

# FINDING EMPIRICAL FORMULA

Given Masses of each element

eg.) A sample of a compound is analyzed and found to contain 8.4 g "C", 2.1 g "H" and 5.6 g of "O". Find empirical formula

NOTE: FOR THESE - Ignore diatomic's

Element	Mass	Atomic Mass	Moles (mass/ct. mass)	$\frac{\text{moles}}{\text{smallest mole}}$	SR
C	8.4	12.0	$\frac{8.4}{12.0} = 0.70$	$\frac{0.70}{0.35} = 2.0$	2
H	2.1	1.0	$\frac{2.1}{1.0} = 2.1$	$\frac{2.1}{0.35} = 6.0$	6
O	5.6	16.0	$\frac{5.6}{16.0} = 0.35$	$\frac{0.35}{0.35} = 1.0$	1

So Emp. Formula =  $C_2H_6O$