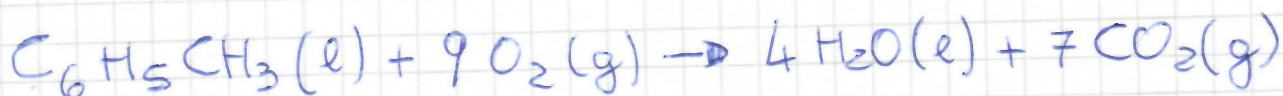
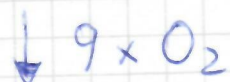
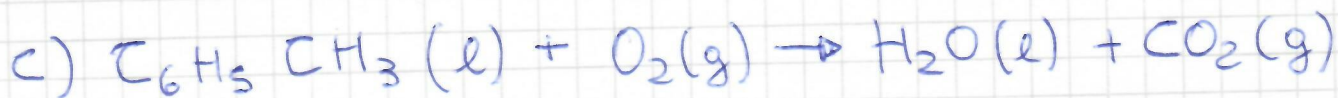
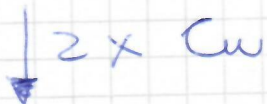
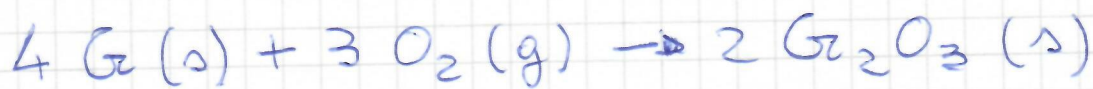
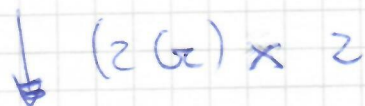
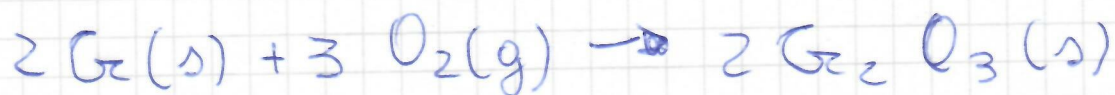
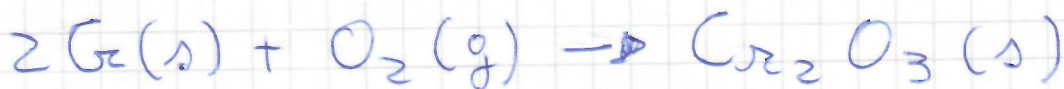
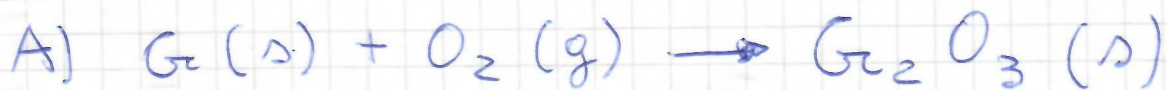
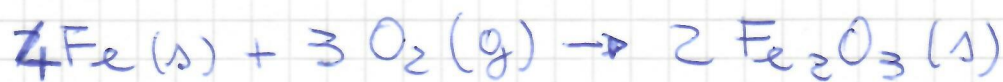
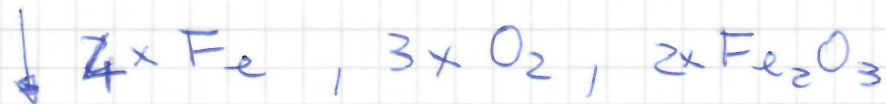
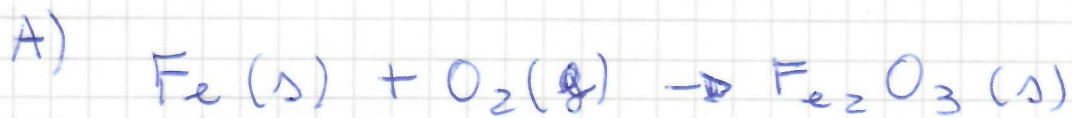


PG 158 (3)



PG. 158 (11)

OSSIDO FERRO (III) Fe_2O_3



B) 2.68 g di Fe (s)

$$n_{\text{Fe}} = \frac{2.68}{55.845} = 0.0480 \text{ mol}$$

CIFRE SIGNIFICATIVE $\Rightarrow \frac{2.68}{55.8} = 0.0480 \text{ mol}$

MASSA di Fe_2O_3 :

$$\begin{aligned} M(\text{Fe}_2\text{O}_3) &= 2 \cdot 55.845 + 3 \cdot 15.999 \\ &= 159.687 \text{ g/mol} \end{aligned}$$

$$\begin{aligned} \text{MASSA}(\text{Fe}_2\text{O}_3) &= n_{\text{Fe}} \cdot \frac{2}{4} \cdot M(\text{Fe}_2\text{O}_3) \\ &= 3.83 \text{ g} \end{aligned}$$

C) MASSA di O_2

$$n_{\text{O}_2} = n_{\text{Fe}} \cdot \frac{3}{4} = 0.0360 \text{ mol}$$

$$\text{Masse}(\text{O}_2) = n_{\text{O}_2} \cdot (15.999 \cdot 2) = 1.15 \text{ g}$$

33) PG. 160



1.506 g MISCELA CaCO_3 + ALTRO

MASSA (CO_2) = 0.558 g

$$n_{\text{CO}_2} = \frac{0.558}{12.011 + 2 \cdot 15.9994}$$

$$= \frac{0.558}{44.001} = 0.0127 \text{ mol}$$

$$n_{\text{CaCO}_3} = n_{\text{CO}_2}$$

$$\text{MASSA} (\text{CaCO}_3) = (12.011 + 3 \cdot 15.9994 + 40.078)$$

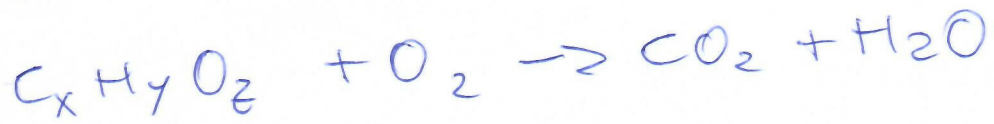
$$\cdot 0.0127$$

$$= 100.087 \cdot 0.0127$$

$$= 1.27 \text{ g}$$

$$\% \text{CaCO}_3 = 1.27 / 1.506 \cdot 100$$

$$= \underline{\underline{84.3}}$$



$$n_{CO_2} = \frac{m_{CO_2}}{PM(CO_2)} = \frac{0.1356}{12+32} = 0.00308 \text{ mol}$$

$$n_{H_2O} = \frac{m_{H_2O}}{PM(H_2O)} = \frac{0.0833}{18} = 0.00463 \text{ mol}$$

$$n_H = 2 \cdot n_{H_2O} = 0.00926 \text{ mol}$$

$$m_C = m_C \cdot 12 = n_{CO_2} \cdot 12 = 0.0370 \text{ gr}$$

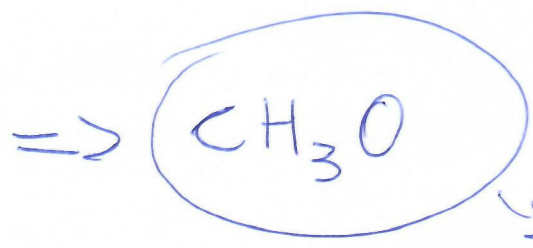
$$m_H = m_H \cdot 1 = 2 \cdot n_{H_2O} \cdot 1 = 0.00926 \text{ gr}$$

$$m_O = m_{TOT} - m_C - m_H = 0.04934 \text{ gr}$$

$$n_O = \frac{m_O}{PA(O)} = 0.00308 \text{ mol}$$

$$\frac{n_C}{n_O} = 1$$

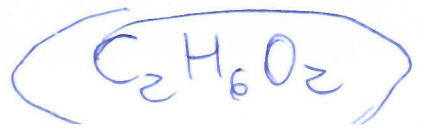
$$\frac{n_H}{n_O} = 3$$



FORMULA MINIMA EMPIRICA

$\rightarrow 12+3+16$

$$n = \frac{P. MOLECOLARE}{P. FORMULA MIN} = \frac{62.1}{31} = 2$$



$$PV = nRT$$

$$561 \text{ mmHg} = 0.738 \text{ atm}$$

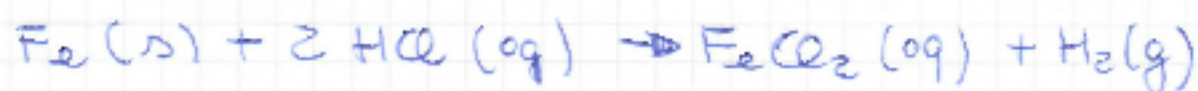
$$125 \text{ mL} = 0.125 \text{ L}$$

$$23.0^\circ \text{C} = 296 \text{ K}$$

$$R = 0.082057 \frac{\text{L atm}}{\text{mol K}}$$

$$n = \frac{PV}{RT} = \frac{0.09225}{24.29} = 3.80 \cdot 10^{-3} \text{ mol}$$

$$m = \frac{M}{M} \Rightarrow M = \frac{m}{n} = 27.63 \text{ g/mol}$$



$$2.2 \text{ g di Fe} \Rightarrow n_{\text{Fe}} = \frac{2.2}{55.845} = 3.94 \cdot 10^{-2} \text{ mol}$$

$$V = 10.0 \text{ L}$$

$$T = 25.0^\circ \text{C} = 298 \text{ K}$$

$$n_{\text{H}_2} = n_{\text{Fe}} \Rightarrow P = \frac{nRT}{V} = \underline{\underline{9.63 \cdot 10^{-2} \text{ atm}}}$$