Topic 7 – Solutions

Lesson 4 – Expression of Concentration of Solutions

Terms to Know

Concentration –

Molarity –

Parts per million (ppm) –

Molarity = moles of solute

liter of solution

Moles of solute = Molarity x liter of solution

Volume = moles of solute

Molarity

Example

What is the concentration of a solution that contains 1.4 moles of solute in 2 L of the solution?

Molarity = 1.4/2 = 0.7 M

ppm = grams of solute x 1,000,000

grams of solution

grams of solute = ppm x grams of solution

1,000,000

Example

A solution of CO2 contains 0.5 grams of the solute in 500 grams of the solution. What is the concentration in ppm?

ppm = 0.5 x 1,000,000 = 1000 ppm

500