



MALAYSIAN STANDARD

MS ISO GUIDE 32:2013

**Calibration in analytical chemistry and use of
certified reference materials
(ISO Guide 32:1997, IDT)**

ICS: 71.040.30

Descriptors: calibration, analytical chemistry, certified reference material

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NOTE: Technical corrigenda are not to correct errors which can be assumed to have no consequences in the application of the MS, for example minor printing errors.

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Committee representation

The Industry Standards Committee on Quality Management and Quality Assurance (ISC Y) under whose authority this Malaysian Standard was adopted, comprises representatives from the following organisations:

Construction Industry Development Board Malaysia
Department of Standards Malaysia
Federation of Malaysian Manufacturers
Institute of Quality Malaysia
Malaysia Productivity Corporation
Malaysian Administrative, Modernisation and Management Planning Unit
Malaysian Agricultural Research and Development Institute
Malaysian Association of Standards Users
Malaysian Institute of Chemistry
Malaysian International Chamber of Commerce and Industry
Ministry of Health Malaysia (Medical Device Control Division)
Ministry of International Trade and Industry
National Pharmaceutical Control Bureau
Science and Technology Research Institute for Defence
SIRIM Berhad (Secretariat)
SIRIM Berhad (Standards Research and Management Centre)
SIRIM QAS International Sdn Bhd
The Electrical and Electronics Association of Malaysia
The Institution of Engineers, Malaysia
Universiti Malaya
Universiti Utara Malaysia

The Technical Committee on Conformity Assessment which recommended the adoption of the ISO Standard as Malaysian Standard consists of representatives from the following organisations:

Construction Industry Development Board Malaysia

Department of Chemistry, Malaysia

Department of Standards Malaysia

Institute of Quality Malaysia

Malaysia Productivity Corporation

Malaysian Administrative, Modernisation and Management Planning Unit

Ministry of Domestic Trade, Co-operatives and Consumerism

SIRIM Berhad (Secretariat)

SIRIM QAS International Sdn Bhd

Co-opted members:

Malaysian Institute of Chemistry
SIRIM Berhad (National Metrology Laboratory)
The Cement and Concrete Association of Malaysia

National foreword

The adoption of the ISO Standard as a Malaysian Standard was recommended by the Technical Committee on Conformity Assessment under the authority of the Industry Standards Committee on Quality Management and Quality Assurance.

This Malaysian Standard is identical with ISO Guide 32:1997 (confirmed in 2007), *Calibration in analytical chemistry and use of certified reference materials*, published by the International Organization for Standardization (ISO). However, for the purposes of this Malaysian Standard, the following apply:

- a) in the source text, "this International Standard" should read "this Malaysian Standard";
- b) the comma which is used as a decimal sign (if any), to read as a point;
- c) reference document ISO/IEC Guide 25:1990 should be replaced by MS ISO/IEC 17025 to reflect current document;
- d) reference document ISO Guide 31:1981 should be replaced by MS ISO Guide 31;
- e) reference document ISO Guide 33:1989 should be replaced by MS ISO Guide 33;
- f) reference document ISO Guide 34:1996 should be replaced by MS ISO Guide 34;
- g) reference document VIM:1993 should be replaced by ISO/IEC Guide 99 to reflect current document;
- h) reference document *Guide to the expression of uncertainty in measurement* should be replaced by ISO/IEC Guide 98-3 to reflect current document; and
- i) reference to International Standards should be replaced by corresponding Malaysian Standards as follows:

Referenced International Standards

Corresponding Malaysian Standards

ISO Guide 30:1992, *Terms and definitions used in connection with reference materials*

MS ISO Guide 30:1996, *Terms and definitions used in connection with reference materials*

ISO Guide 35:2006, *Certification of reference materials - General and statistical principles*

MS ISO Guide 35:2008, *Reference materials - General and statistical principles for certification*

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.

NOTE. IDT on the front cover indicates an identical standard i.e. a standard where the technical content, structure, and wording (or is an identical translation) of a Malaysian Standard is exactly the same as in an International Standard or is identical in technical content and structure although it may contain the minimal editorial changes specified in clause 4.2 of ISO/IEC Guide 21-1.