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(JFA/JSA)

**Method for chemical analysis of  
chromium metal—Part 4:  
Determination of sulfur content**

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## Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by Japan Ferroalloy Association (JFA)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Consequently **JIS G 1323**:1989 has been withdrawn and partially replaced with this Standard.

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**JIS G 1323** series consists of the following 7 parts under the general title “*Method for chemical analysis of chromium metal*”:

*Part 1: Determination of carbon content*

*Part 2: Determination of silicon content*

*Part 3: Determination of phosphorus content*

*Part 4: Determination of sulfur content*

*Part 5: Determination of iron content*

*Part 6: Determination of aluminium content*

*Part 7: Determination of various elements—ICP atomic emission spectrometric method*

# Method for chemical analysis of chromium metal—Part 4: Determination of sulfur content

## 1 Scope

This Japanese Industrial Standard specifies the method for determination of sulfur content in chromium metal.

## 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 G 1301 *Ferrous alloys—General rules for chemical analysis*

JIS Z 2616 *General rules for determination of sulfur in metallic materials*

## 3 General

General matters of chemical analysis shall be in accordance with **JIS G 1301** and **JIS Z 2616**.

## 4 Classification of determination method

The determination method of sulfur content shall be in accordance with either of the following.

- a) **Combustion—sodium hydroxide titration method** This method is applicable to samples with sulfur content of 0.005 % (mass fraction) or over up to and including 0.1 % (mass fraction).
- b) **Combustion—infrared absorption method** This method is applicable to samples with sulfur content of 0.001 % (mass fraction) or over up to and including 0.1 % (mass fraction).

## 5 Combustion—sodium hydroxide titration method

### 5.1 Summary

Burn a sample in oxygen stream, absorb the generated sulfur oxide in hydrogen peroxide to obtain sulfuric acid, and titrate it with sodium hydroxide solution.

### 5.2 Reagents

The reagents shall be in accordance with **9.1.2** of **JIS Z 2616**.

### 5.3 Assembly and components of apparatus

The assembly and components of apparatus shall be in accordance with **9.1.3** of **JIS Z 2616**.