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

GB/T 6379.6-2009

**Accuracy (trueness and precision) of measurement methods
and results -- Part 6: Use in practice of accuracy values
(English Translation)**

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Foreword

GB/T 6379 Accuracy (Trueness and Precision) of Measurement Methods and Results can be divided into the following 6 parts.

- Part 1.General Principle sand Definitions (ISO 5725-1.1994, IDT);
- Part 2.Basic Method for the Determination of Repeatability and Reproducibility of a Standard Measurement Method (ISO 5275-2.1994, IDT);
- Part 3.Intermediate Measures of the Precision of a Standard Measurement Method (ISO 5275-3.1994, IDT);
- Part 4.Basic Methods for the Determination of the Trueness of a Standard Measurement Method (ISO 5275-4.1994, IDT);
- Part 5.Alternative Methods for the Determination of the Precision of a Standard Measurement Method (ISO 5275-5.1998, IDT);
- Part 6.Use in Practice of Accuracy Values (ISO 5275-6.1994, IDT).

This Part belongs to Part 6 of GB/T 6379.

This Part equivalently adopted the international standard ISO 5275-6.1994 Accuracy (Trueness and Precision) of Measurement Methods and Results - Part 6.Use in Practice of Accuracy Values and Technical amendments of ISO 5275-6 (Edition 1994) issued on October 15, 2001 by ISO. Corrections to the ISO 5275-6.1994 are as follows.

--- According to the calculation results, redraw the Figure 10;

--- x_1 is added up to 16.84 in the original Table 6, which is wrong, and shall be corrected into 16.74.

The Part 1 to Part 6 of GB/T 6379 as a whole replaced GB/T 6379-1986 and GB/T 11792-1989. The concept of original precision is extended in the standard, add the concept of trueness, which is called accuracy; in addition to the repeatability and reproducibility conditions, add the intermediate precision conditions.

The contents of this Part replaced GB/T 6379-1986 and GB/T 11792-1989 partially.

The Appendix A of this part is normative.

This Part was proposed by Guangdong Entry-Exit Inspection and Quarantine Bureau.

This Part shall be under the jurisdiction of National Technical Committee on Application of Statistical Methods of Standard Administration of China.

Drafting organizations of this Part. Guangdong Entry-Exit Inspection and Quarantine Bureau, Academy of Mathematics and System Science of Chinese Academy of Sciences, and China National Institute of Standardization.

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This Part was first-time published in 2009.

1 Scope

It is assumed that the estimates of trueness and precision for the method have been obtained in accordance with parts 1 to 5 of GB/T 6379.

Any additional information regarding the field of application will be given at the beginning of each particular application.

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Part of GB/T 6379. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard,

however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

3 Terms and Definitions

For the purposes of this Part of GB/T 6379, the terms and definitions given in GB/T

4.1 Repeatability and reproducibility limits

When the absolute difference exceeds the appropriate limit as given in the preceding clauses, then the difference shall be considered as suspect, and therefore all measurements that have given rise to this difference shall be considered as suspect and subject to further investigation.

5 Methods for Checking the Acceptability of Test Results and Determining the Final Quoted Result

It is not common in commercial practice to obtain only one test result. When only one test result is obtained, it is not possible to make an immediate statistical test of the acceptability of that test result with respect to the given repeatability measure.

6 Method for Checking the Stability of Test Results within a Laboratory

It is difficult to check the trueness of a test result if there is no RM. However, in practice, in many cases a test result obtained by a skilled operator in a well-equipped laboratory following a standard measurement method (or preferably a "definitive" method) strictly, thoroughly and carefully, can be used as a reference value in place of the certified value.

7 Use of Repeatability and Reproducibility Standard Deviation in Assessing Laboratories

This clause describes assessment of laboratories with regard to only a single measurement method which is standardized and which is in use in various laboratories. Consequently, it is possible to estimate the precision of the method in the form of the repeatability and the reproducibility standard deviations. It is assumed that these

8 Comparison of Alternative Measurement Methods

The comparison between methods A and B shall be made on the results of precision experiments. If method A is a well-established standard method, the precision of method A can be used as the basis for comparison.

The accuracy experiment shall be conducted in accordance with the general rules described in GB/T 6379.1.

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