

# Near-edge X-ray absorption fine structure spectra and specific dissociation of Gly-Phe and Phe-Gly

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## Abstract

Near-edge X-ray absorption fine structure (NEXAFS) spectra is a very useful tool for chemical analysis of biomolecules and determine the electronic states. In previous works, we measured the NEXAFS spectra of Phe-Gly by using MOLDI-TOF MS. To determine selectively dissociation of Phe-Gly more precisely, we use NEXAFS-TOF MS to analyse Phe-Gly and compare with Gly-Phe. These two compounds are structural isomerism. They have similar absorption spectra at K-edge range and many ionic products with the same ratios of mass to charge; Gly-Phe have many ionic fragments with high value  $m/z$  compared to those from Phe-Gly. In this experiment, we discuss possible site-selective dissociation of two compounds. By comparing those two compounds, we found that their dissociations are related to the phenyl group.

*NEXAFS, TOF, MS*