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Effect of Backing Metals in the X-Ray Fluorescence
Spectral Analysis of Metal Films and its Application
Absorption Edge Effect*

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Abstract

The enhancement effect of the backing metal on the x-ray intensity of an element in a film has been studied. This effect is dependent on the wave length of the x-ray absorption edge of the element in the film. In the case of nickel film, the infinite thickness at which this effect is lost is about 20μ , and the infinite thickness is independent on the kind of backing metals. It has also been recognized that this enhancement effect is convenient for increasing the x-ray intensity of small amounts of an element. The application of this effect has been demonstrated for the determination of small amounts of nickel and cobalt, which were concentrated in an organic precipitate.

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