

STRONG ACIDS AND THE EQUILIBRIUM CONSTANT

NAME _____

SECTION _____

1. The chemical equation which describes how the strong acid HCl dissociates in aqueous solution is,



- a. In the data you obtained earlier (Acids, Bases and pH, pg. 55), the initial concentration of HCl is 0.100 M. In the space provided below (**ICE** Table), enter the initial concentration of HCl, H^+ , and Cl^- . Based on the measured pH of this solution, calculate and enter the equilibrium concentration of H^+ .



Initial Concentrations _____ _____ _____

Change _____ _____ _____

Equilibrium Concentrations _____ _____ _____

- b. Calculate the change in $[\text{H}^+]$.
- c. Using the balanced chemical equation and the calculated change in $[\text{H}^+]$, calculate the change in $[\text{HCl}]$ and $[\text{Cl}^-]$.
- d. Calculate the equilibrium concentration of $\text{HCl}(aq)$ and $\text{Cl}^-(aq)$.
- e. Estimate the equilibrium constant for the dissociation of $\text{HCl}(aq)$.