

Formula Empírica C = 92.3% H = 7.7%

$$\text{Mol C} = \frac{92.3 \text{ g}}{12 \text{ g/mol}} = 7.69 \text{ mol} / 7.69 = 1$$

= CH

$$\text{Mol H} = \frac{7.7 \text{ g}}{1 \text{ g/mol}} = 7.7 \text{ mol} / 7.69 = 1$$

Na = 52.4% S = 22.5% O = 45.1%

$$\text{Mol Na} = \frac{32.4 \text{ g}}{22.98 \text{ g/mol}} = 1.40 \text{ mol} / 0.7 = 2$$

$$\text{Mol S} = \frac{22.5 \text{ g}}{32.06 \text{ g/mol}} = 0.7 \text{ mol} / 0.7 = 1 = \text{Na}_2\text{SO}_4$$

$$\text{Mol O} = \frac{45.1 \text{ g}}{16 \text{ g/mol}} = 2.8 \text{ mol} / 0.7 = 4$$

C = 48% H = 4% N = 22.4% S = 12.8% O = 12.8%

$$\text{Mol C} = \frac{48}{12} = 4 \text{ mol} / 0.4 = 10$$

$$\text{Mol H} = \frac{4}{1} = 4 \text{ mol} / 0.4 = 10 = \text{C}_{10}\text{H}_{10}\text{N}_4\text{S}_2\text{O}_2$$

$$\text{Mol N} = \frac{22.4}{14} = 1.6 \text{ mol} / 0.4 = 4$$

$$\text{Mol S} = \frac{12.8}{32} = 0.4 \text{ mol} / 0.4 = 1$$

$$\text{Mol O} = \frac{12.8}{16} = 0.8 \text{ mol} / 0.4 = 2$$

$$\text{N} = 0.079 \text{ g} \quad \text{O} = 0.181 \text{ g} = \text{NO}_2$$

$$\text{Mol N} = \frac{0.079}{14} = 0.005 \text{ mol} / 0.005 = 1$$

$$\text{Mol O} = \frac{0.181}{16} = 0.011 \text{ mol} / 0.005 = 2.2$$

Na = 21.6% Cl = 33.3% O = 45.1%

$$\text{Mol Na} = \frac{21.6}{23} = 0.93 \text{ mol} / 0.93 = 1$$

$$\text{Mol Cl} = \frac{33.3}{35} = 0.95 \text{ mol} / 0.93 = 1$$

$$\text{mol O} = \frac{45.1}{16} = 2.81 \text{ mol} / 0.93 = 3$$

= NaClO₃