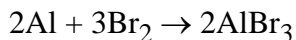


Limiting & Excess Reagents Worksheet

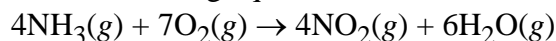
1. An excess of Al and 6.0 mol of Br₂ are reacted according to the equation



How many moles of AlBr₃ will be formed assuming 100% yield?

- [A] 8.0 mol [B] 6.0 mol [C] 4.0 mol [D] 2.0 mol [E] 3.0 mol

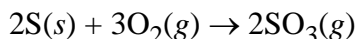
2. Refer to the following equation:



In the reaction $\text{N}_2(g) + 3\text{H}_2(g) \rightarrow 2\text{NH}_3(g)$, how many moles of ammonia would be produced from 1.0 mol of hydrogen and excess nitrogen?

- [A] 0.67 mol [B] 2.0 mol [C] 3.0 mol [D] 1.3 mol [E] 0.33 mol

3. For the reaction



if 6.3 g of S is reacted with 10.0 g of O₂, show by calculation which one will be the limiting reactant.

4. For the reaction



68.1 g solid CaCO₃ is mixed with 51.6 g HCl. What number of grams of CO₂ will be produced?

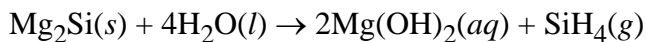
- [A] 29.9 g CO₂ [B] 59.8 g CO₂ [C] 15.0 g CO₂
[D] 69.4 g CO₂ [E] 33.7 g CO₂

5. For the reaction



11.9 g Cl₂ is reacted with 12.0 g NaOH. Determine which is the limiting reactant.

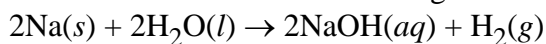
6. Consider the reaction



Which of the reactants is in excess if we start with 50.0 g of each reactant?

Limiting & Excess Reagents Worksheet

7. Sodium and water react according to the reaction



What number of moles of H_2 will be produced when 4 mol Na is added to 2 mol H_2O ?

[A] 2 mol [B] 1 mol [C] 4 mol [D] 3 mol [E] none of these

8. For the reaction of $\text{C}_2\text{H}_4(g)$ with $\text{O}_2(g)$ to form $\text{CO}_2(g)$ and $\text{H}_2\text{O}(g)$, what number of moles of CO_2 can be produced by the reaction of 5.00 mol C_2H_4 and 12.0 mol O_2 ?

[A] 10.0 mol [B] 4.00 mol [C] 5.00 mol [D] 8.00 mol [E] none of these

9. In the reaction of $\text{C}_8\text{H}_{18}(l)$ with $\text{O}_2(g)$ to form $\text{CO}_2(g)$ and $\text{H}_2\text{O}(g)$, 2.28 g C_8H_{18} is reacted with 7.00 g of O_2 . Determine which is the limiting reactant.

10. The limiting reactant in a reaction is

[A] the reactant which has the lowest coefficient in a balanced equation
[B] the reactant for which there is the fewest number of moles
[C] the reactant for which there is the least amount in grams
[D] the reactant for which there is the most amount in grams [E] none of these

11. The limiting reactant is the reactant

[A] that has the lowest coefficient in the balanced equation
[B] for which you have the lowest mass in grams [C] that has the lowest molar mass
[D] that is left over after the reaction has gone to completion [E] none of these