

How to use the acid dissociation constant expression to calculate the pH of buffer. K_a of carbonic acid: 4.2×10^{-7} . concentration of carbonic acid: 0.035 mol/L (divided by 1.000 L to get concentration) concentration of hydrogen carbon ion: 0.0035 mol/L.

How do you calculate the pH of a buffer solution?

Calculating pH To calculate the pH of an aqueous solution you need to know the concentration of the hydronium ion in moles per liter (molarity). The pH is then calculated using the expression: $\text{pH} = -\log [\text{H}_3\text{O}^+]$.