Practice:

Determine if the formula below is an empirical formula or a molecular formula. If its a molecular formula, write the empirical formula.

1. P_4O_{10}
2. C_8H_{18}
3. N_2O
4. C_2H_5

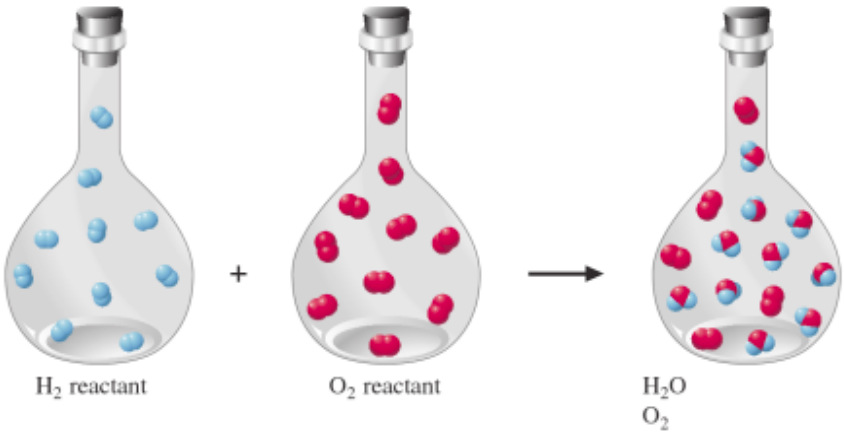
Dec 16-2:17 PM

Practice:

Determine if the formula below is an empirical formula or a molecular formula. If its a molecular formula, write the empirical formula.

1. P_4O_{10} molec P_2O_5
2. C_8H_{18} molec C_4H_9
3. N_2O emp.
4. C_2H_5 emp.

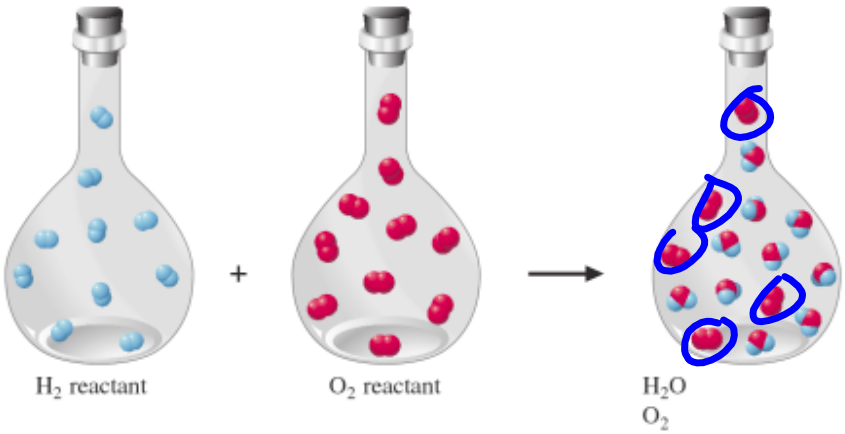
Practice:



What is the limiting reactant?

What is in excess?

Practice:



What is the limiting reactant? H_2

What is in excess? O_2

Practice:

How many formula units are in 60. grams of sodium carbonate.

Dec 16-2:17 PM

Practice:

How many formula units are in 60. grams of sodium carbonate.

$Na^{+}_2CO^{2-}_3$

$$\frac{60g\ Na_2CO_3}{} \left| \frac{1\ mol\ Na_2CO_3}{106g\ Na_2CO_3} \right| \frac{6.02\times10^{23}\ F.U.\ Na_2CO_3}{1\ mol\ Na_2CO_3}$$

$= 3.41\times10^{23}$ Fu Na_2CO_3

Practice:

Write the complete, balanced chemical reaction for a piece of iron (III) being dropped into a solution of copper (II) sulfate.

Dec 16-2:17 PM

Practice:

Write the complete, balanced chemical reaction for a piece of iron (III) being dropped into a solution of copper (II) sulfate.

$$2\overset{3+}{Fe} + 3\overset{2+}{Cu}\,\overset{2-}{SO_4} \rightarrow 3Cu + \overset{3+}{Fe_2}(\overset{2-}{SO_4})_3$$

Practice:

Determine the mass of copper produced from 10.2 moles of copper (II) sulfate.

Dec 16-2:17 PM

Practice:

Determine the mass of copper produced from 10.2 moles of copper (II) sulfate.

$$2Fe + 3CuSO_4 \rightarrow 3Cu + Fe_2(SO_4)_3$$

10.2 mol Xg

10.2 mol $CuSO_4$	3 mol Cu	64 g Cu
	3 mol $CuSO_4$	1 mol Cu

= 653 g Cu

Dec 16-2:17 PM

Review:

Determine the percent yield of the experiment below.

$$2\ Al(OH)_3 + 3\ H_2SO_4 \longrightarrow 6\ H_2O + Al_2(SO_4)_3$$

Initial Mass of $Al(OH)_3$	1.00 grams
Mass of Beaker and Reactants	15.650 grams
Mass of Solid Product and beaker	15.000 grams
Mass of gas product (H_2O)	

Jan 4-11:10 AM

Review:

Determine the percent yield of the experiment below.

1.00g Xg

$$2\ Al(OH)_3 + 3\ H_2SO_4 \longrightarrow 6\ H_2O + Al_2(SO_4)_3$$

Initial Mass of $Al(OH)_3$	1.00 grams
Mass of Beaker and Reactants	15.650 grams
Mass of Solid Product and beaker	15.000 grams
Mass of gas product (H_2O)	0.650g ← act. yield

$$1.00g\ Al(OH)_3 \times \frac{1\ mol\ Al(OH)_3}{78g\ Al(OH)_3} \times \frac{6\ mol\ H_2O}{2\ mol\ Al(OH)_3} \times \frac{18g\ H_2O}{1\ mol\ H_2O}$$

$= 0.69g$

$$\frac{0.650g}{0.690g} \times 100$$

$= 94\%$