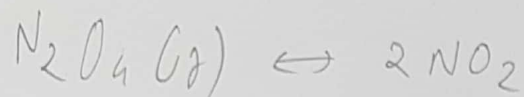
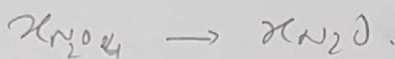


1.

Ficha 6

se $P_{\text{NO}_2} + P_{\text{N}_2\text{O}_4} = 1,5 \text{ atm}$

$$K_p = 0,148$$



$$K_p = \frac{(P_{\text{NO}_2})^2}{P_{\text{N}_2\text{O}_4}} \Leftrightarrow K_p = \frac{(P_{\text{NO}_2})^2}{1,5 - P_{\text{NO}_2}}$$

$$0,148 \times 1,5 - 0,148 P_{\text{NO}_2} = P_{\text{NO}_2}^2$$

$$P_{\text{NO}_2}^2 + 0,148 P_{\text{NO}_2} - 0,222 = 0$$

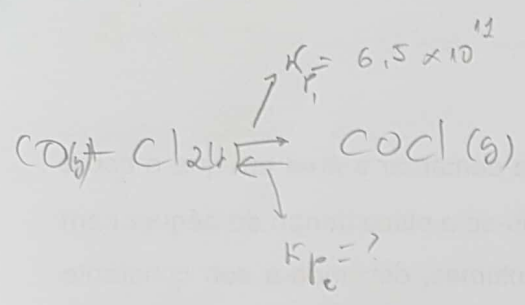
$$x^2 + 0,148x - 0,222 = 0$$

$$\underline{x = 0,403}$$

No equilíbrio x_{NO_2}

Parcial de NO_2 é $0,403 \text{ atm}$.

2

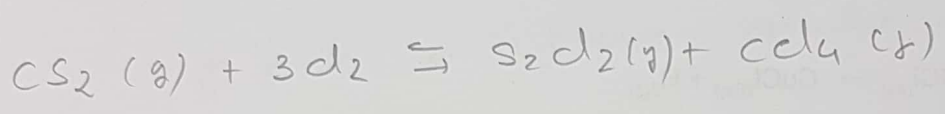


$$K_2 = \frac{1}{K_{f1}}$$

$$K_2 = \frac{1}{6,5 \times 10^{11}}$$

$$K_2 = 1,53 \times 10^{-12}$$

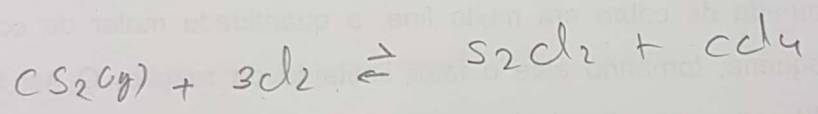
3



Inicial 0,12 mola CS₂ ; 0,36 mol Cl₂ V = 10 l

equilibrio 0,090 mola CCl₄

$K_c = ?$



I $\frac{0,12}{10}$ $\frac{0,36}{10}$

V -x -3x x x

eq = 0,012 - x 0,036 - 3x x x

$x = \frac{0,090}{10}$
Dato no
Problemny

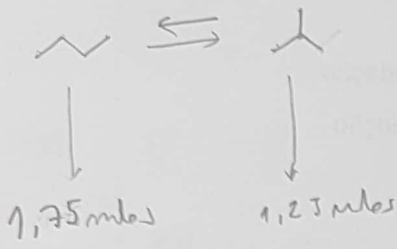
$x = \frac{0,090}{10}$ *valor*

$$K_c = \frac{x^2}{(0,012 - x)(0,036 - 3x)^3}$$

$$K_c = \frac{(0,0090)^2}{(0,012 - 0,0090)(0,036 - 3 \times 0,0090)^3} = 3,7 \times 10^4$$

4

Butano Isobutano



$$K = 2,5 \quad T = 25^\circ\text{C}$$

sistema está em equilíbrio?

As duas mols iguais → o recipiente é o mesmo.

$$K = \frac{[\text{Isobutano}]}{[\text{Butano}]} \Leftrightarrow \frac{1,25}{1,75} = 0,71$$

$Q < K$ o sistema ainda não está em equilíbrio.

$$K[\text{Butano}] = [\text{Isobutano}]$$

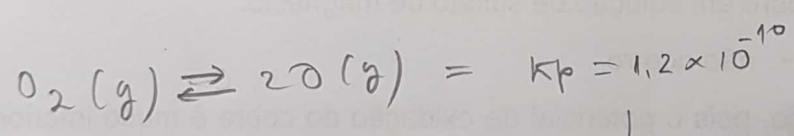
$2,5 \times [\text{Butano}] = [\text{Isobutano}]$ no equilíbrio

concentração de Butano será 2,5 a concentração de Isobutano.

0,050 mol de O_2 em um recipiente 10 L

5

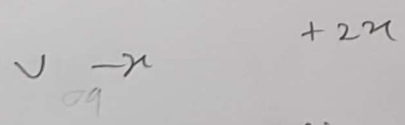
$$T = 1800 \text{ K}$$



→ atores de oxigênio no recipiente?

$$i. \frac{0,050}{10} \quad \text{---}$$

$$1,2 \times 10^{-10} = \frac{P_O^2}{0,938}$$



$$P_0 = 9,14 \times 10^{-6}$$

$$P_{O_2} = 0,005 \text{ mol} + 2x$$

$$PV = nRT$$

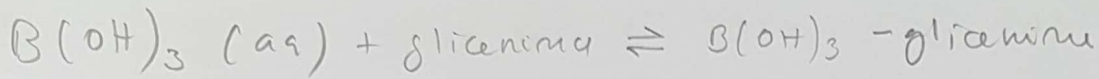
$$PV = nRT$$

$$P_{O_2} = 0,005 \times 0,032 \times 1800 \text{ K}$$

$$\frac{9,14 \times 10^{-6} \times 10}{0,02 \times 1800 \text{ K}} = M_O$$

$$\frac{6,023 \times 10^{23}}{6,19 \times 10^{-7}}$$

$$6,19 \times 10^{-7}$$



$K_c = 0,90$
 conversão - 60%
 $[B(OH)_3] = 0,10 M$

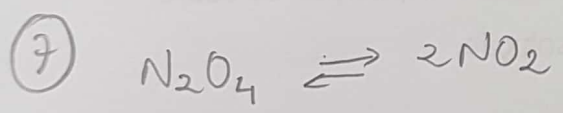
i	0,10	y	
v	-x	+x	x
eq	0,10-x	y-x	x

y = ?

$x = 0,1 \times 0,6 = 0,06$

$K_c = 0,90 = \frac{0,06}{(0,04)(y+0,06)}$

$y = 1,72 M = \text{glicanina}$



a) $K_p = \frac{P_{NO_2}^2}{P_{N_2O_4}} = \frac{(0,4)^2}{(0,8)} = 0,2$

i	1	0
v	-x	+2x
Eq	$\frac{1-x}{1-0,2}$	$\frac{2x}{2 \times 0,2}$
	0,8	0,4

b) $P_{N_2O_4} = 0,1 \text{ atm}$
 sabido que $K_p = 0,2$

$K_p = \frac{(2x)^2}{(0,1-x)}$

$0,02 - 0,2x = 4x^2$
 $4x^2 + 0,2x - 0,02 = 0$
 $x = 0,05 //$

$\frac{0,1 - 0,05}{0,1} = 50\%$

$$K = 200$$



Pressão parcial de CO ligada a Hb

$$\frac{[\text{HbCO}]}{[\text{HbO}_2]} = 1$$

$$K_p = \frac{p_{\text{HbCO}} \cdot p_{\text{O}_2}}{p_{\text{HbO}_2} \cdot p_{\text{CO}}}$$

Pressão parcial de O₂ ligada a Hb.

MORTE

p_{CO} (no AR) necessária

Para a pessoa

MORRER

Para morrer $\frac{p_{\text{HbCO}}}{p_{\text{HbO}_2}} = 1$

$$200 = 1 \times \frac{0,20}{p_{\text{CO}}}$$

$$p_{\text{CO}} = 1 \times 10^{-3} \text{ atm}$$