

Competition Corner: Acid–Base Evidence

g11_u04_w14

Original fictional paper data only; no chemical activity, mixing, pH testing, or procedure is requested.

1. A model has $K_a = 2.5 \times 10^{-6}$ and $HX_0 = .0200$ M. Estimate pH, test the approximation, and state a model limitation.
2. For pH 5.10 and $pK_a = 4.50$, calculate X^-/HX . State two claims the ratio cannot establish.