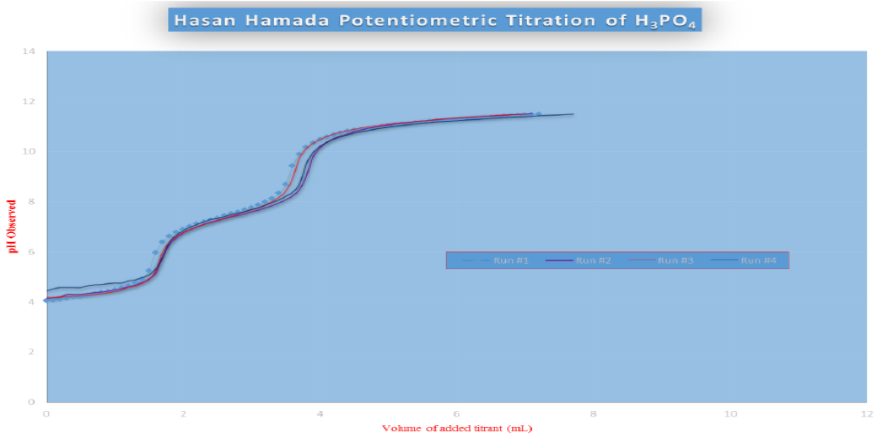
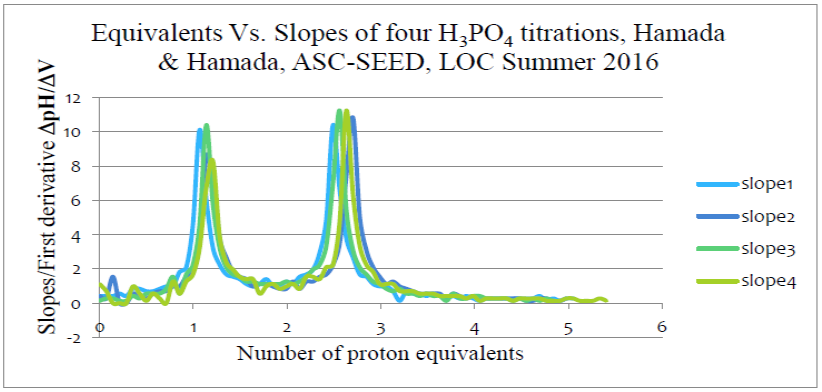
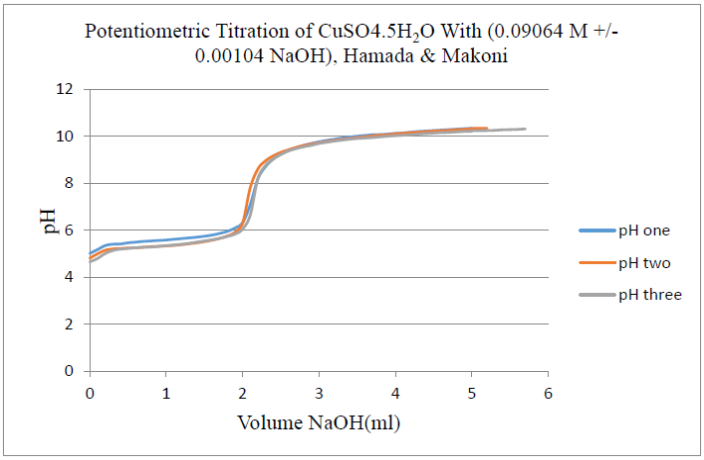


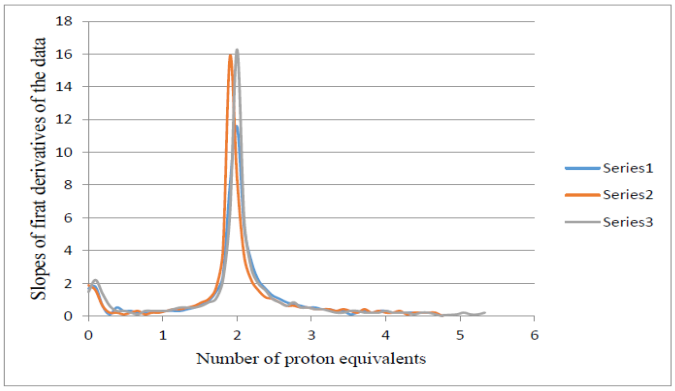
Supplementary Figure 1: Potentiometric titration graphs overlaying four plots of 2.0 mL (0.1M) free H_3PO_4 solution for calibrating the potentiometric titration system.



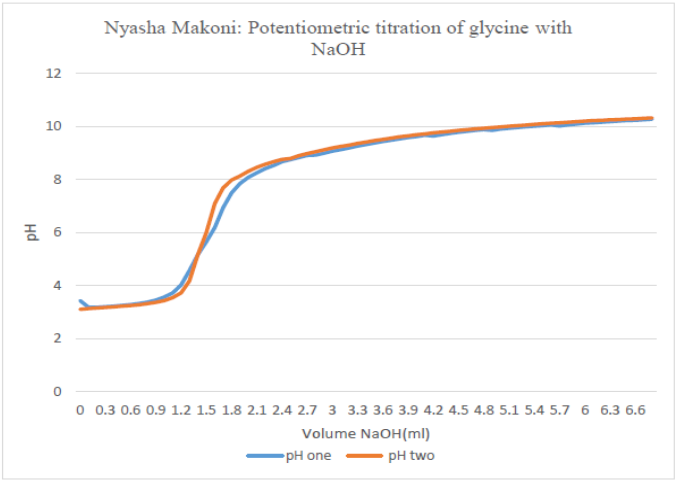
Supplementary Figure 2: First derivatives (ΔpH/ΔV) of the potentiometric titration graphs showed in Supplementary Figure 1 above for calibrating the potentiometric titration system. The appearance of two peaks indicates the presence of two end points and three protons of phosphoric acid (H_3PO_4).



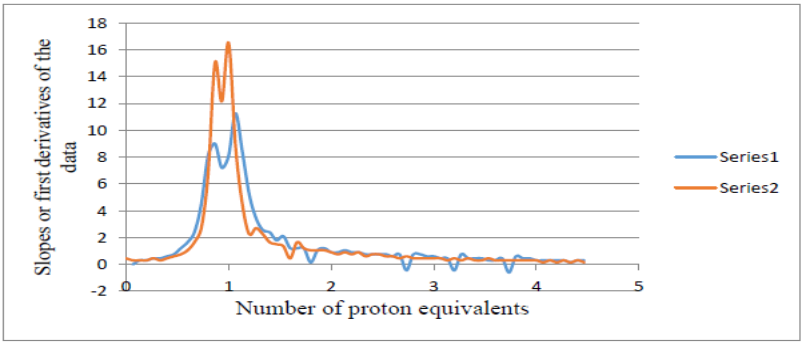
Supplementary Figure 3: Potentiometric titration graphs overlaying three plots of 2.0 mL (0.1M) free $Cu(SO_4)$ solution. Two protons were released due to the net charge on the copper ion is 2^+.



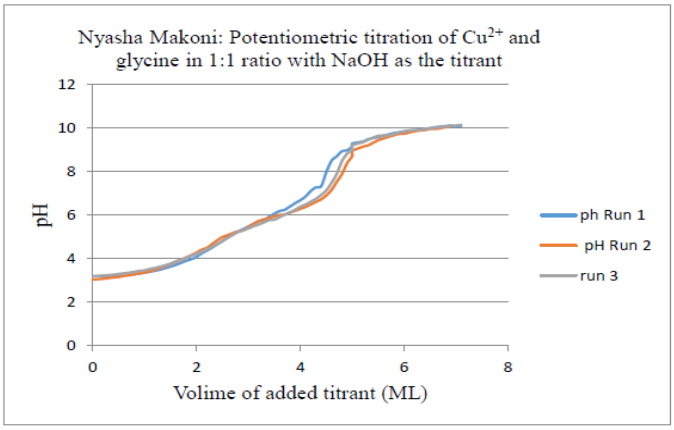
Supplementary Figure 4: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 3 above. A net of two protons were observed from the titration of free Cu^{2+} solution.



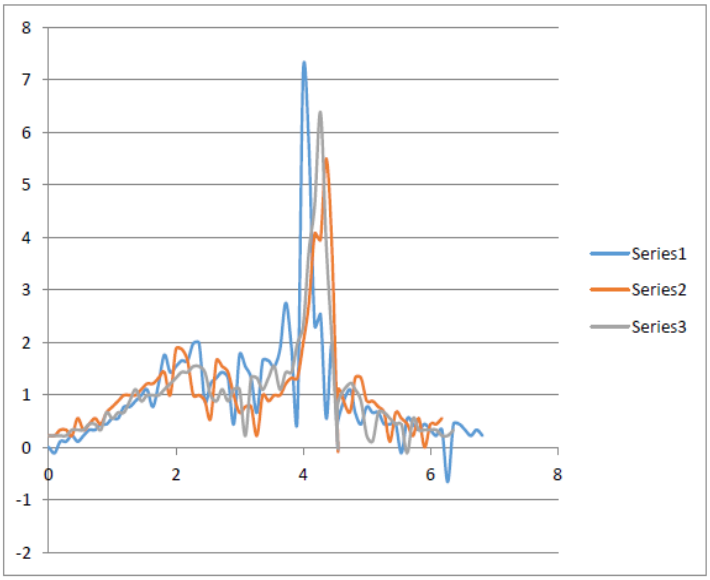
Supplementary Figure 5: Potentiometric titration graphs overlaying four plots of 2.0 mL (0.1M) free Gly.HCl solution.



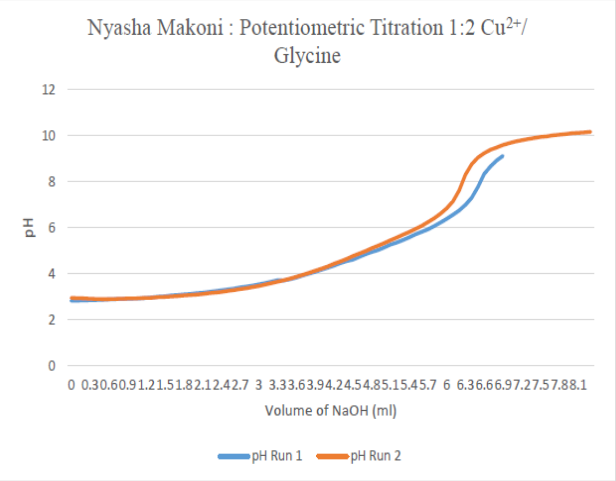
Supplementary Figure 6: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 4 above. A net of one proton was observed from the titration of free Gly.HCl solution.



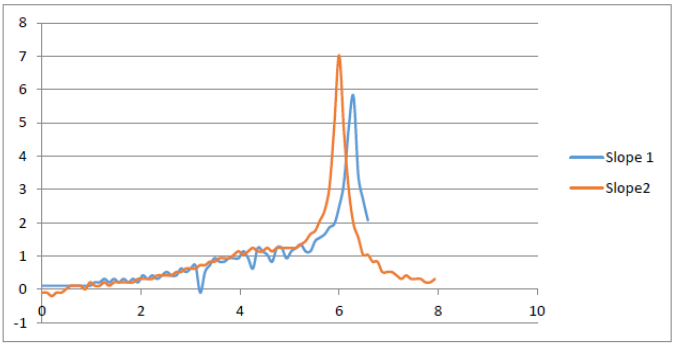
Supplementary Figure 7: Potentiometric titration graphs overlaying three plots of Cu^{2+}: Gly in 1:1 ratio.



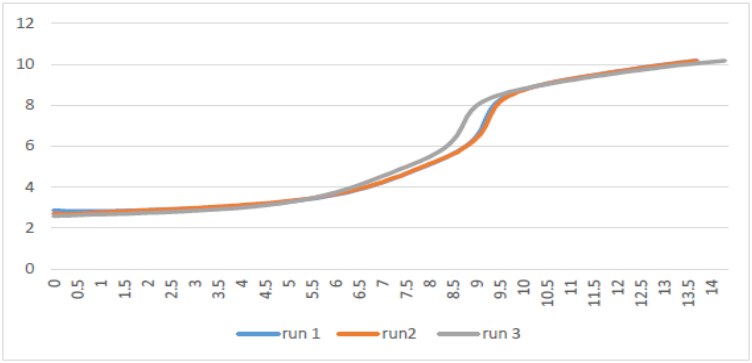
Supplementary Figure 8: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 6 above for the titrations of Cu^{2+}: Gly in 1:1 ratio.



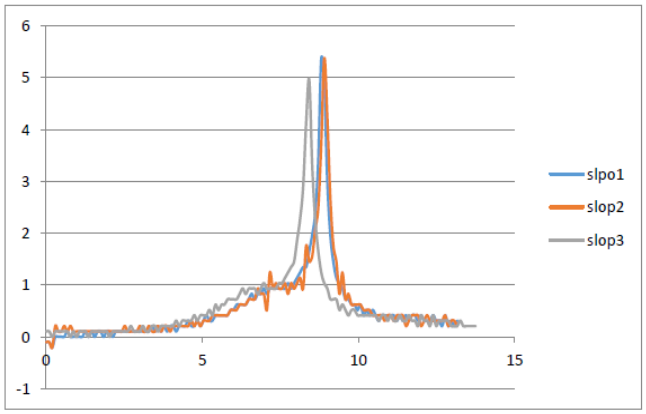
Supplementary Figure 9: Potentiometric titration graphs overlaying two plots of Cu^{2+}: Gly in 1:2 ratio.



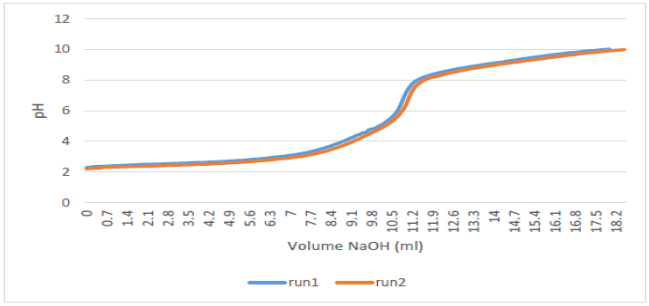
Supplementary Figure 10: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 8 above for the titrations of Cu^{2+}: Gly in 1:2 ratio.



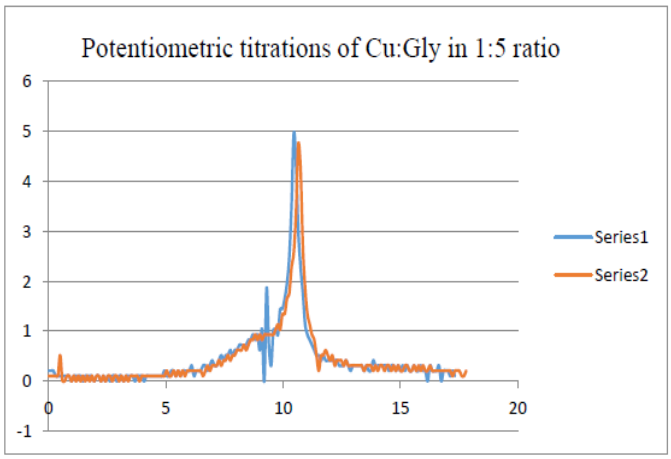
Supplementary Figure 11: Potentiometric titration graphs overlaying three plots of Cu^{2+}: Gly in 1:4 ratio.



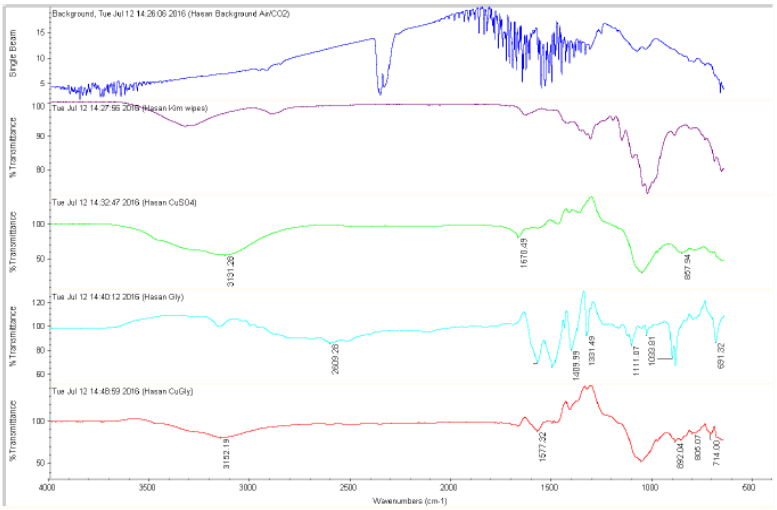
Supplementary Figure 12: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 10 above for the titrations of Cu^{2+}: Gly in 1:4 ratio.



Supplementary Figure 13: Potentiometric titration graphs overlaying two plots of Cu^{2+}: Gly in 1:5 ratio.



Supplementary Figure 14: First derivatives of the potentiometric titration graphs showed in Supplementary Figure 12 above for the titrations of Cu^{2+}: Gly in 1:5 ratio.



Supplementary Figure 15: Top to bottom are the IR-Spectra for air (showing the characteristic peaks for CO_2 at 2,360 cm^{-1}) which was absent from the rest of the samples. The main peak that changed in due to the binding of Copper to Gly is the carbonyl peak at 1,577 cm^{-1}.