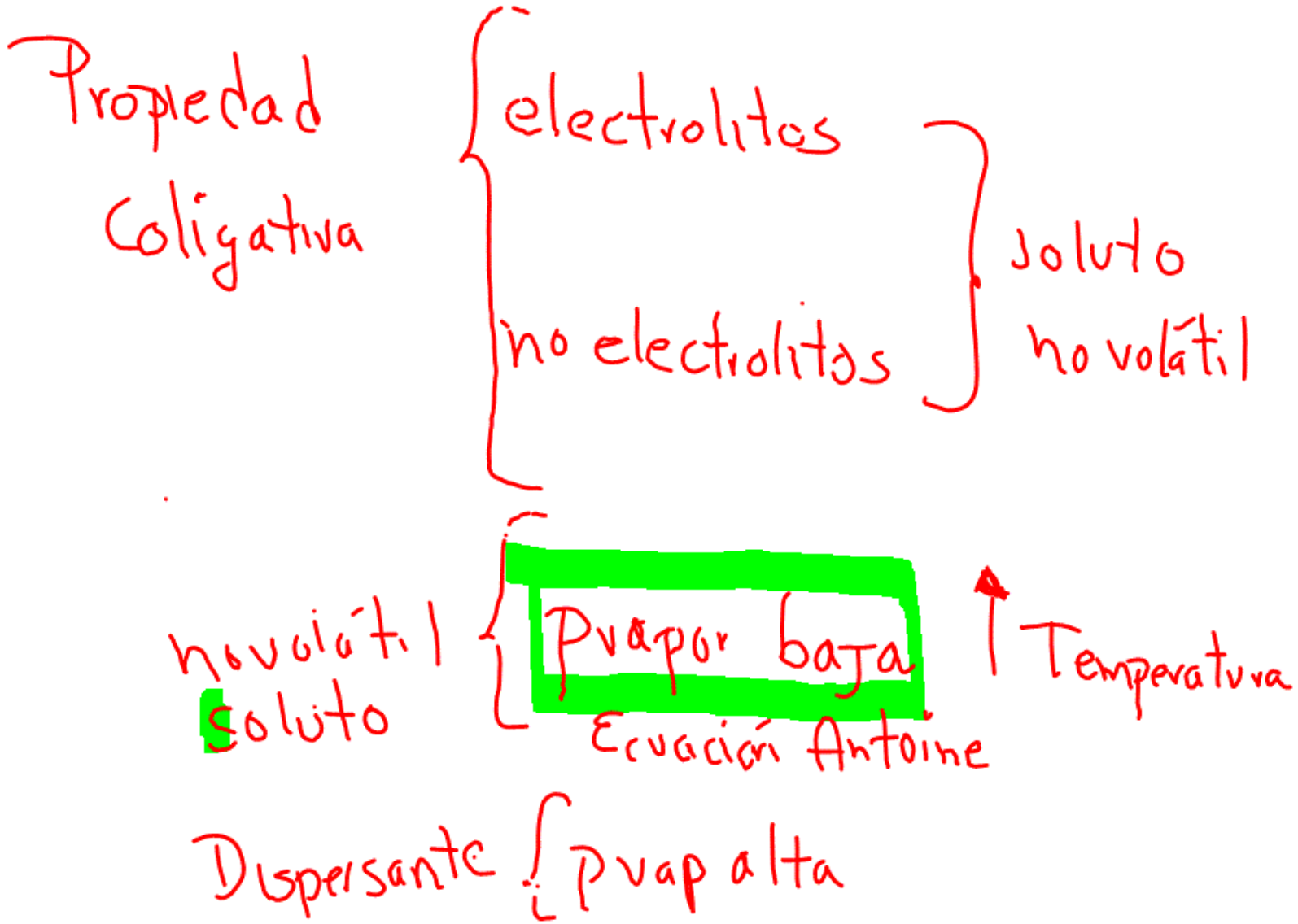
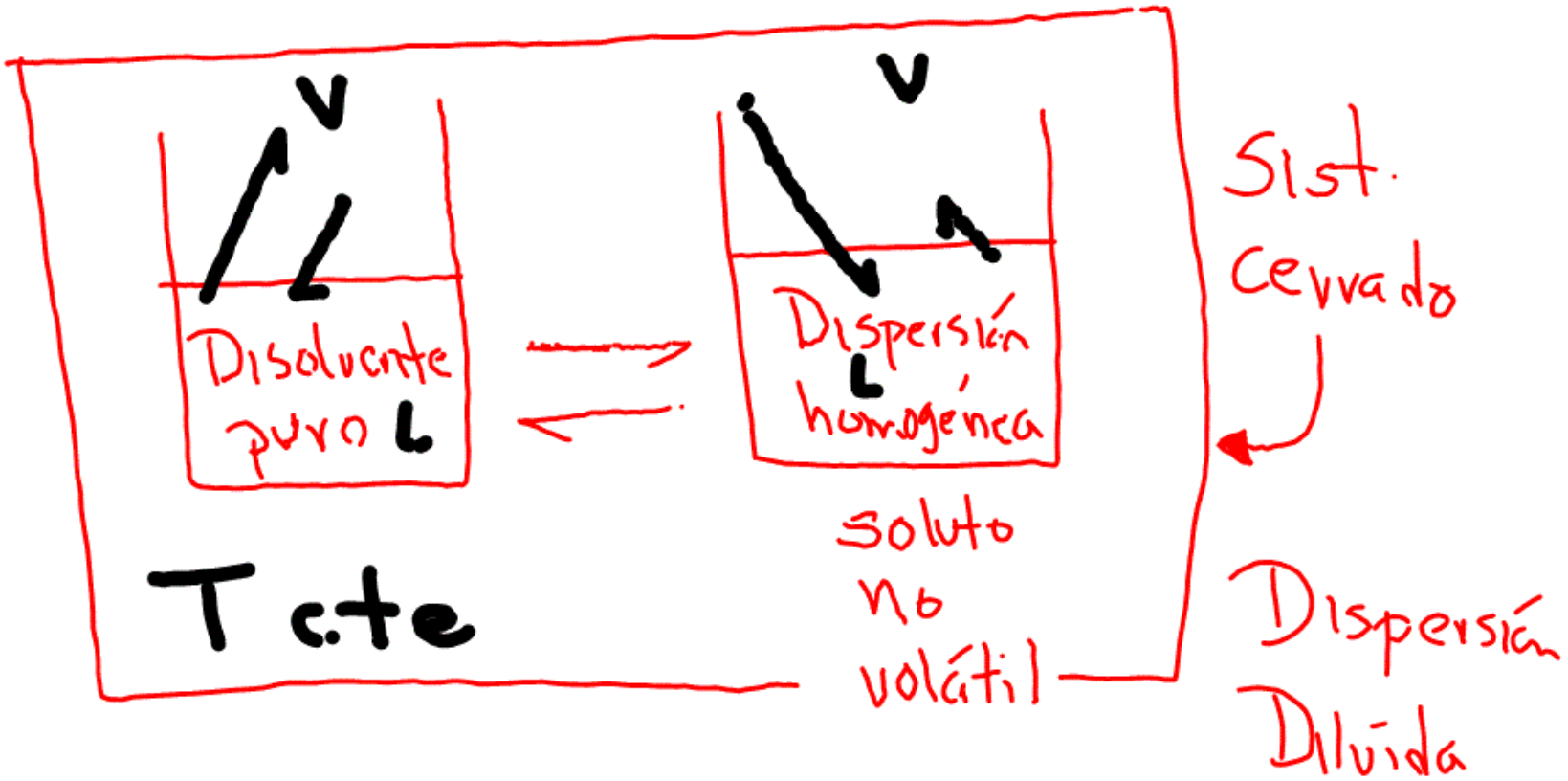
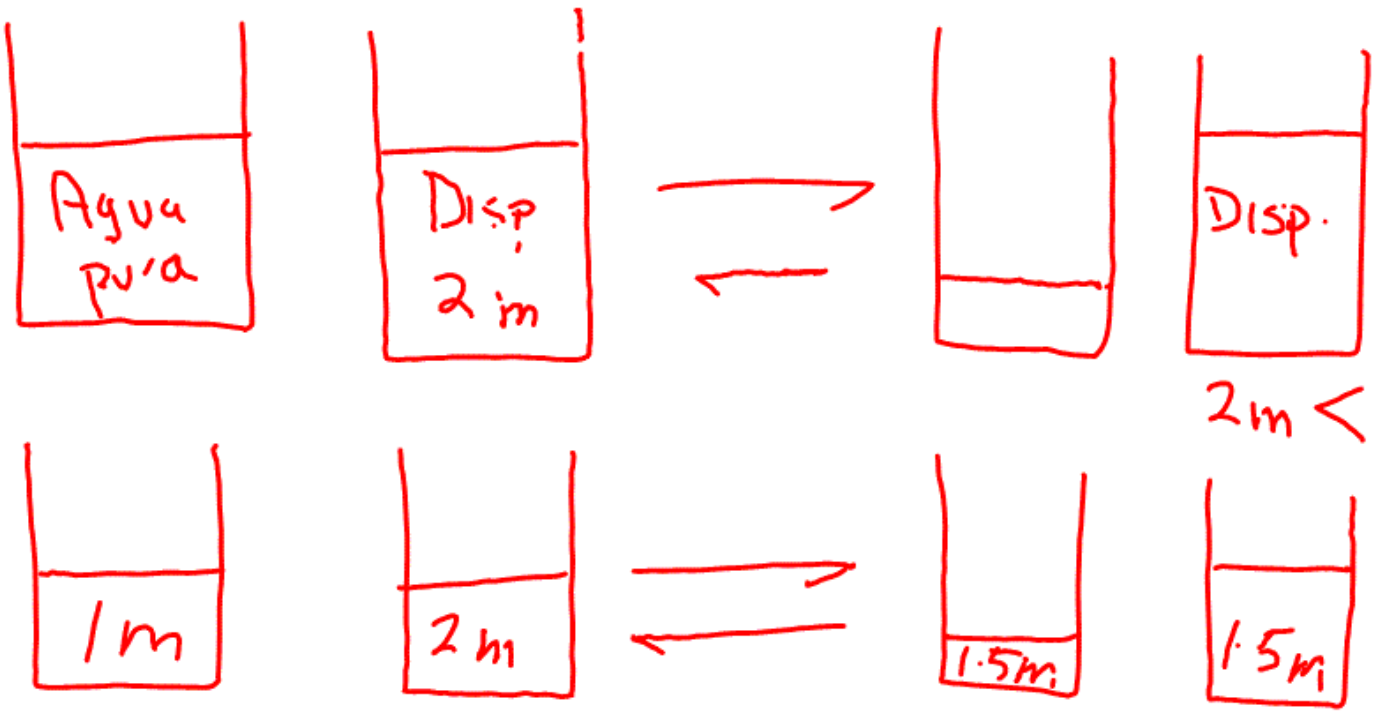
Clase 9 16 Marzo 2021

Título de la nota 16/03/2021




V
V
Disolvente puro l
Dispersión homogénea l
Sist. Cerrado
T cte
soluto no volátil
Dispersión Diluída



Transfiere de masa Disolvente

Pvap Disolvente > Pvap Soluto

Potencial químico
- Variable intensiva
- $\frac{R}{n}$ R = Función estado
- R = U, H, S, G, A

$$G = \begin{cases} p, T = cte & \Delta G = 0 \text{ equilibrio} \end{cases}$$

$$G = f(p, T, n)$$

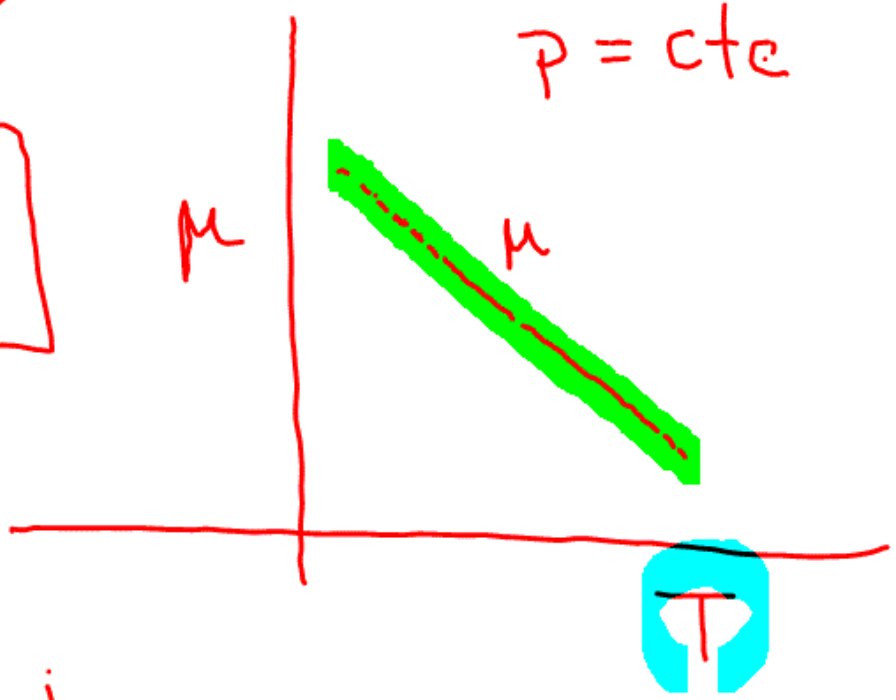
μ = potencial químico

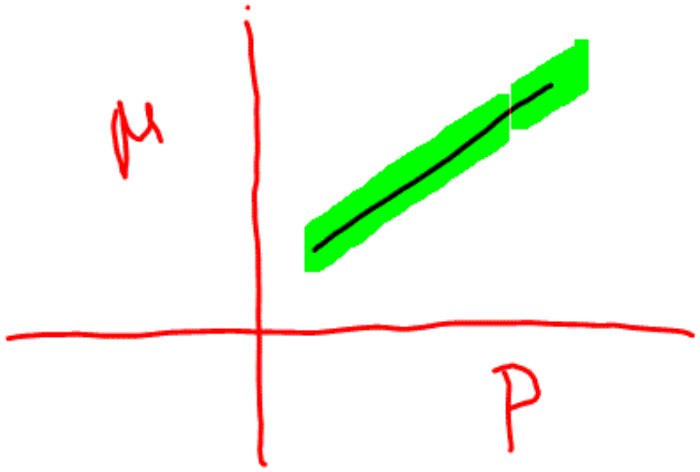
$$dG = \left(\frac{\partial G}{\partial p}\right)_{T,n} dp + \left(\frac{\partial G}{\partial T}\right)_{p,n} dT + \left(\frac{\partial G}{\partial n}\right)_{T,p} dn$$

$$\mu = \left(\frac{\partial G}{\partial n}\right)_{T,P}$$

$$\boxed{d\bar{G} = d\mu}$$

$$d\bar{G} = \bar{V}\,dP - \bar{S}\,dT$$





$\mu_L = \mu_S$ = Fusión $\Delta H = +$

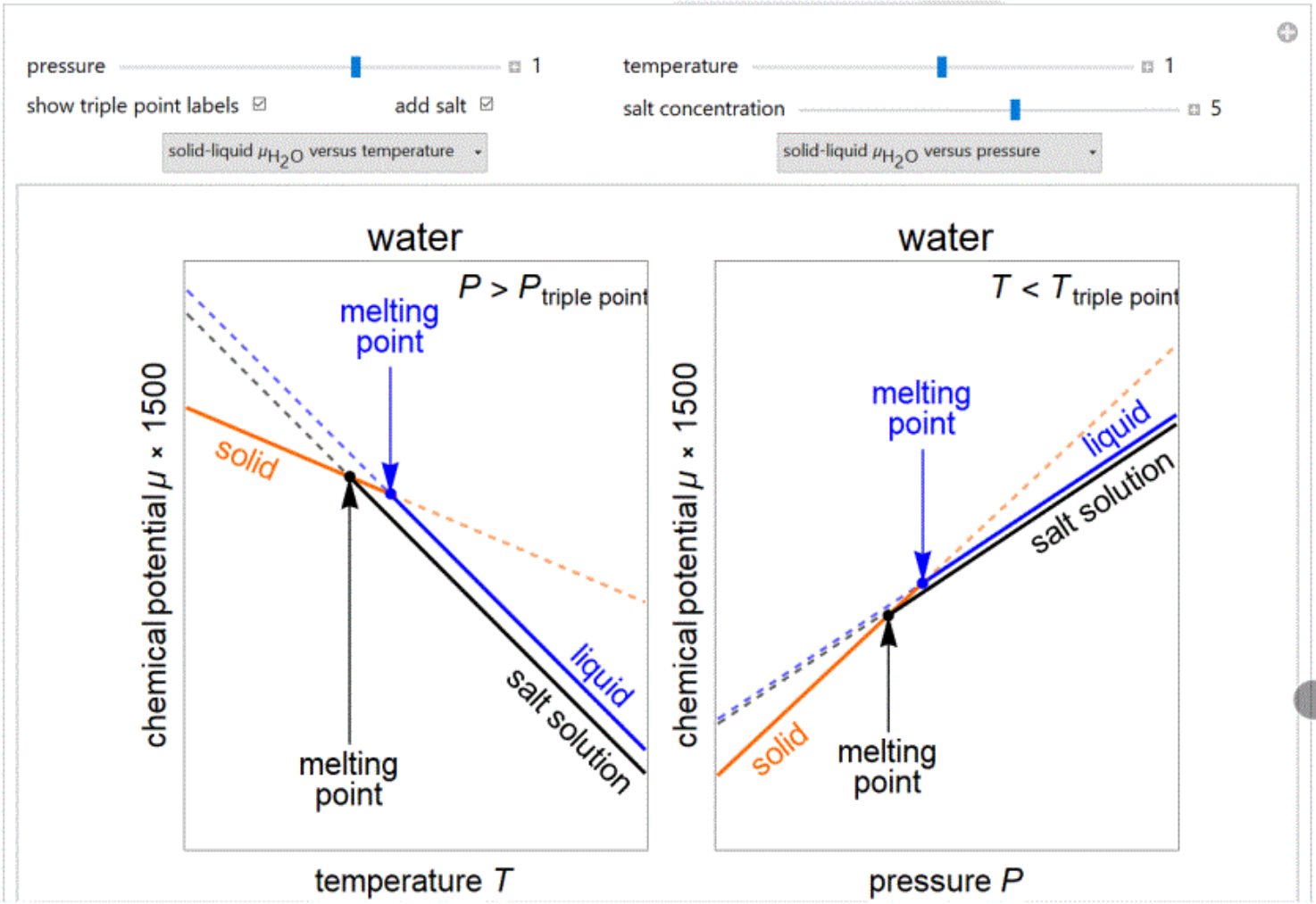
Solidificación $\Delta H = -$

$\mu_L = \mu_V$ = Vaporización $\Delta H = +$

Condensación $\Delta H = -$

$\mu_S = \mu_V$ = Sublimación $\Delta H = +$

Deposición $\Delta H = -$


pressure 1
temperature 1
show triple point labels
add salt
salt concentration 5
solid-liquid μ_{H_2O} versus temperature
solid-liquid μ_{H_2O} versus pressure
water
$P > P_{triple\ point}$
melting point
solid
liquid
salt solution
chemical potential $\mu \times 1500$
temperature T
water
$T < T_{triple\ point}$
melting point
liquid
salt solution
solid
chemical potential $\mu \times 1500$
pressure P