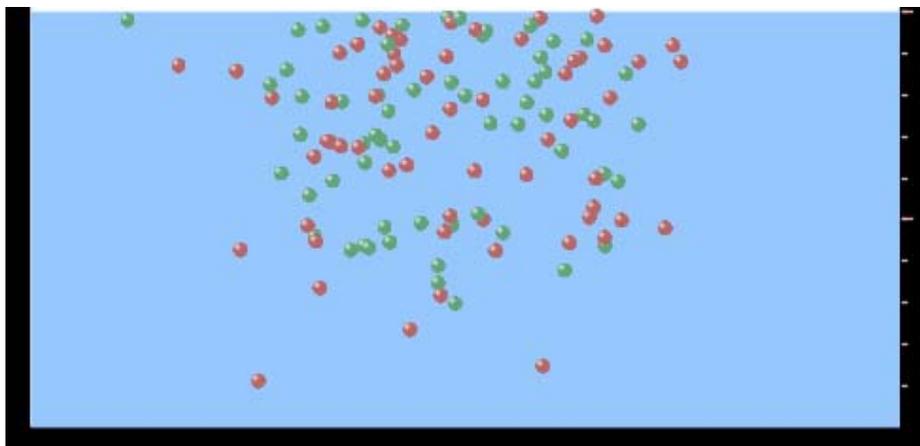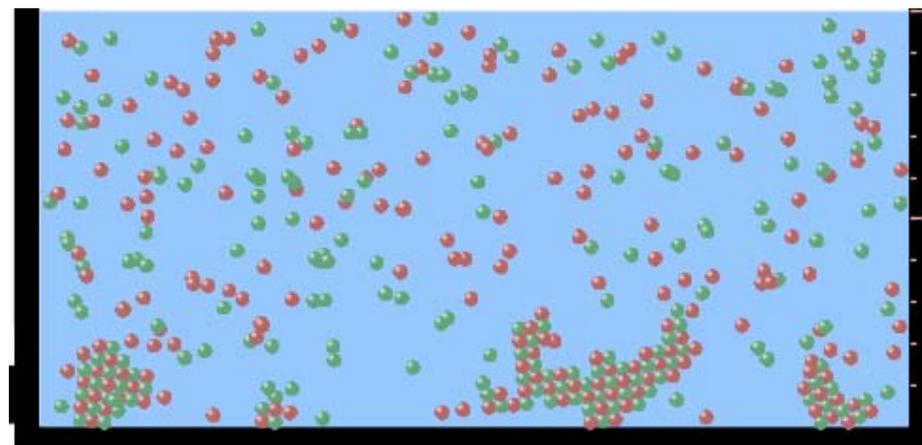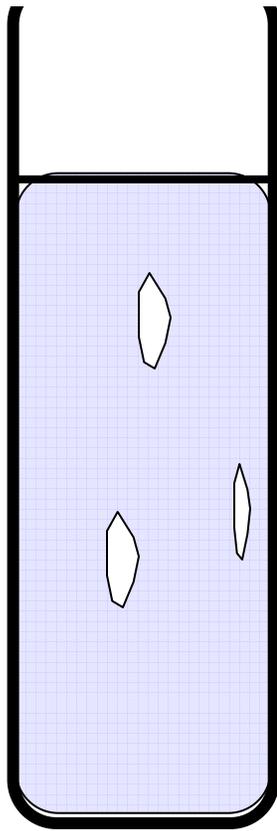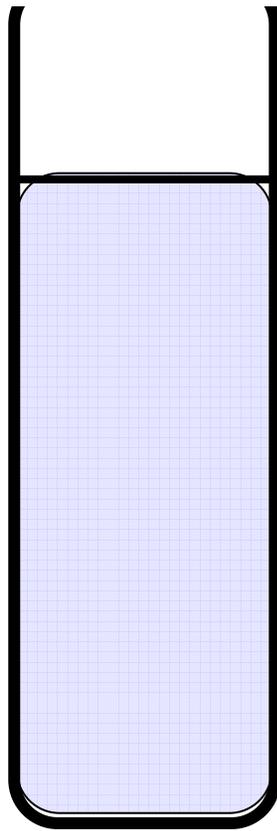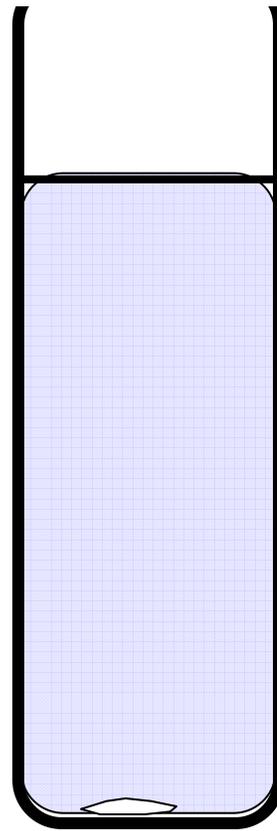

A

B

C

D

3. Waldo added salt to a test tube of water to learn about "saturated solution". Which image best shows a saturated solution?
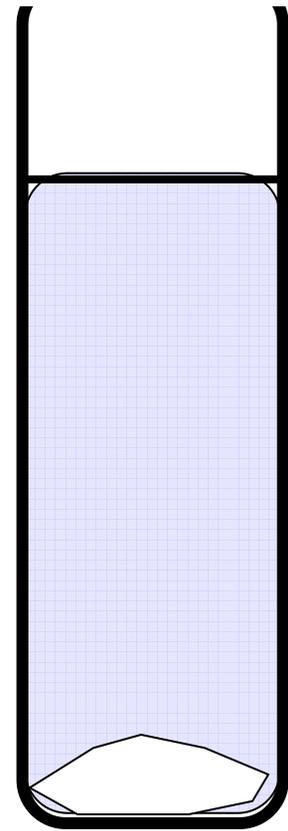
A

B

C

D

4. If you used the sim to test silver chloride, you would see 80 Ag⁺ ions dissolved in 1E-17 liters. What is the solubility in 100 ml of water?

A. .0019 grams/100 ml water

B. .00019 grams/100 ml water

C. .0014 grams/100 ml water

D. .00014 grams/100 ml water

The calculation for AgCl example:

80 AgCl /6.02E23 AgCl/mole) *(143.5grams/mole)
  = 2.4E –20 grams

1.9E –20 grams/(1E-17L) = .0019 grams/L

.0019 grams/L* .1L/100ml=.00019 g/100ml

B

5. You knew a salt was either sodium chloride or silver chloride.
If you put **1** gram in 10 ml of water in a test tube, and it looked like this →
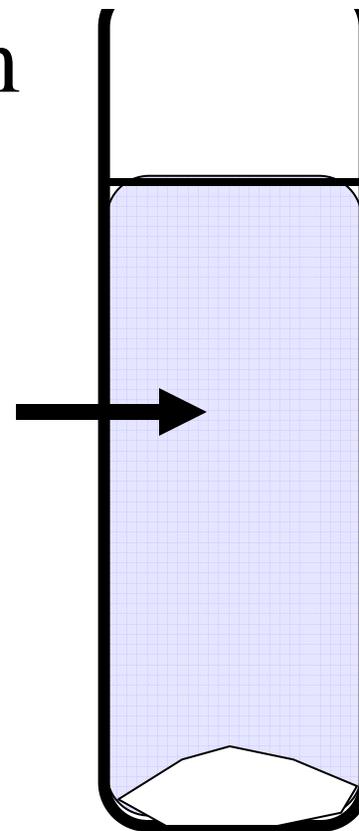
Which is it?

A. **Sodium chloride**

B. **Silver Chloride**

C. **This is not an identifying test**