

Section 10.1

- 342.3 g/mol
- a. 208.2 g/mol b. 352.0 g/mol
- a. 158.0 g/mol b. 310.2 g/mol
- 5.85 mol H₂O
- 3.6×10^{23} atoms
- 32.0 g

Section 10.2

- a. 180.2 g/mol c. 96.2 g/mol
b. 84.0 g/mol d. 153.2 g/mol
- a. 1.8×10^3 g
b. 26 g
c. 3.20×10^{-2} g
d. 0.480 g or 4.80×10^{-1} g
e. 1.43×10^2 g
- 1.87×10^5 g
- 204.1 g
- a. 4.9×10^{-3} mol d. 1.98×10^{-2} mol
b. 9.10×10^{-2} mol e. 1.97×10^{-6} mol
c. 1.08×10^{-2} mol
- 5.43 mol
- 15.1 g
- 59.6 L CH₄
- 6.03 mol NH₃

Section 10.3

- Percent C = $\frac{5.34 \text{ g C}}{52.84 \text{ g cpd}} \times 100 = 10.1\% \text{ C}$
Percent H = $\frac{0.42 \text{ g H}}{52.84 \text{ g cpd}} \times 100 = 0.79\% \text{ H}$
Percent Cl = $\frac{47.00 \text{ g Cl}}{52.84 \text{ g cpd}} \times 100 = 89.1\% \text{ Cl}$
- Mass of Cl = total mass of compound - mass of Sn
= 18.35 g of compound - 5.74 g Sn
= 12.61 g Cl
Percent of Sn = $\frac{5.74 \text{ g Sn}}{18.35 \text{ g cpd}} \times 100$
= 31.3% Sn
Percent of Cl = $\frac{12.61 \text{ g Cl}}{18.35 \text{ g cpd}} \times 100$
= 68.7% Cl
- Percent C = $\frac{3.907 \text{ g C}}{4.781 \text{ g cpd}} \times 100 = 81.7\% \text{ C}$
Percent H = $\frac{0.874 \text{ g H}}{4.781 \text{ g cpd}} \times 100 = 18.3\% \text{ H}$
- Percent C = $\frac{48.0 \text{ g C}}{158.1 \text{ g Ca(C}_2\text{H}_3\text{O}_2)_2} \times 100$
= 30.4% C
Mass C = 30.4% C \times 65.3 g = 19.8 g
- 13.2 g Al
- 15.11 g Fe
- a. CCl₄
b. CHCl₃

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