Answer on Question #83589 - Chemistry - General Chemistry

Question:

Determine the concentration of HOCl with Ka=3.5x10^-8 , has the same pH as that of 2.50x10^-4 M HNO3

Solution:

[H+] = 2.5*10-4 M;
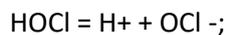
HOCl = H+ + OCl -;

Ka = [H+]*[OCl-]/[HOCl];

[H+] = [OCl-] = 2.5*10-4 M;

C (HOCl) = [H+]*[OCl-]/Ka = (2.5*10-4)^2/(3.5*10^-8) = 1.79 M.

Answer: 1.79 M.