JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 1323-1 : 2017

(JFA/JSA)

Method for chemical analysis of chromium metal—Part 1: Determination of carbon content

ICS 77.120.40

Reference number : **JIS G 1323-1 : 2017 (E)**

Date of Establishment: 2017-03-21
Date of Public Notice in Official Gazette: 2017-03-21
Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Metal and Inorganic Materials

JIS G 1323-1:2017, First English edition published in 2017-09

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

NH/AT

Contents

Page

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Consequently **JIS G 1323** : 1989 has been withdrawn and partially replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

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 1: Determination of carbon content

1 Scope

This Japanese Industrial Standard specifies the method for determination of carbon 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) shall be applied.

JIS G 1301 *Ferroalloys—General rules for chemical analysis*

JIS Z 2615 *General rules for determination of carbon in metallic materials*

3 General

General matters of chemical analysis shall be in accordance with **JIS G 1301** and **JIS Z 2615**.

4 Classification of determination method

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

a) **Combustion–sulfuric acid back titration method** This method is applicable to samples with carbon content of 0.05 % (mass fraction) or over up to and including 0.1 % (mass fraction).

b) **Combustion–infrared absorption method** This method is applicable to samples with carbon content of 0.001 % (mass fraction) or over up to and including 0.1 % (mass fraction).

5 Combustion–sulfuric acid back titration method

5.1 Summary

The sample is heated in a stream of oxygen to thoroughly oxidize carbon into carbon dioxide. The generated carbon dioxide is then collected in a burette together with oxygen, and absorbed in a definite amount of sodium hydroxide solution. The excessive sodium hydroxide is titrated with the sulfuric acid solution.

5.2 Reagents

The reagents shall be in accordance with **9.3.2** of **JIS Z 2615**.

5.3 Assembly and composition of apparatus

The assembly and composition of apparatus shall be in accordance with **9.3.3** of **JIS Z 2615**.