

ICS 03.120.30

CCS A 41



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

GB/T 33260.3-2018

**Capability of detection -- Part 3: Methodology for determination
of the critical value for the response variable when no
calibration data are used**

Issued on: June 7, 2018

Implemented on: January 1, 2019

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

GB/T 33260 "Checkout Capacity" is currently divided into the following sections.

- Part 1. Terms and definitions;
- Part 2. Method for determining the detection limit of linear calibration;
- Part 3. Method for determining the critical value of the response variable of the situation without calibration data;
- Part 4. Comparison between the minimum detectable value and the given value;
- Part 5. Determination of detection limits for non-linear calibration situations.

This part is Part 3 of GB/T 33260.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafted method to modify the use of ISO 11843-3:2003 "detection capabilities of the third part. response to the situation without calibration data

The method of determining the critical value of a variable". Compared with ISO 11843-3:2003, the main technical changes are as follows.

--- With regard to normative references, this section has made adjustments with technical differences to apply our country's technical conditions and adjust the situation.

The focus is reflected in Chapter 2, "Normative References," and the specific adjustments are as follows.

- * Replaced ISO 3534-1 with GB/T 3358.1-2009 equivalent to international documents;
- * Replaced ISO 3534-2 with GB/T 3358.2-2009 equivalent to international documents;
- * Replaced ISO 3534-3 with GB/T 3358.3-2009 equivalent to international documents;
- * Replaced ISO 11095:1996 with GB/T 22554-2010 which modifies international

documents;

* Replaced ISO 11843-1:1997 with GB/T 33260.1-2016 that modifies international documents;

* Replaced ISO 11843-2:2000 with GB/T 33260.2-2018, which modifies the use of international documents;

* ISO Guide 30 is replaced by GB/T 15000.2-1994, which is non-equivalent to the correspondence relationship with international documents.

This part is proposed and managed by the National Statistical Methods Application Standardization Technical Committee (SAC/TC21).

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Introduction

The ideal requirement for the detection capability of a selected state variable is that the actual state of the observing system can be very accurately distinguished as the basis

State or non-basic state. However, due to systematic and random variations, this ideal requirement cannot be satisfied because.

--- In fact, the state variable values of all reference states including the basic state are unknown. Therefore, all states can only

Through the difference with the basic state, the net state variable, to be exactly described.

Note. In GB/T 15000.2-1994 and GB/T 22554-2010, there is no distinction between state variables and net state variables. Therefore, none of these two standards

Illustratively, the state variables of the reference state are known.

--- In addition, the calibration and sampling and sample preparation process will give random errors in the measurement results.

In this section, α denotes the probability of (incorrectly) detecting that the system is not in the basic state when the system is in the basic state.

Checkout capability Part 3. No calibration data

Method for determining the critical value of situation response variables

1 Scope

This part of GB/T 33260 specifies the specific situation where the value of the net state variable is zero (see 5.1). Repeated observations in the reference state are used.

The method of estimating the critical value of the response variable by means of the mean and standard deviation, from which the actual state (or sample to be tested) can be determined. The value of the response variable is

Nothing exceeds the critical value provided by the reference state.

GB/T 33260.2-2018 specifies the threshold for determining the response variable, the critical value of the net state variable, and the minimum of the net state variable.

The general method of calculating the detected value. These methods are suitable for linear functions where there is a linear calibration, a standard deviation of the residual error is a constant, or a net state variable.

Situation. This section specifies how to determine the critical value of the response variable when there is no calibration data. Assume that the data is normally distributed or approximated

Normal distribution.

The methods given in this section are used to obtain a large number of basic states but it is difficult to obtain a large number of actual states.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 3358.1-2009 Statistical vocabulary and symbols - Part 1. General statistical terms and terms used for probability

(ISO 3534-1.2006, IDT)

GB/T 3358.2-2009 Statistical vocabulary and symbols Part 2. Application statistics (ISO 3534-2.2006, IDT)

GB/T 3358.3-2009 Statistical vocabulary and symbols - Part 3. Experimental design (ISO 3534-3.1999, IDT)

GB/T 4882-2001 Statistical processing and interpretation of data for normality testing (ISO 5479.1997, IDT)

GB/T 6379.2-2004 Accuracy (trueness and precision) of measurement methods and results
Part 2. Determine the standard measure side

Basic methods for repeatability and reproducibility (ISO 5725-2.1994, IDT)

GB/T 15000.2-1994 Guideline for Working with Standard Samples (2) Common Terms and
Definitions for Standard Samples (ISO Guide 30.1992,

NEQ)

GB/T 22554-2010 Linear calibration based on standard samples (ISO 11095.1996, MOD)

GB/T 33260.1-2016 Capability of detection - Part 1. Terms and definitions (ISO
11843-1.1997, MOD)

GB/T 33260.2-2018 Detection capability - Part 2. Method for determining the detection limit
of linear calibration (ISO 11843-2.

2000, MOD)

3 Terms and Definitions

GB/T 3358.1-2009, GB/T 3358.2-2009, GB/T 3358.3-2009, GB/T 4882-2001, GB/T
15000.2-

The terms and definitions defined in.1994, GB/T 6379.2-2004, GB/T 22554-2010, and GB/T
33260.1-2016 apply to this

file.