

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 0050 : 2019

(JSAC/JSA)

General rules for chemical analysis

ICS 71.040.40

Reference number : JIS K 0050 : 2019 (E)

PROTECTED BY COPYRIGHT

28 S

K 0050 : 2019

Date of Establishment: 1964-03-01

Date of Revision: 2019-02-20

Date of Public Notice in Official Gazette: 2019-02-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Chemical Products and
Analytical Methods

JIS K 0050 : 2019, First English edition published in 2019-11

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.

© JSA 2019

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

KK/HN

PROTECTED BY COPYRIGHT

Contents

	Page
1	Scope 1
2	Normative references 1
3	Terms and definitions 5
4	Quantities and units 5
5	Expression and rounding of numerical values 7
5.1	Expression of numerical values 7
5.2	Rounding of numerical values 8
6	Types of chemical analyses 8
6.1	General matters 8
6.2	Qualitative analysis 8
6.3	Quantitative analysis 9
7	Water, reagents, instruments and measuring instruments used for chemical analysis 11
7.1	Water and reagents 11
7.2	Instruments 12
7.3	Measuring instruments 12
8	Conditions of analysis/storage site 13
8.1	Conditions of analysis site 13
8.2	Conditions of storage site of reagents and solutions 13
9	Sampling 14
9.1	Sampling 14
9.2	Handling and storage of sample 15
10	Pretreatment on sample 15
11	Quantitative operation 17
11.1	Method of obtaining quantitative value 17
11.2	Preparation of working curve 18
11.3	Method of obtaining blank value 19
11.4	Decision on number of analyses and analytical value 19
12	Reference materials used in chemical analysis 19
12.1	General matters 19
12.2	Pure substance-type reference materials 19
12.3	Matrix reference materials 20
13	Record 20
14	Reliability of chemical analysis 20

15	Precautions on safety of chemical analysis and environment	21
Annex A (informative)	Qualitative analysis by chemical method	23
Annex B (informative)	General operation of precipitate gravimetric analysis	26
Annex C (informative)	General operation of volumetric analysis	31
Annex D (normative)	Water used in chemical analysis	33
Annex E (normative)	Preparation and storage of water for special use	34
Annex F (informative)	Washing methods for main instruments	36
Annex G (informative)	Precautions on use of platinum instruments	38
Annex H (normative)	Correction of buoyancy of air to value weighed by balance	41
Annex I (normative)	Calibration method for volumeters	43

Foreword

This Japanese Industrial Standard has been 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 The Japan Society for Analytical Chemistry (JSAC)/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 0050:2011** is 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 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.

Blank

General rules for chemical analysis

1 Scope

This Japanese Industrial Standard specifies the general matters of chemical analysis.

In this Standard, the chemical analysis methods refer to the operation/technique to carry out the qualitative and/or quantitative analysis of chemical species of substances, which include chemical methods and physical methods; however, this Standard covers mainly the qualitative and the quantitative analyses based on the chemical methods.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. For standards with the year indication, only the editions of the indicated year shall be applied and the revisions (including amendments) made thereafter shall not be applied. For those without the indication of the year, the most recent edition (including amendments) shall be applied.

- JIS A 1960 *Indoor air — General aspects of sampling strategy*
- JIS B 7414 *Glass thermometers*
- JIS B 7601 *Trip balances*
- JIS B 7609 *Weights*
- JIS B 7611-1 *Nonautomatic weighing instruments — Metrological and technical requirements and Tests — Part 1 : General measuring instruments*
- JIS B 7611-2 *Non-automatic weighing instruments — Metrological and technical requirements and tests — Part 2 : Measuring instruments used in transaction or certification*
- JIS B 7611-3 *Non-automatic weighing instruments — Metrological and technical requirements and tests — Part 3 : Weights and poises used in transaction or certification*
- JIS C 1602 *Thermocouples*
- JIS C 1604 *Platinum resistance thermometers*
- JIS H 6201 *Platinum crucibles for chemical analysis*
- JIS H 6202 *Platinum dishes for chemical analysis*
- JIS K 0055 *General rules for calibration method of gas analyzer*
- JIS K 0060 *Sampling method of industrial wastes*
- JIS K 0094 *Sampling methods for industrial water and industrial wastewater*