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**CERTIFICATION AND ACCREDITATION INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

RB/T 228-2023

Replacing RB/T 151-2016

**Guidelines for the estimation of measurement uncertainty of
food microbiological quantitative detection
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces RB/T 151-2016 "Guidelines for the evaluation of measurement uncertainty for quantitative detection of food microorganisms" and is compatible with RB/T 151-Compared with 2016, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Added terms, definitions and symbols related to measurement uncertainty assessment;
- b) The evaluation scheme of measurement uncertainty has been changed to use technical uncertainty, matrix uncertainty and distribution uncertainty to evaluate the measurement uncertainty.

Measurement uncertainty.

1 Scope

This document describes a method for the evaluation and expression of measurement uncertainty for the quantitative testing of microorganisms in foods.

This document applies to the quantitative analysis of microorganisms in food and food raw materials, as well as environmental samples related to food production, processing and storage.

Evaluation and expression of measurement uncertainty. Other fields can refer to it for use.

Note: Quantitative analysis methods include conventional microbial plate count method, most probable number (MPN) method, instrumental determination method [such as impedance this document is not applicable to the assessment of uncertainty components related to system errors and their corrections for quantitative detection of food microorganisms.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB 4789.2 National food safety standard Food microbiology examination Determination of total colony count

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1

Sample

A single or multiple individuals (or a certain proportion) extracted from a population (or a large amount of material) according to a certain rule and representing the overall information.

Materials), under certain circumstances, can be used as a basis for determining the overall situation or its production process.

3.1.2

Laboratory sample Samples sent to the laboratory for testing (3.1.1).

3.1.3

Test sample Tests sample Samples prepared according to the method standard using laboratory samples (3.1.2).

3.1.4

Test portion Weigh or pipette a representative amount (mass or volume) of the test sample (3.1.3) to prepare the initial dilution.

The product is homogenized.

Note: For liquid samples, a certain amount of representative stock solution can be selected as the test portion.