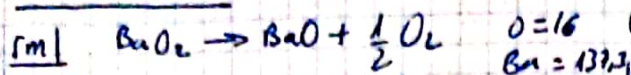


PART 2 VOLUMEN ESTEQUIOMETRÍA

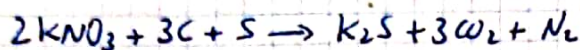
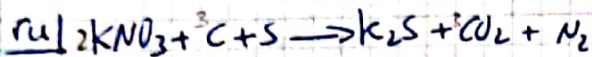


$$10\text{g BaO}_2 \times \frac{1\text{mol BaO}_2}{169,3\text{g}} \times \frac{0,5\text{mol O}_2}{1\text{mol BaO}_2} = 0,03\text{mol O}_2$$

$27^\circ\text{C} = 300\text{K}$ $PV = nRT$

$$P = \frac{nRT}{V} = \frac{0,03 \cdot 0,082 \cdot 300}{1}$$

$$P = 0,738\text{atm}$$



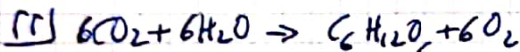
$$50\text{g KNO}_3 \times \frac{1\text{mol KNO}_3}{101,1\text{g}} \times \frac{3\text{mol CO}_2}{2\text{mol KNO}_3} = 0,742\text{mol}$$

$C.N \rightarrow T = 233\text{K}$
 $\rightarrow P = 1\text{atm}$

$PV = nRT$

$$V = \frac{nRT}{P} = \frac{0,742 \cdot 0,082 \cdot 233}{1}$$

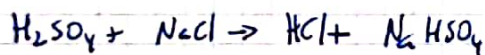
$$V = 14,61\text{L}$$



$$n = \frac{PV}{RT} = \frac{1 \cdot 10}{0,082 \cdot 273} = 0,447\text{mol CO}_2$$

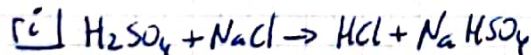
$$0,447\text{mol CO}_2 \times \frac{6\text{mol O}_2}{6\text{mol CO}_2} \times \frac{32\text{g}}{1\text{mol O}_2} = 14,304\text{g}$$

rc



$$n = \frac{PV}{RT} = \frac{1 \cdot 2}{0,082 \cdot 273} = 0,089\text{moles HCl}$$

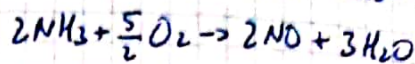
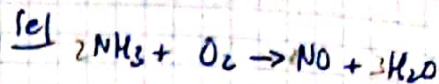
$$0,089\text{mol HCl} \times \frac{1\text{mol NaCl}}{1\text{mol HCl}} \times \frac{58,5\text{g}}{1\text{mol NaCl}} = 5,2\text{g}$$



$2\text{L HCl} = 0,089\text{moles}$

$$0,089\text{moles HCl} \times \frac{1\text{mol H}_2\text{SO}_4}{1\text{mol HCl}} \times \frac{98\text{g}}{1\text{mol H}_2\text{SO}_4}$$

$$= 8,72\text{g}$$



$30^\circ\text{C} = 303\text{K}$ $650\text{mmHg} = 0,855\text{atm}$

$$n = \frac{PV}{RT} = \frac{1 \cdot 20}{0,082 \cdot 303} = 0,805\text{mol}$$

$$0,805\text{mol H}_2\text{O} \times \frac{2\text{mol NH}_3}{3\text{mol H}_2\text{O}} = 0,537\text{mol NH}_3$$

$$V = \frac{nRT}{P} = \frac{0,537 \cdot 0,082 \cdot 303}{0,855} = 15,61\text{L}$$