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**General rules for X-ray fluorescence  
analysis**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Analytical Instruments Manufacturers' Association (JAIMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS K 0119**:1997 is replaced with this Standard.

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# General rules for X-ray fluorescence analysis

## 1 Scope

This Japanese Industrial Standard specifies general rules for the measurement of fluorescent X-ray generating from a specimen using a fluorescent X-ray spectrometric analysis instrument and for performing the qualitative analysis and the quantitative analysis of elements contained in a specimen. Scope covers the thickness determination and the mapping analysis.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS K 0211 *Technical terms for analytical chemistry (General part)*

JIS K 0212 *Technical terms for analytical chemistry (optical part)*

JIS K 0215 *Technical terms for analytical chemistry (analytical instrument part)*

JIS Q 0030 *Terms and definitions used in connection with reference materials*

## 3 Terms and definitions

For the purposes of this Standard, the definitions given in **JIS K 0211**, **JIS K 0212**, **JIS K 0215** and **JIS Q 0030**, and the following definitions apply.

### 3.1 fluorescent X-ray

X-ray emitted when outer-shell electrons transit to holes generated by the excitation of inner-shell electrons of atoms which constitute the substance by irradiating the substance with X-rays,  $\gamma$ -rays, etc.

It has energy specific to the element which constitutes the substance (see **JIS K 0212**).

### 3.2 primary X-rays

X-rays with which a specimen is irradiated in order to generate the fluorescent X-ray

### 3.3 wavelength dispersive method

method to disperse X-rays generated from a specimen using a wavelength dispersion element such as an analyzing crystal and a synthetic multi-layer film (see **JIS K 0212** and **JIS K 0215**)

### 3.4 energy dispersive method

method to disperse (energy selection) X-rays using a detector which generates electric signals proportional to X-ray energy (see **JIS K 0212** and **JIS K 0215**)