

Luthe Ions and Dani Jinn

Answers to the Ch. 12 Questions

1. $\frac{32g}{35g} = .9143 \times 100 = 91.43\%$

2. $\frac{.38g \text{ LIN}}{1} \times \frac{1 \text{ mol LINi}}{24g \text{ LINi}} \times \frac{3}{1} = \frac{24}{1} = \underline{0.72g}$

3. $\frac{425}{1} \cdot \frac{1}{32} \cdot \frac{1}{1} \cdot \frac{22.4}{1} = 297.5 \text{ L}$

4. $\text{CaCl}_2: \frac{.64}{1} \cdot \frac{1}{52} \cdot \frac{1}{1} = 0.012$
 $\text{CaCl}_2 = \text{limitor}$

$\text{H}_2\text{O}: \frac{200 \text{ mL}}{1} \cdot \frac{1}{18} \cdot \frac{1}{2} = 5.5$

5. $\frac{65.2}{73} = .8931 \times 100 = \underline{89.32\%}$

6. ~~$\frac{1}{23} \cdot \frac{2}{2} = \dots$~~
 $\frac{5.68}{1} \cdot \frac{1}{22.4} \cdot \frac{2}{1} \cdot \frac{2}{1} = \boxed{11.66 \text{ L}}$
 ~~$\frac{41.2}{48} \cdot \frac{5.6}{20} \cdot \frac{2}{1} = \dots$~~
 ~~$\frac{261.2}{65.12g} \cdot \frac{5.6}{257.8} \cdot \frac{2}{12} = \dots$~~

7. ~~$\frac{256}{48} \cdot \frac{1}{22.4} \cdot \frac{1}{8} \cdot \frac{256}{1} = \dots$~~
 $\frac{2.47}{1} \cdot \frac{1}{22.4} \cdot \frac{1}{8} \cdot \frac{256}{1} = \underline{3.53g}$

8. $\text{Al}: \frac{.225}{4} = 0.056$

$\text{Al} = \text{Limitor}$

$\text{O}_2: \frac{.415}{3} = 0.138$

Write down the final sum

$$9. \frac{4.72}{1} \cdot \frac{1}{22.4} \cdot \frac{2}{3} \cdot \frac{27}{1} = \boxed{.89}$$

$$10. \frac{46.3}{50.8} = .9114 \times 100 = \boxed{91.142\%}$$

