Structural Study of Cu(II):Gly Solution by X-ray Absorption Spectroscopy

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This experimental work focuses on the investigation of aqueous solutions of copper(II) chloride mixed with glycine. Structural changes of the mixture are probed by X-ray absorption near-edge spectroscopy (XANES) by varying the Cu(II):Gly molar ratios. Moreover, pH is an important parameter to adjust since it influences the formation of the different species present in the Cu(II):Gly solution, affecting thus the structures observed in the XANES spectra. The information on the coordination shells of the metallic center for various ratio of Cu(II):Gly can be extracted by extended X-ray absorption fine structure spectroscopy. This could be a key for the understanding of the interactions of metal ion with biomolecules as a basic knowledge for future applications.

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