

Molarity Review

Molarity is one of the major units used to describe concentration. Molarity is defined as moles solute/ liter of solution.

mol/L

Common Practice:

Find the molarity of a solution

Dilution

Using molarity and volumes to analyze chemical reactions

Molarity Review

Find the molarity of a solution

A 300.0 mL solution is created from a 75.0 g sample of $\text{Al}(\text{NO}_3)_3$. What is $[\text{Al}(\text{NO}_3)_3] = ?$

$\text{mw} (\text{Al}(\text{NO}_3)_3) = 212.9 \text{ amu}$

What is the concentration of NO_3^- in the solution?

Molarity Review

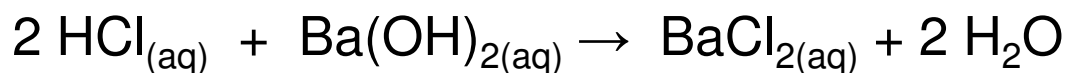
Dilution

$$M_1V_1=M_2V_2$$

A 55.0 mL solution where $[\text{NaCl}] = 0.456 \text{ M}$ is diluted to 147 mL. What is the new concentration of NaCl?

Molarity Review

Using molarity and volumes to analyze chemical reactions



A 55.0 mL solution of 0.456 M HCl is mixed with 25 mL of 0.555 M $\text{Ba}(\text{OH})_2$. How many moles of BaCl_2 is generated?

How much (and what) is left over in moles?

What is the molarity of the 'leftovers'?