Warm Up

Calculate the mass of NaCl needed to make 250. mL of a 0.717 mol/L solution.

m = ?

NaCl

V = 250. mL

C = 0.717 mol/L

$C = \frac{n}{V}$

$0.717\ mol/L = \frac{n}{0.250\ L}$

$n = (0.717\ mol/\cancel{L})(0.250\ \cancel{L})$

$n = 0.17925\ mol$

$0.17925\ mol\ NaCl \times \frac{58.44\ g\ NaCl}{1\ mol\ NaCl} = \boxed{10.5\ g\ NaCl}$

$NaCl \rightarrow (1 \times 22.99) + (1 \times 35.45) = 58.44\ g/mol$

$$C = \frac{n}{V}$$

n ← # of moles

V ← volume (L)

C → molar concentration (mol/L = M)

Practice Problems

Worksheet