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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 22554-2010

Linear calibration using reference materials

基于标准样品的线性校准

(English Translation)

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Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and definitions, symbols
4 General
5 Basic methods
5.1 Overview
5.2 Assumes
5.3 Calibration Experiment
5.4 Data Analysis Strategy

Foreword

This revised standard adopts ISO 11095:1996 "based on a linear calibration standard sample" (Linearcalibrationusingreference materials).

This standard and ISO 11095. The main difference compared to 1996 is as follows.

- Deleted international standards foreword;
- Use a range of statements in the form of typical language guide, and made the appropriate editorial changes and adjustments in some equivalent conditions;
- Cited international standards of our standards;
- The original International Standard Appendix A "symbol used" Adjust this standard 3.2;
- The original International Standard Appendix B "basic methods ranging from the number of repetitions when the" Adjust this standard Appendix A.

Appendix A of this standard is a normative appendix.

Application of this standard by the National Standardization Technical Committee on statistical methods (SAC/TC21) and focal points.

This standard was drafted. Liaoning Exit Inspection and Quarantine, China National Accreditation Center, Beijing University of Technology, China Standardization Research Institute, China Institute of Metrology, Qinghai CIQ.

Introduction

Calibration is the most core part of the measuring program, which is operating under a set of prescribed conditions for establishing measurement values \u200b\u200bare given with a these "Standards" to accept the relationship between values.

Standard sample is a substance or article of one or more properties are well established and sufficient to confirm the measurement system, existing in Several categories.

- a) internal standard samples, developed by the user for internal use;
- b) External standard sample, provided by an external;
- c) certified reference samples, distribution and value to be recognized by the competent institutions.

Based on a linear calibration standard sample

1 Scope

This standard specifies the calibration and measurement system is calibrated measuring system maintained in statistical control state general principles.

This standard specifies the basic method used for the following purposes.

- a) measuring the variability estimate assumes two kinds of linear calibration function;
- b) linear calibration function and measurement variability of test assumed;
- c) based on measured values \u200b\u200bof the new calibration functions transformed unknown quantity estimates.

This standard gives a method of controlling the life cycle of calibration function is used.

- a) calibration function test when it needs to be updated;
- b) Assessment by the uncertainty of the measured values \u200b\u200bafter calibration function transformation.

This standard specifies two alternative methods under certain conditions, the basic method, gives an example of the basic methods and control methods.

This standard applies to the measurement system can obtain the standard sample and measuring system assumes a linear calibration function, and provides a linear false test Given method.

This standard does not apply to non-linear calibration functions are known, unless the use described in 8.3 "Squeeze technology." this standard does not distinguish between the various types of standard samples, and accepts that the measuring system calibration standard sample error does not exist.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 3358.1 Statistics Vocabulary and symbols - Part 1. General statistical terms and terms (GB/T 3358.1- for Probability 2009, ISO 3534-1:2006, IDT) GB/T 3358.2 Statistics Vocabulary and symbols - Part 2. Applied Statistics (GB/T 3358.2-2009, ISO 3534-2:2006, IDT) GB/T 15000.2 standard for the work of (2) The common terms and definitions (GB/T 15000.2-1994, ISO Guide30.1991, NEQ)

3 Terms and definitions, symbols

GB/T 3358.1 and GB/T 3358.2 and established the following terms and definitions, symbols apply to this standard.

3.1 Terms

3.1.1

Standard sample referencematerial Standard sample having a sufficiently uniform of one or more chemical, physical, biological, engineering technology or special sensory properties Zheng, after technical evaluation, together with the description of a number of samples of data about the performance certificate.

Note 1: The standard sample may be a pure or mixed gas, liquid or solid, may be an article or image. Most standard sample batch is identified, also that is, a number of materials in a random selection of at least a portion of energy to meet the requirements, it can represent the entire batch number of properties within the specified uncertainty limits Value; few standard samples are identified by one single article; also some standard samples due to their chemical properties can not be established and its structure He explained the reasons for, and therefore their characteristics represented nor can well-defined test methods can not be used to determine the composition, quality and quantity, which Class standard samples include certain biological properties, sample standard engineering techniques and/or senses.

Note 2: The standard samples in this standard in other applications, also known as reference material, reference material, certified reference materials, certified reference materials, reference materials and the like.

Note 3: The change from GB/T 15000.2 defined.