1. WHAT ARE THE FULL AND NET IONIC EQUATIONS FOR THE REACTION OF HCl(aq) with NaOH(aq).

H+(aq)+ Cl-(aq)+ Na+(aq)+ OH-(aq)🡪 Na+(aq)+ Cl-(aq)+ H20(l)

H+(aq)+ OH-(aq) 🡪 H2O(l)

1. HOW WOULD THE CALCULATED CONCENTRATION OF THE NaOH(aq) DETERMINED BY YOU COMPARE TO THE TRUE CONCENTRATION OF THE NaOH(aq) IF THE KHP HAD NOT BEEN FULLY DRIED BEFORE USE?

If the KHP had not been fully dried then the mass would be partial KHP and partial water. Affecting the mass. Therefore the mol of NaOH would be affected thus affecting the molarity of NaOH as well.

1. HOW WOULD THE CALCULATED CONCENTRATION OF THE NaOH(aq) DETERIMINED BY YOU COMPARE TO THE TRUE CONCENTRATION OF THE NaOH(aq) IF AN AIR BUBBLE HAD BEEN PRESENT IN THE BURET?

If an air bubble had been present in the Buret, the volume would be different (final mL – initial mL). Then when using the formula n(molarity)=mol/vol, the molarity would be affected not giving a true reading of the concentration of NaOH used.

1. COULD YOU HAVE PLACED THE NaOH(aq) IN THE FLASK AND TITRATED WITH ACID IN THE BURET? WHY OR WHY NOT? WHAT WOULD YOU HAVE OBSERVED?

Yes. It doesn’t matter if the acid or the base is in the Buret or flask. It still needs the same amount to titrate and reach pH levels. If both solutions were to switch my observation would be the same.

1. DOES THE AMOUNT OF WATER USED TO DISSOLVE THE KHP HAVE ANY IMPACT ON THE CALCULATED CONCENTRATION OF THE NaOH(aq)? WHY OR WHY NOT?

No. The base (NaOH) is reacting with the acid (KHP) not the water. The pink color comes from the combination of the acid and base together, not the base and water.