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

**GB/T 3359-2009**

Replacing GB/T 3359-1982

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**Statistical interpretation of data -- Determination of statistical  
tolerance intervals**

数据的统计处理和解释 统计容忍区间的确定

**(English Translation)**

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## Foreword

"Data processing and interpretation of the statistics" includes the following national standards.

Statistical processing and interpretation --- GB/T 3359 statistical data to determine the tolerance interval Statistical interpretation of comparison in the case of two paired

observations mean --- GB/T 3361 data Statistical interpretation of Binomial Distribution  
Reliability sided lower confidence limit --- GB/T 4087 data

--- Statistical processing and interpretation binomial distribution parameters GB/T 4088  
Estimation and Test Data

--- Statistical processing and interpretation of the Poisson distribution parameters GB/T  
4089 Estimation and test data

--- GB/T 4882 Statistical interpretation of data normality test

--- Analyzing and processing GB /statistical processing and interpretation of normal sample  
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--- GB/T 4885 Normal distribution complete reliability lower confidence limit

--- GB /statistical processing and interpretation of the mean and variance of normal  
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--- GB Statistical interpretation of normal distribution mean and variance test the efficacy/T  
4890 data

--- GB/Statistical interpretation Gamma distribution (Pearson III distribution) parameters T  
8055 data estimates

--- GB /statistical processing and interpretation of data distribution index T 8056 judgment  
and sample handling outliers Analyzing and Processing --- GB /statistical processing and  
interpretation of Type I extreme value distribution of the sample outliers T 6380 data

--- GB /statistical processing and interpretation of test results of multiple comparisons of  
data T 10092

--- GB/T 10094 quantile normal confidence limits and coefficient of variation this standard is  
identical with ISO 16269-6:2005 "Statistical processing and interpretation of data - Part 6.  
statistical tolerance interval is determined." for ease of use, this standard made the  
following editorial changes.

--- Remove the foreword and introduction of international standards;

--- With a decimal point "." Instead of a comma as the decimal point "." this standard  
replaces GB/T 3359-1982 "statistical processing and interpretation of statistical data to  
determine the tolerance interval." this standard compared with GB/T 3359-1982 The main  
changes are as follows.

--- The GB/T 3359-1982 the intensity variation coefficient  $C_{vp}$  R to  $CR$ ;

--- The GB/T 3359-1982 stress the coefficient of variation  $C_{vp}$  S to  $CS$ ;

--- The GB/T 3359-1982 the value of strength  $FKR$  to  $FR$ ,  $\alpha_R$ ; stress standard values to  
do the appropriate changes;

Features sub-sites;

--- Added a few comments, which can eliminate some questions.

The Standard Appendix B, Appendix C, Appendix D, Appendix E, Appendix F and Appendix G are normative appendices, Appendix A, Appendix H and Appendix I Informative appendices.

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

This standard drafting units. China National Institute of Standardization, Beijing Institute of Technology, Beijing University.

## 1 Scope

This standard gives the tolerance interval established procedures, which tolerate a certain level of confidence interval contains at least a predetermined percentage of the overall unit Minute. This standard considers the unilateral and bilateral statistical tolerance interval is determined, there are two methods of determining given, where the parameters of the law applicable to research Case study of the characteristics of normal distribution, free distribution method is applicable to only know the distribution is continuous scenario.

## 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)

### 3.1 Terms and Definitions

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

#### 3.1.1

Determined by the random sample, comprising at least a predetermined probability sampling interval specified rate overall.

**Note:** When so established the interval confidence level is repeatedly used which contains at least a

predetermined percentage of the overall sampling frequency.

### 3.1.2

Statistics indicate statistical tolerance interval endpoint.

**Note:** The statistical tolerance intervals can be unilateral or bilateral. Unilateral interval only one upper or lower tolerance limits. Bilateral upper and lower tolerance limits are interval.

### 3.1.3

The overall fall in the proportion of unit statistical tolerance interval.

**NOTE:** This is not the concept of reference [5] The cover factor confused.

### 3.1.4

Normally distributed population.

## 3.2 Symbol

The following symbols apply to this standard.

GB/T 3359-2009/ISO 16269-6:2005