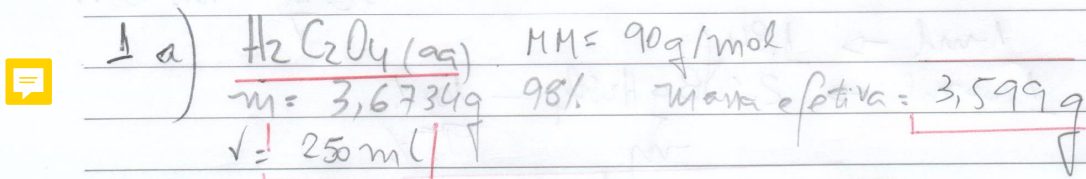


ANALISÃO I Cléber Prestes



$$\Sigma \text{H}_2\text{C}_2\text{O}_4 \text{ g/L} = \frac{3,599 \text{ g}}{0,25 \text{ L}} \rightarrow 14,396 \text{ g/L}$$

$$\Sigma \text{H}_2\text{C}_2\text{O}_4 = 14,4 \text{ g} \cdot \text{L}^{-1} \quad \text{1a}$$

b) Solução mãe

$0,25 \text{ L}$
 $3,599 \text{ g H}_2\text{C}_2\text{O}_4$ γ $\gamma = 0,0399 \text{ mol}$
 $90 \text{ g} \leftarrow 1 \text{ mol}$

$3,99 \cdot 10^{-2} \text{ mol H}_2\text{C}_2\text{O}_4 \rightarrow 0,25 \text{ L}$
 $7,98 \cdot 10^{-4} \text{ mol H}_2\text{C}_2\text{O}_4 \leftarrow 5 \cdot 10^{-3} \text{ L (Aliquota)}$
 $n_1 \cdot v_1 = n_2 \cdot v_2$

$$7,98 \cdot 10^{-4} \text{ mol H}_2\text{C}_2\text{O}_4 \cdot 5 \cdot 10^{-3} \text{ L} = M_2 \cdot 0,1 \text{ L}$$

$$M_2 = \frac{3,99 \cdot 10^{-5} \text{ mol}}{0,1 \text{ L}}$$

$$0,1 \text{ L} \rightarrow 3,99 \cdot 10^{-5} \text{ mol}$$

$$1 \text{ L} \rightarrow M$$

$$M = 4,0 \cdot 10^{-4} \text{ mol} \cdot \text{L}^{-1} \quad \text{1b}$$

2a) H_2SO_4 95% $d = 1,84 \text{ g/ml}$ $M = 98 \text{ g/mol}$
 $d = \frac{m}{V}$ $m = d \cdot V$

1 ml $\rightarrow 1,84 \text{ g}$

1200 ml $\rightarrow 2.208 \text{ g H}_2\text{SO}_4$ - 100%

95%

$m = 2097,6 \text{ g H}_2\text{SO}_4$ 2a

b) $n = \frac{m}{M}$

1 mol $\rightarrow 98 \text{ g H}_2\text{SO}_4$

$n \leftarrow 2097,6 \text{ g}$

$n = 21,4 \text{ mol} \rightarrow 1,2 \text{ L}$

$n \leftarrow 1 \text{ L}$

$n = 17,84 \text{ mol} \cdot \text{L}^{-1}$ 2b

c) 1000 ml $\rightarrow 25 \text{ g H}_2\text{SO}_4$

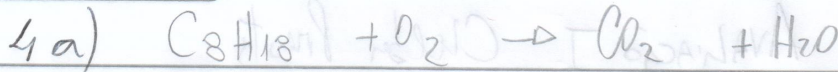
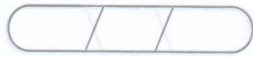
250 ml $\rightarrow 6,25 \text{ g H}_2\text{SO}_4$

1,2 L solution $\rightarrow 2097,6 \text{ g H}_2\text{SO}_4$

Fisique

$\checkmark \leftarrow 6,25 \text{ g H}_2\text{SO}_4$

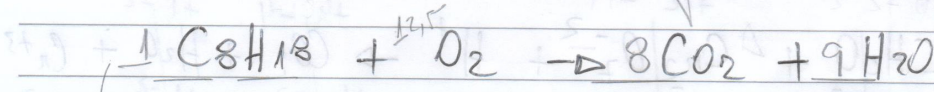
$V = 3,58 \cdot 10^{-3} \text{ L}$ polucao 2c ou 3,58 ml



MM = 114 g/mol

44 g/mol

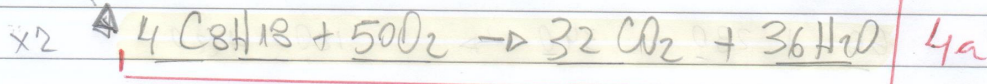
DM = 456 g C₈H₁₈



x2
A

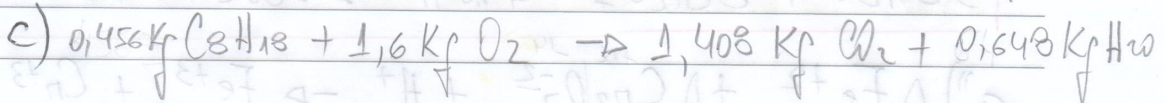


C₈H₁₈ 1 mol → 114 g
C₈H₁₈ 4 mols → 456 g



$$b) \rho_{\text{O}_2} \cdot \eta = \frac{m}{\text{MM}} \quad m_{\text{O}_2} = 50 \text{ mpl} \cdot \frac{32 \text{ g}}{\text{mpl}} \quad m_{\text{O}_2} = 1600 \text{ g} \quad 4b$$

ou 1,6 Kg O₂

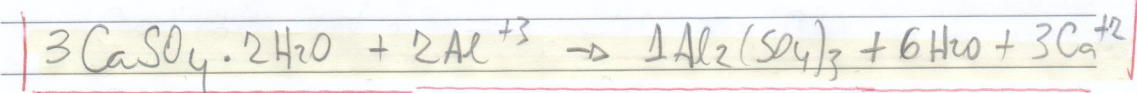
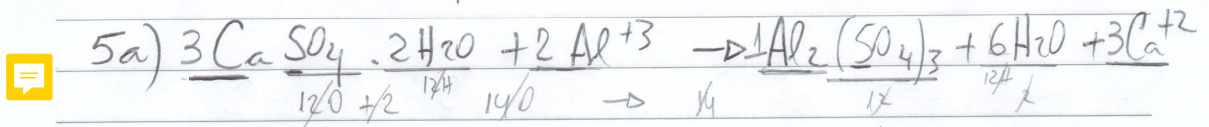


1,408 Kg CO₂ → 100% reação

1,056 Kg CO₂ → R

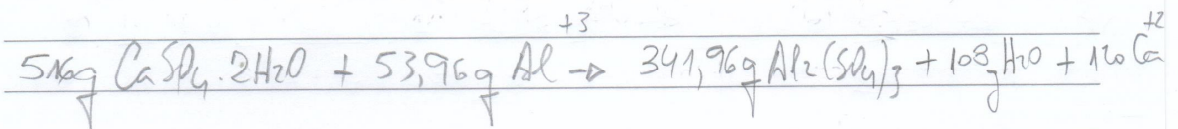
Rendimento = 75% 4c

AVALIAÇÃO I Cléber Prestes



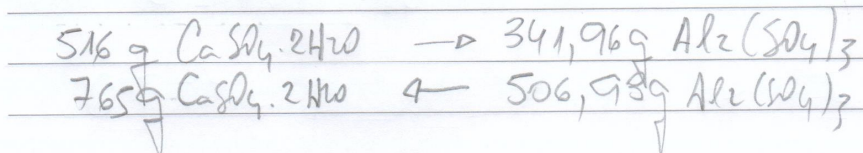
b)

Ca	40 × 3	120		S	32,3	96
S	32 × 3	96		O	16,4 × 3	192
O	16 × 3 × 4	192		Al	26,98 × 2	53,96
Al	26,98 × 2	53,96		H ₂ O	18 × 6	108
H ₂ O	18 × 6	108				



PIAL $80 \text{g Al}^{+3} \rightarrow 506,98 \text{g Al}_2(\text{SO}_4)_3$ limitante
 PI Gesso $1000 \text{g} \rightarrow 662,71 \text{g Al}_2(\text{SO}_4)_3$ Excesso

Al⁺³ é o reagente limitante pois a partir dele forma-se menos produto. 5b)



$1000 \text{g CaSO}_4 \cdot 2\text{H}_2\text{O}$
 $- 765 \text{g CaSO}_4 \cdot 2\text{H}_2\text{O}$
 $235 \text{g de CaSO}_4 \cdot 2\text{H}_2\text{O}$ massa em excesso 5b)

