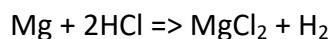


## Answer on Question #76466, Chemistry / General Chemistry

In Flask A, you reacted 7.23 g Mg with 1.05 mol HCl. In Flask B, you reacted 1.22 g Mg with 1.35 mol HCl. Which balloon will inflate the most?

### Solution



According to the reaction equation 1 mole of Mg reacts with 2 moles of HCl forming 1 mole of H<sub>2</sub> which inflates the balloon. Find the amounts of hydrogen that will be formed in each flask.

**A.** Find the amount of Mg:

$$v_{\text{Mg}} = \frac{7.23}{24} = 0,3 \text{ (mol)}.$$

This amount of Mg requires 0.6 mol of HCl. There is excess of HCl. So we calculate the amount of hydrogen according to amount of Mg.

There will be **0.3 mol** of hydrogen in the flask **A**.

**B.** Find the amount of Mg:

$$v_{\text{Mg}} = \frac{1.22}{24} = 0,05 \text{ (mol)}.$$

This amount of Mg requires 0.1 mol of HCl. There is excess of HCl. So we calculate the amount of hydrogen according to amount of Mg.

There will be **0.05 mol** of hydrogen in the flask **B**.

### Answer

Balloon **A** will inflate the most.