

# 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  $\text{NO}_3^-$  in the solution?

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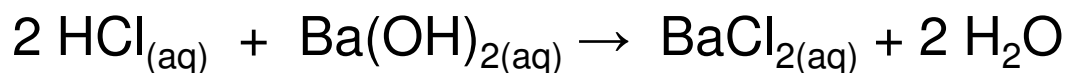
Dilution

$$M_1V_1=M_2V_2$$

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  $\text{BaCl}_2$  is generated?

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

What is the molarity of the 'leftovers'?