

## **Quantitative X-ray Fluorescent Analysis Without Reference Samples**

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**Abstract:** quantitative analysis of elements by X-ray spectroscopy has many applications. In order to measure a relative amount of an element in a material it is necessary to use standard samples. However, using too many standard samples with different percent of elements needs a long processing time and calculations. X-rays with definite energies are incident to the sample, penetrate to a certain depth, and excite atoms to emit X-ray fluorescence. The emitted X-ray passes through the sample and reaches the detector. In this work we have calculated exactly the fluorescent intensity throughout its passage in the sample.