

Poster Presentations
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**THE INVESTIGATION OF CHEMICAL EFFECT ON SOME CU AND FE METAL
COMPLEXES**

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In this study, we investigated the chemical effects on $K\beta$, $K\alpha$ production cross sections, the $K\beta$ -to- $K\alpha$ X-rays intensity ratios and K shell fluorescence yields for pure Cu, Fe and their some complexes at 59.54 keV incident photon energy. The samples were excited by 59.54 keV γ -rays from ^{241}Am . The K X-ray spectra emitted by the samples were counted by a Si(Li) detector with a resolution of 150 eV at 5.9 keV. The experimental K shell fluorescence yields have been determined using the measured X-ray production cross sections and theoretical K shell photoionization cross section values. The results for the present $K\beta$, $K\alpha$ production cross section, K shell fluorescence yield and $K\beta$ -to- $K\alpha$ X-ray intensity ratio values for pure Cu and Fe were compared with theoretically calculated and the ones available in the literature. The results are in good agreement with the theoretical values and the ones. It was observed that the changing in chemical structure of the pure and metal complexes depending on the chemical condition caused some changes on the measured K X-ray production cross sections, fluorescence yields and $K\beta$ -to- $K\alpha$ X-ray intensity ratios.