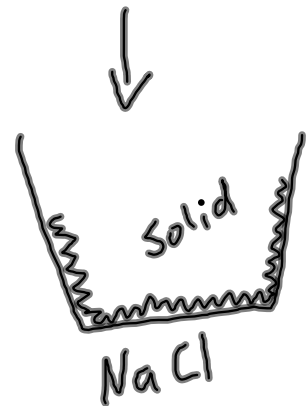
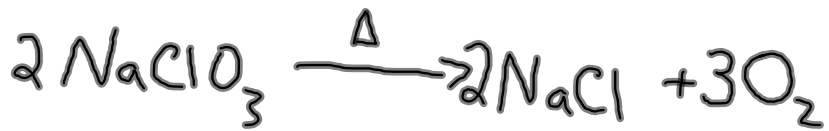


Post-Lab % Oxygen in NaClO_3

Reaction



Mr. Scott's Example Data
 These values should NOT appear on your report!!

Empty Crucible + Lid (g)	50.0g		
Sample mass NaClO ₃ (g)	5.00g		
Crucible + Lid + <u>NaCl</u> Residue	52.70g		
NaCl remaining	$ \begin{array}{r} 2.70g \\ 52.70g - \\ \underline{50.00g} \end{array} $		

Calculations

NaCl remaining

$$\begin{array}{r} \text{Crucible + lid} \quad 52.70 \text{ g} \\ + \text{NaCl} \\ \hline - \text{Crucible + lid} \quad 50.00 \text{ g} \\ \hline \text{NaCl} \quad 2.70 \text{ g} \end{array}$$

Theoretical

$$\frac{\text{Portion}}{\text{Whole}} \times 100$$

$$\% \text{ NaCl in NaClO}_3 = \frac{\text{NaCl}}{\text{NaClO}_3} \times 100 = \frac{58.443 \text{ g/mol}}{106.441 \text{ g/mol}} \times 100$$

$$\% \text{ NaCl} = 54.9 \%$$

$$\% \text{ oxygen} = \frac{\text{O} \times 3}{\text{NaClO}_3} \times 100 = \frac{47.9982 \text{ g/mol}}{106.441 \text{ g/mol}} \times 100$$

$$\% \text{ O} = 45.1 \%$$

Check $\begin{array}{r} 54.9 \\ + 45.1 \\ \hline 100.0 \end{array}$ you don't need to do this on your report.

Experimental

$$\text{Mass } \underline{\text{NaClO}_3} \quad 5.00\text{g}$$

$$\text{Mass } \underline{\text{Oxygen gas}} = \text{NaClO}_3(\text{g}) - \text{NaCl}(\text{g}) = 5.00\text{g} - 2.70\text{g} = 2.30\text{g}$$

$$\text{Mass } \underline{\text{NaCl remain}} \quad 2.70\text{g}$$

$$\% \text{NaCl} = \frac{\text{NaCl}}{\text{NaClO}_3} \times 100 = \frac{2.70\text{g}}{5.00\text{g}} \times 100 = 54.0\%$$

$$\% \text{Oxygen} = \frac{\text{Oxygen gas}}{\text{NaClO}_3} \times 100 = \frac{2.30\text{g Oxygen}}{5.00\text{g NaClO}_3} \times 100 = 46.0\%$$

Error Calculation

$$\% \text{ Error} = \frac{(46\% \text{ Oxygen}) - (45.1\%)}{45.1\%} \times 100 = 2.00\% \text{ Error}$$

Same for everyone