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

GB/T 33260.1-2016

Capability of detection -- Part 1: Terms and definitions

检出能力 第1部分：术语和定义

(English Translation)

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Table of Contents

- Foreword
- Introduction
- 1 Scope
- 2 Out of the concept of the concept of capacity
- 2.1 Check out the capacity of the icon
- 2.2 Symbols

Foreword

GB/T 33260 "Detection capability" is divided into the following parts.

Part 1. Terms and definitions;

Part 2. Method for determining the detection limit of linear calibration cases;

- Part 3. Method for determining the critical value of response variables without calibration data;

- Part 4. Comparison of minimum detectable values and given values;

Part 5. Method for determining the detection capability of linear and non - linear calibration cases.

This part is part 1 of GB/T 33260.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the re-drafting method to modify ISO 11843-1.:1997, "Detection Capability Part 1. Terms and Definitions". versus ISO 11843-1.:1997, the main technical content changes as follows.

--- the vertical line in Figure 1 in the basic state and the actual state between the solid line into a dotted line;

--- the scope of the simplified, ISO 11843-1.:1997 in the scope of the text into the standard introduction;

- Define the concept of capability in ISO 11843-1.:1997 as standard Chapter 2, the terms and definitions as Chapter 3 content.

This part of the National Statistical Methods Applied Standardization Technical Committee (SAC/TC21) proposed and centralized.

This part of the drafting unit. China Institute of Standardization, China Testing and Certification Group Co., Ltd., Xiamen Standard & Poor's standardized service limited Company, Beijing University of Technology, Hefei Teachers College, CITIC Daika Co., Ltd.

Introduction

The general concept given in this section, the critical value of the response variable, the critical value of the net state variable, and the minimum detectable value of the net state variable (See 3.9 to 3.11) for a variety of situations, such as the presence or absence of a substance in the material, whether there is fuel in the sample or device, or Geometric deformation in distorted static systems.

The threshold can be obtained from the actual measurement sequence in order to evaluate the unknown state of the system in this sequence, whereas the minimum of the net state variables the detected value as a characteristic value of the measurement method is used to select the appropriate measurement process. To characterize a measurement process, a laboratory or a measurement method, if each correlation level (ie, a measurement sequence, measurement process, laboratory or measurement method) has Appropriate measurement data, you can determine the minimum detectable value. Different measurement sequence, measurement process, laboratory or measurement method of the smallest detectable the value is different.

This part is suitable for continuous measurement of continuous scale and is suitable for the detection process and the detection capability of various measuring devices.

The relationship between the expected value of the response variable and the state variable value can be described by the calibration function. If the response variable or state variable is a vector Value, then this part can be applied to the vector component or component function.

There may be some differences between the terms used in the chemical analysis and the terms in this section. Appendix A gives the general terms and chemical the correspondence between the terms used.

Detection Capability Part 1. Terminology and Definitions

1 Scope

This part of GB/T 33260 gives the terms and definitions used to detect the difference between the actual state and the underlying state of the system.

This part is suitable for continuous measurement of continuous scale, as well as the measurement process and a variety of measurement equipment to detect the ability to obtain.

2.1 Check out the capacity of the icon

This section assumes that the net state variable (see 3.4) is not negative and that the calibration function (see 3.6) is strictly monotonically increasing, with no applicability restrictions. Senate See note 1 of 3.9.

Figure 1 shows some of the concepts. The distribution of the response variables in the figure and the calibration function are examples only and do not represent the distribution

There are any restrictions on the particular type. The symbols used in this part of Figure 1 are examples only and do not constitute a normative document in this section.

Figure 1 Calibration function, the critical value of the response variable, the critical value of the net state variable, and the minimum detectable value of the net state variable

2.2 Symbols

Z. state variable.

z_0 . State variable value in base state.

X. net state variable, $X = Z - z_0$.

x_C . the critical value of the net state variable.

x_D . the minimum detectable value of the net state variable.