Titrations and Maximum Ion Concentration Problems

In a titration 25.0 ml of a 0.250 M $AgNO_3$ solution was used to precipitate out all of the Br^- in a 200.0 ml sample. Calculate $[Br^-]$.

In a titration 26.5 ml of 0.100 M $Pb(NO_3)_2$ was used to precipitate out all of the Cl^- in a 30.0 ml sample of water. Calculate $[Cl^-]$.

Calculate the maximum concentration of OH^- that can exist in a 0.200 M $Mg(NO_3)_2$ solution.

Calculate the maximum concentration of CO_3^{-2} that can exist in a 0.500 M $AgNO_3$ solution.

Calculate the maximum concentration of IO_3^- that can exist in a 0.200 M $Cu(N0_3)_2$ solution.

Calculate the maximum concentration of Ca^{+2} that can exist in a 0.200 M Na_2C0_3 solution.

Calculate the minimum number of moles of $Pb(NO_3)_2$ required to start precipitation in 50.0 mL of 0.15 M $ZnCl_2$.

In a titration 12.5 mL of 2.00×10^{-5} M HCl is required to neutralize 250 mL of saturated AgOH solution. Calculate the $[OH^-]$ and then determine the Ksp for AgOH.