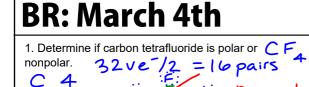
Quiz Tomorrow!



2. Using your notes from Friday, determine which molecules below would dissolve in water.

HBr polar

28

H₂Se) polar

nonpolar CS2 nonpola-

Apr 4-8:30 AM

Monday, March 4th

Objective: Students will learn how to express concentration in chemistry.

- 1. Bellringer
- 2. Notes: Concentration Units
- 3. HW?'s
- 4. Worktime

Due: Polarity Practice Homework: Concentration Units Practice

Apr 4-8:16 AM

Molarity: pg. 5

Molarity (M): the number of moles of

solute per <u>liter</u> of solvent

Units: <u>M</u> *ex: 3.0 M is "3 <u>molar"</u>*

molarity (M) = $\frac{\text{moles of solute}}{\text{L of solvent}}$

Apr 25-7:54 AM

Molality

Molality (m): the number of <u>moles</u> of solute per <u>kilogram</u> of solvent

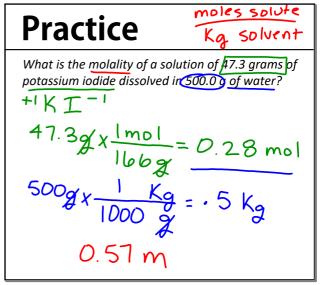
Units: <u>m</u> ex: 3.0 m is "3 <u>molal</u>"

molality (m) = $\frac{\text{moles of solute}}{\text{kg of solvent}}$

Apr 25-7:54 AM

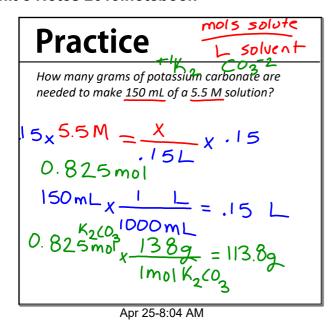
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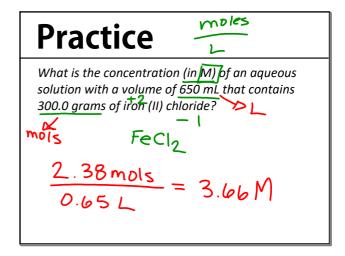
- 1000 mL = 1 L
- 1000g = 1 kg
- 1 mL of water = 1 g of water



Apr 25-7:54 AM

Apr 25-8:04 AM





Apr 25-8:04 AM

Percent by Mass

mass of solute

*mass of solution

(solute + solvent)

In order to maintain a sodium chloride (NaCl) concentration similar to ocean water, an aquarium must contain 3.6 g NaCl per 100.0 g of water. What is the percent by mass of NaCl in the solution?

Apr 25-8:04 AM

Percent by Volume

 $\frac{\text{volume of solute}}{\text{volume of solution}} \times 100$

Example:

What is the percent by volume of ethanol (C₂H₅OH) in a solution that contains 35 mL of ethanol dissolved in 155 mL of water?

$$\frac{35}{(155+35)} \times 100 = 18.4\%$$

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Practice

Example:

What is the percent by volume of isopropyl alcohol in a solution that contains 24 mL of isopropyl alcohol in 1.1 L of water?

Practice

What is the percent by mass of NaHCO₃ in a solution containing 20.0 g of NaHCO₃ dissolved in 600.0 mL of H_2O ?

Apr 25-8:04 AM Apr 25-8:04 AM

solutionSalt.zip clipboard(20615).galleryitem