

2.6 Limiting Reactant and Excess Reactant

1. $\text{Ca(OH)}_2 + 2 \text{NH}_4\text{Cl} \rightarrow \text{CaCl}_2 + 2 \text{NH}_3 + 2 \text{H}_2\text{O}$

The above reaction is carried out by mixing 7 g of pure Ca(OH)_2 and 7 g of pure NH_4Cl . Which of the following is the excess reagent?

- a. NH_3 b. CaCl_2 c. Ca(OH)_2 d. NH_4Cl
2. 20g CaCO_3 is treated with 15 gram HCl to produce CaCl_2 , H_2O and CO_2 . Which of the following is the limiting reagent?
- a. CaCO_3 b. HCl c. Both d. CaCl_2
3. When 8 g of H_2 and 8 g of O_2 combine, the amount of water formed is
- a. 9 g b. 4.5 g c. 16 g d. 8 g
4. 20g CaCO_3 is treated with 15 gram HCl to produce CaCl_2 , H_2O and CO_2 . What mass of H_2O is produced?
- a. 18 g b. 36 g c. 1.8 g d. 3.6 g
5. 10 g Na_2CO_3 is treated with 7 gram HCl to produce NaCl , H_2O and CO_2 . What volume of CO_2 is produced at NTP?
- a. 21.13 l b. 2.113 l c. 2.24 l d. 22.4 l
6. 30 g of magnesium and 30 g of oxygen are reacted, then the residual mixture contains
- a. 50 g of MgO and 10 g of O_2
- b. 40 g of MgO and 20 g of O_2
- c. 45 g of MgO and 15 g of O_2
- d. 60 g of MgO only