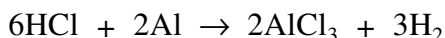


## Problems of Limiting reagent of chemical reactions

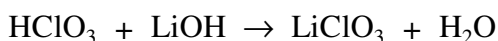
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1) In a flask we have 109.7 g of aluminium that react with 4111 mL of 4.3 mol/L hydrochloric acid solution according the following equation:



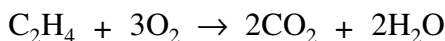
Calculate: **a)** The limiting reagent. **b)** Mass of hydrogen formed.

2) In a flask we have 294.7 mL of 3.8 mol/L lithium hydroxide solution that react with 240.9 mL of 2.8 mol/L chloric acid solution according the following equation:



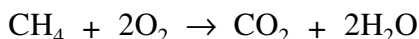
Find out: **a)** The limiting reagent. **b)** Mass of water obtained.

3) In a receptacle we have 222.9 g of oxygen that react with 33 g of ethene according the following equation:



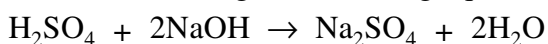
Find out: **a)** The limiting reagent. **b)** Mass of water formed.

4) In a balloon flask we have 1233 g of oxygen that react with 153 L of methane gas at a temperature of 377 °C and a pressure of 8.4 atm according the following equation:



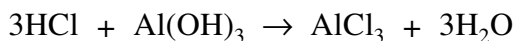
Calculate: **a)** The limiting reagent. **b)** Mass of water formed.

5) In a flask we have 26.94 g of sodium hydroxide that react with 195.9 mL of 3.3 mol/L sulfuric acid solution according the following equation:



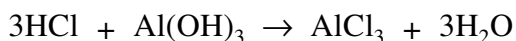
Determine: **a)** The limiting reagent. **b)** Mass of water formed.

6) In a flask we have 239.7 mL of 0.8 mol/L aluminium hydroxide solution that react with 407.7 mL of 2.3 mol/L hydrochloric acid solution according the following equation:



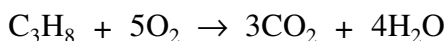
Determine: **a)** The limiting reagent. **b)** Mass of aluminium chloride obtained.

7) In a receptacle we have 64.11 g of aluminium hydroxide that react with 147.6 g of hydrochloric acid according the following equation:



Find out: **a)** The limiting reagent. **b)** Mass of water obtained.

8) In a balloon flask we have 1285 g of oxygen that react with 286.9 L of propane gas at a temperature of 25 °C and a pressure of 1 atm according the following equation:



Determine: **a)** The limiting reagent. **b)** Mass of carbon dioxide obtained.

**Problems of Limiting reagent of chemical reactions**

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**Answers:**

- 1) a) Al, aluminium, b) 12.19 g.
- 2) a) HClO<sub>3</sub>, chloric acid, b) 12.14 g.
- 3) a) C<sub>2</sub>H<sub>4</sub>, ethene, b) 42.43 g.
- 4) a) O<sub>2</sub>, oxygen, b) 693.8 g.
- 5) a) NaOH, sodium hydroxide, b) 12.12 g.
- 6) a) Al(OH)<sub>3</sub>, aluminium hydroxide, b) 25.6 g.
- 7) a) Al(OH)<sub>3</sub>, aluminium hydroxide, b) 44.38 g.
- 8) a) O<sub>2</sub>, oxygen, b) 1060 g.