

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 1312-1 : 2011

(JFA/JSA)

**Method for chemical analysis of
ferrosilicon — Part 1: Methods for
determination of silicon content**

ICS 77.040.30;77.100

Reference number : JIS G 1312-1 : 2011 (E)

PROTECTED BY COPYRIGHT

9 5

G 1312-1 : 2011

Date of Establishment: 2011-10-20

Date of Public Notice in Official Gazette: 2011-10-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Iron and Steel

JIS G 1312-1 : 2011, First English edition published in 2013-06

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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

© JSA 2013

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HN

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 General	1
4 Classification of determination method	2
5 Silicon dioxide gravimetric method	2
5.1 Summary	2
5.2 Reagents	2
5.3 Amount of test portion	2
5.4 Procedure	2
5.5 Blank test	5
5.6 Calculation	5
6 Sodium hydroxide titration method after separation of precipitated potassium hexafluorosilicate	5
6.1 Summary	5
6.2 Reagents	5
6.3 Amount of test portion	6
6.4 Procedure	6
6.5 Blank test	8
6.6 Calculation	8
Annex JA (informative) Comparison table between JIS and corresponding International Standard	9

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 the 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Consequently **JIS G 1312:1998** has been withdrawn and partially replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

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

JIS G 1312 series consists of the following 6 parts under the general title "*Method for chemical analysis of ferrosilicon*":

Part 1: Methods for determination of silicon content

Part 2: Methods for determination of carbon content

Part 3: Methods for determination of phosphorus content

Part 4: Methods for determination of sulfur content

Part 5: Methods for determination of aluminium content

Part 6: Methods for determination of titanium content

Method for chemical analysis of ferrosilicon — Part 1 : Methods for determination of silicon content

Introduction

JIS G 1312 was established in 1953 and was revised for the fifth time in 1998. This time, to correspond to the progress in the analytical technology, JIS G 1312 : 1998 is withdrawn and partially replaced with this Japanese Industrial Standard, which is established as the methods for determination of silicon content.

This Standard has been prepared based on the first edition of ISO 4158 published in 1978 with some modifications of the technical contents to correspond to the actual situation in Japan.

The portions given sidelines or dotted underlines are the matters not given in the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the methods for determination of silicon content in ferrosilicon.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 4158 : 1978 *Ferrosilicon, ferrosilicomanganese and ferrosilicochromium — Determination of silicon content — Gravimetric method* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21-1.

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 *Ferroalloys — General rules for chemical analysis*

JIS K 8001 *General rule for test methods of reagents*

3 General

General matters common to the chemical analysis method shall be in accordance with JIS G 1301.