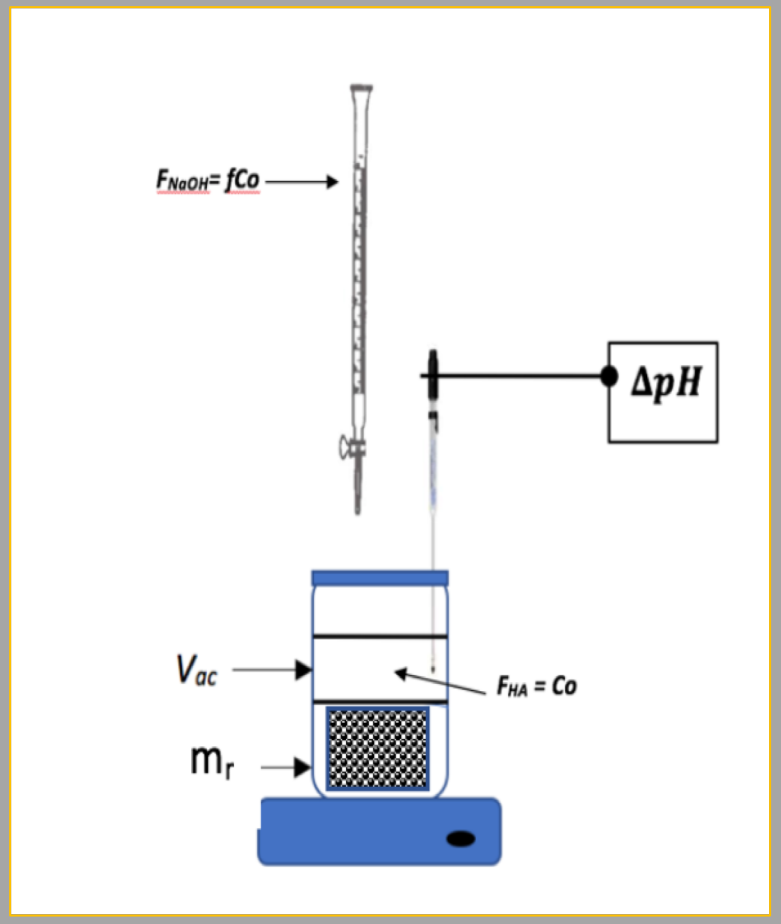
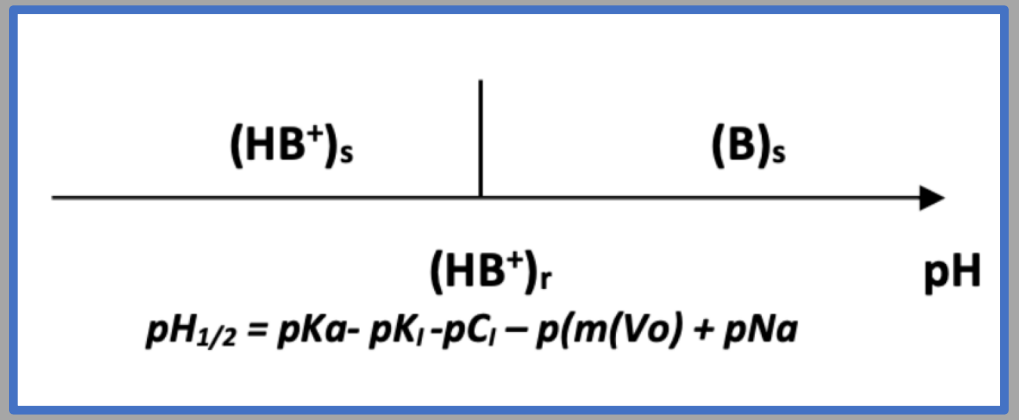
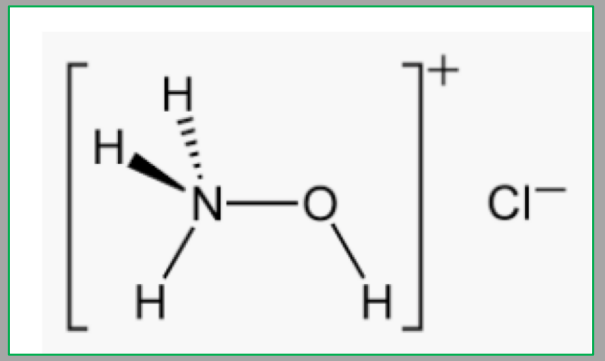
QA III
Acidez-intercambio iónico
DLTEII
hidroxilamonio/$(Na^+)_r$

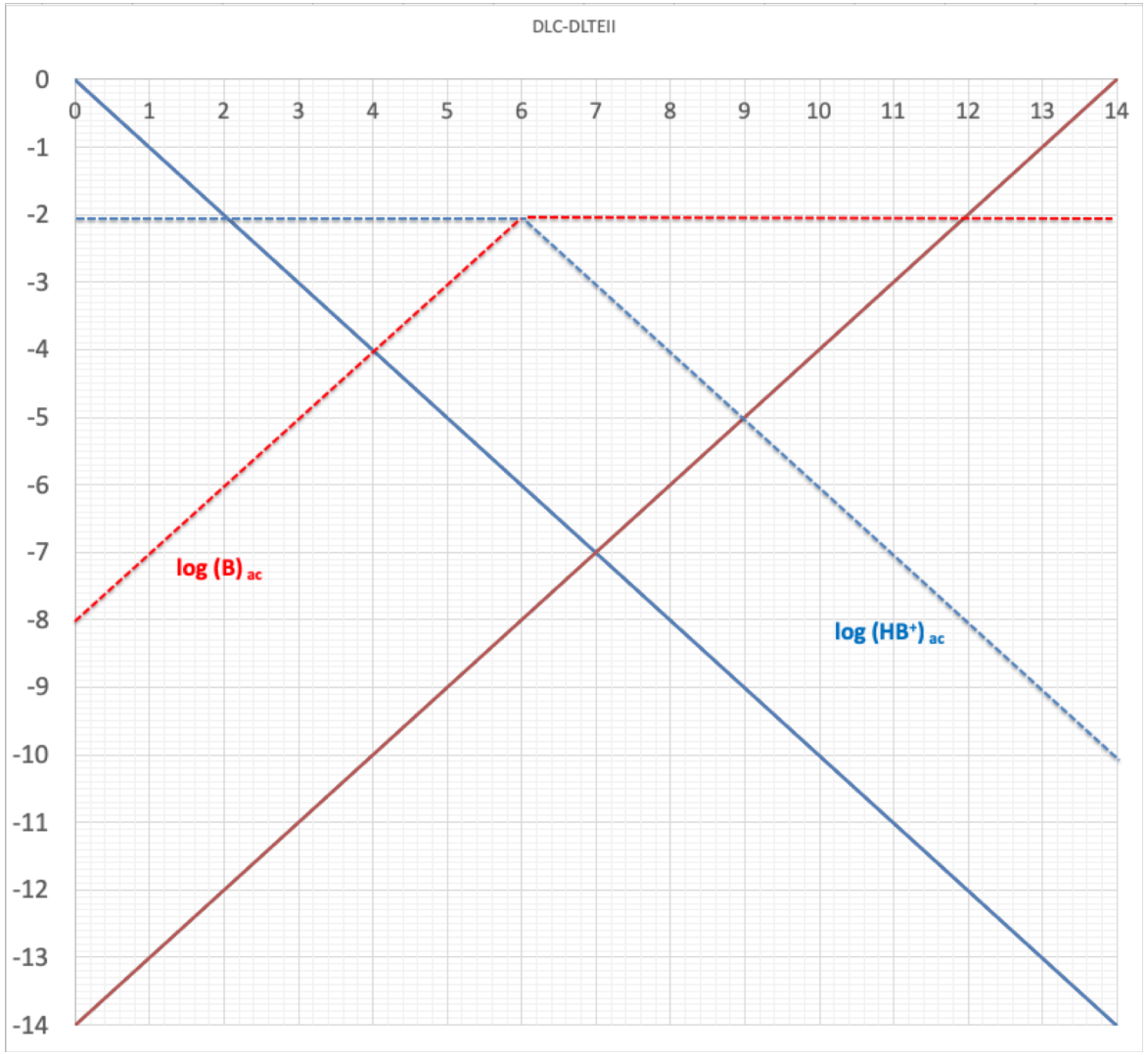


Dr. Alejandro Baeza





DLC ***Co = 0.01 mol/L, pKa = 6, K_i = 10; p(m/Vo) = 0 y C_i = 5 mmol/g de R-Na;F_{NaCl} = 0.1 mol/L.***



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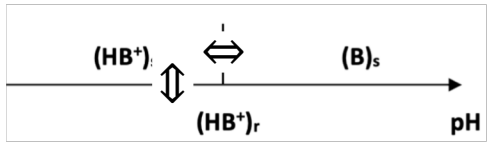


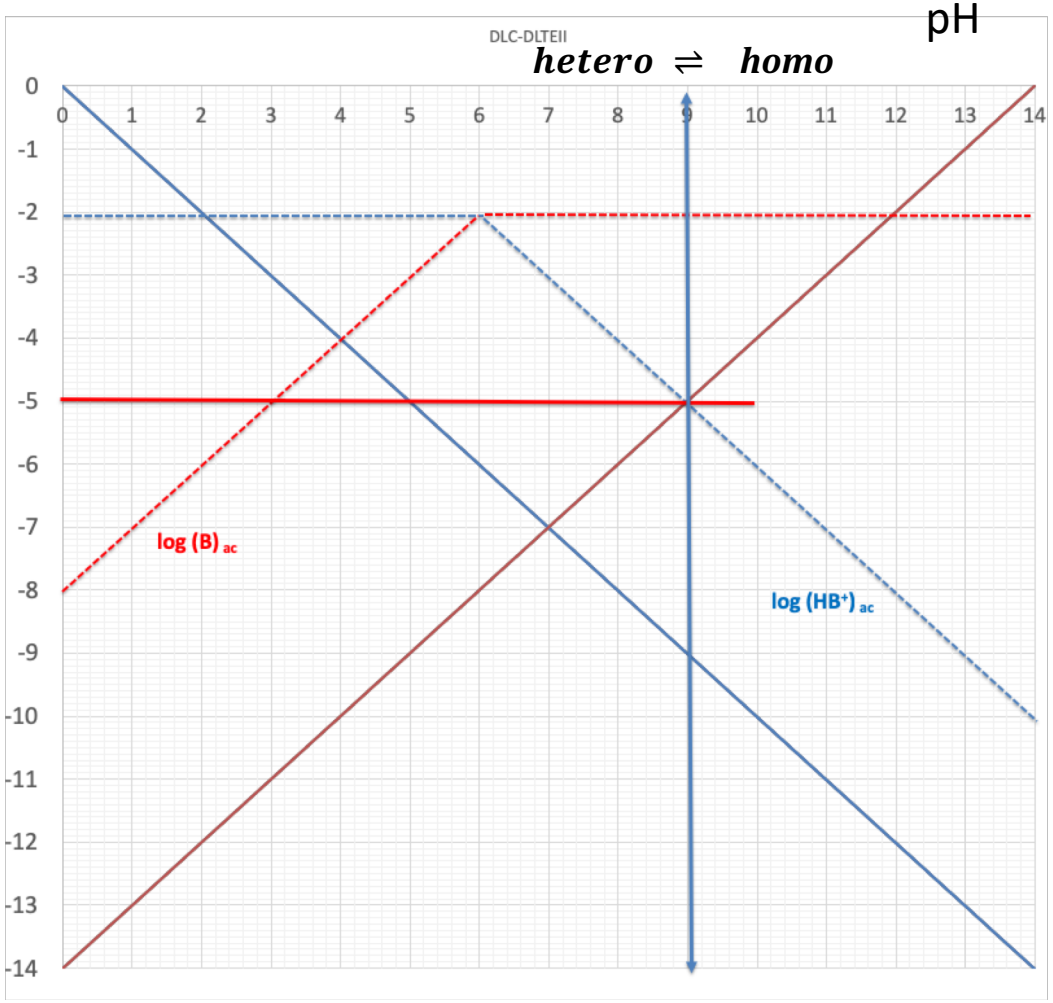
$$Co \approx [HB^+]_r \left(\frac{m}{Vo}\right)$$

$$HB^+ + (Na^+)_r \rightleftharpoons (HB^+)_r + Na^+$$

$$K_I = \frac{Co\ C_{Na}}{\left(\frac{m}{Vo}\right)[HB^+]C_I};$$

$$log[HB^+] = \log Co + pK_I + p\left(\frac{m}{Vo}\right) + pC_I - pNa$$

$$log[HB^+] = -2 - 1 + 0 - 0.7 - 1 = -4.7 \approx -5$$



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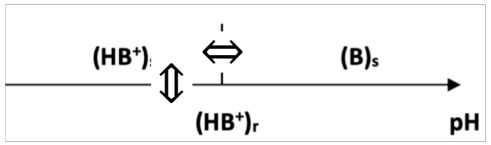


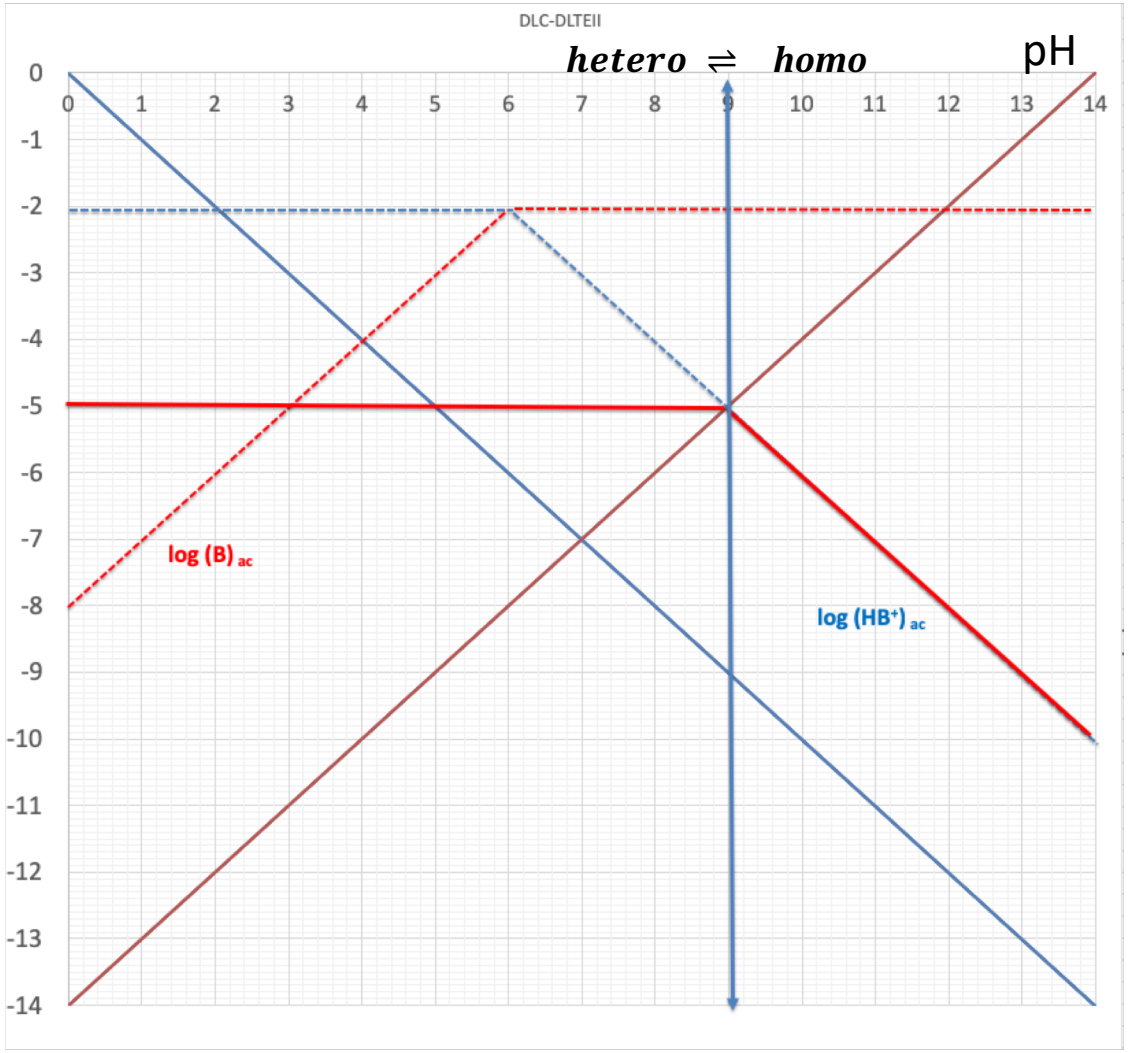
$$Co \approx [HB^+]_r \left(\frac{m}{Vo}\right)$$

$$HB^+ + (Na^+)_r \rightleftharpoons (HB^+)_r + Na^+$$

$$K_I = \frac{Co\ C_{Na}}{\left(\frac{m}{Vo}\right)[HB^+]C_I};$$

$$log[HB^+] = \log Co + pK_I + p\left(\frac{m}{Vo}\right) + pC_I - pNa$$

$$log[HB^+] = -2 - 1 + 0 - 0.7 - 1 = -4.7 \approx -5$$



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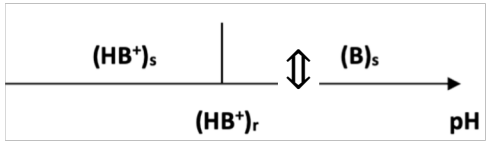


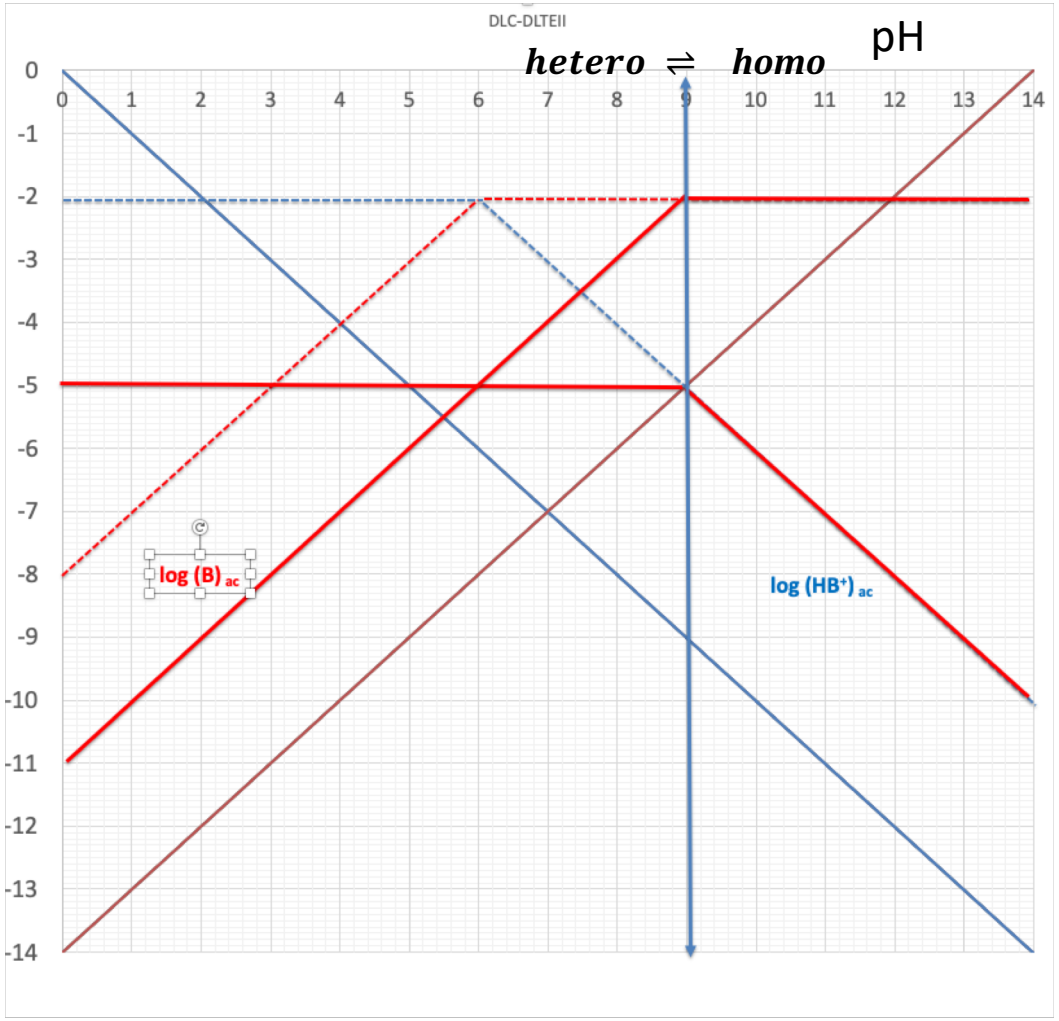
$$Co \approx [HB^+]_r \left(\frac{m}{Vo}\right)$$

$$B + H^+ + (Na^+)_r \rightleftharpoons (HB^+)_r + Na^+$$

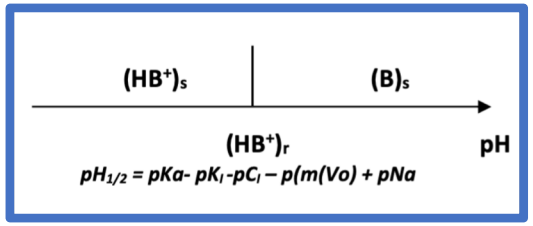
$$\frac{K_I}{Ka} = \frac{Co\, C_{Na}}{\left(\frac{m}{Vo}\right)[B][H^+]C_I};$$

$$log[B] = \log Co + pK_I - pKa + p\left(\frac{m}{Vo}\right) + pC_I - pNa + pH$$

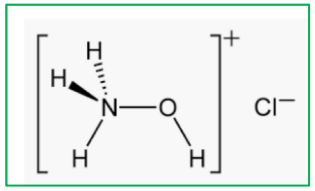
$$log[B] = -2 - 1 - 6 + 0 - 0.7 - 1 + pH = -10.7 \approx -11 + \text{pH}$$



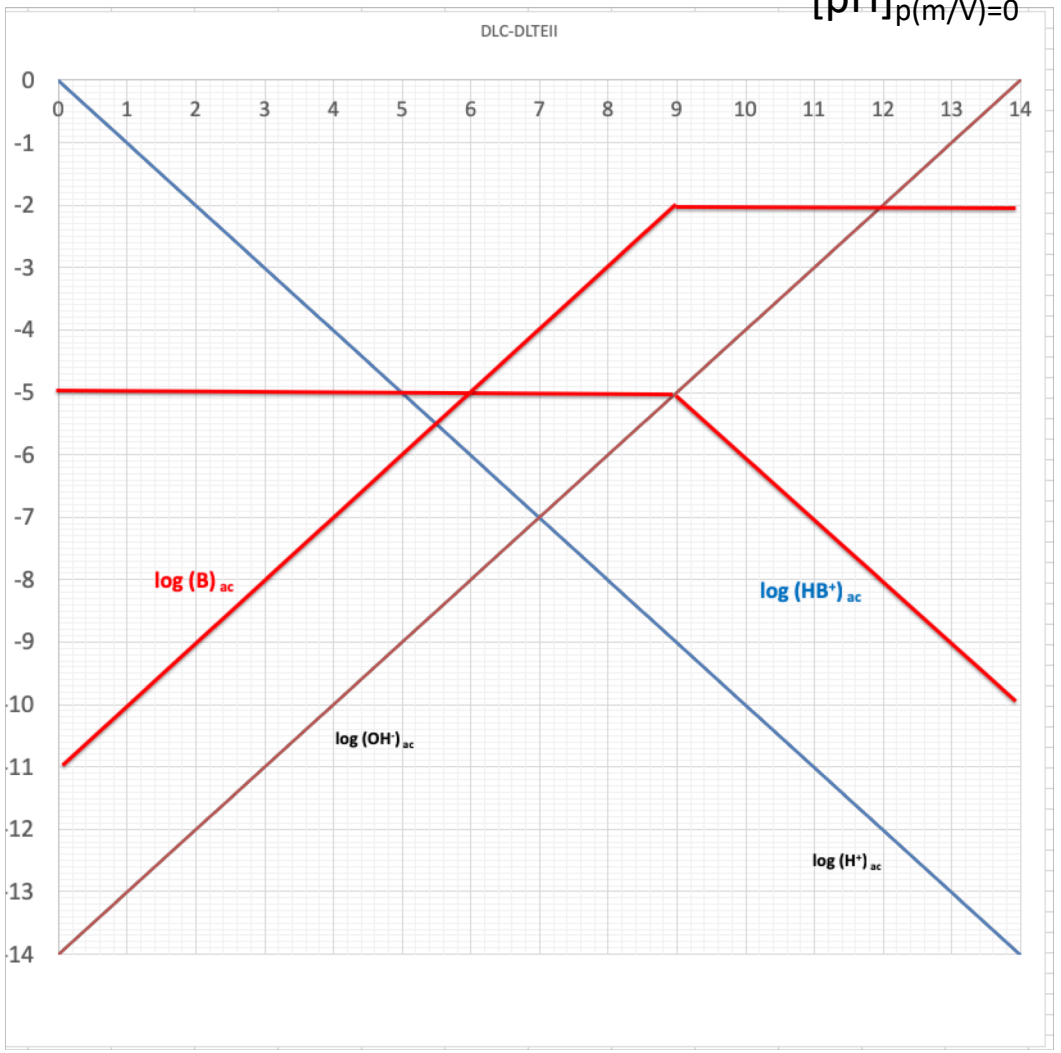
DLTEII: Diagrama logarítmico de transición de estado de intercambio iónico:



HBCl:



$[pH]_{p(m/V)=0}$



$\log [i]_{ac}$