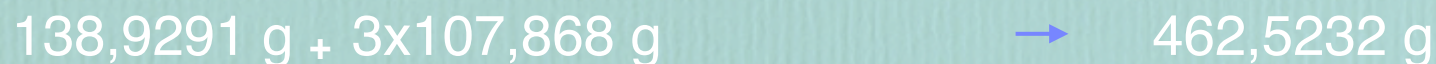
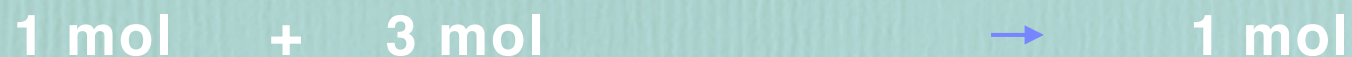
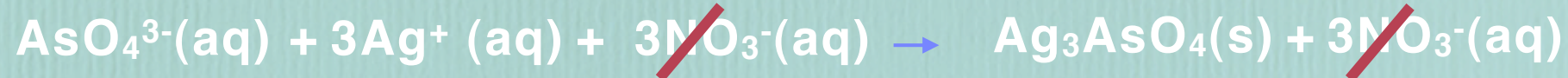


# Arsénio presente numa amostra



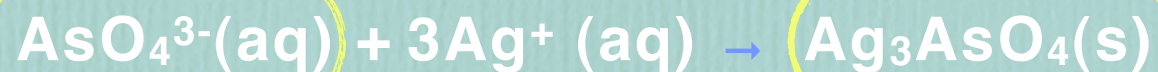
Temos: amostra com uma quantidade desconhecida de arsenato

Sabemos:

o ião arsenato ( $\text{AsO}_4^{3-}$ ) reage com o ião prata ( $\text{Ag}^+$ ) (PTN) formando um sólido insolúvel (precipitado) de arsenato de prata ( $\text{Ag}_3\text{AsO}_4$ )

Podemos: determinar a massa de arsenato de prata ( $\text{Ag}_3\text{AsO}_4$ )

Determinar o número de moles de arsénio presentes na amostra



?

0,37002 g

$$n = m/M$$

$7,9535 \times 10^{-3}$  mol  
0,0079535 mol

1 mol ( $\text{AsO}_4^{3-}$ )

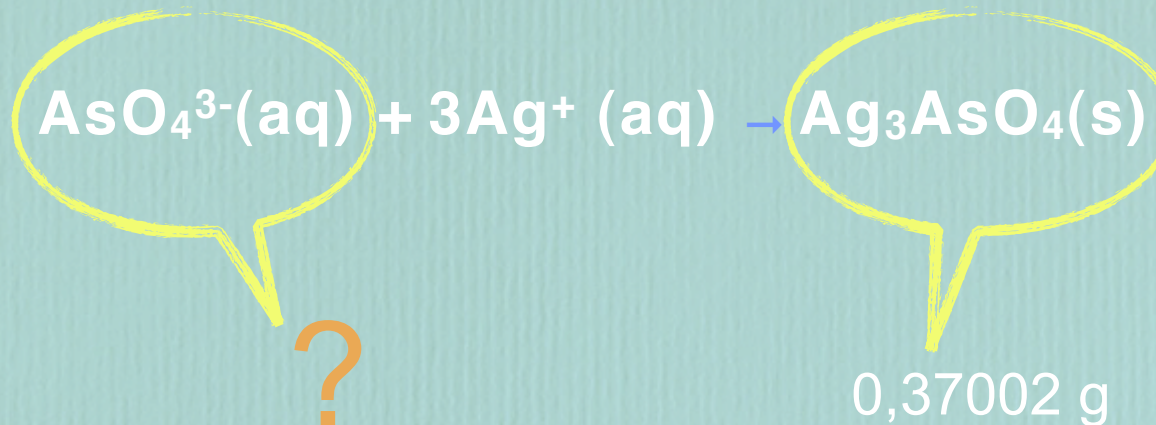
x mol ( $\text{AsO}_4^{3-}$ )

→ 1 mol ( $\text{Ag}_3\text{AsO}_4$ )

→ 0,0079535 mol ( $\text{Ag}_3\text{AsO}_4$ )

Quantidade de As presente na amostra 0,0079353 mol

Determinar a % em massa de As presente na amostra de solo



1 mol

138,9291 g

→ 1 mol

→ 462,5232 g

massa de  $\text{AsO}_4^{3-}$  presente na amostra =  
 $(138,9291 \text{ g} \times 0,37002 \text{ g}) / 462,5232 \text{ g} = 0,11114 \text{ g}$

138,9291 g ( $\text{AsO}_4^{3-}$ ) — 74,9291 g (As)

0,11114 g ( $\text{AsO}_4^{3-}$ ) — x g (As)

massa (As) =  $5,9942 \times 10^{-2} \text{ g}$  ou 0,059942 g

% em massa (As) =  
 $0,059942 \text{ g} / 1,00 \times 10^3 \text{ g} = 0,00599 \%$