

ICS 67.050
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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 2102.1-2008

**Polymerase chain reaction(PCR)for the detection of food-borne
pathogens-Part 1: General requirements and definitions**

食源性病原体PCR检测技术规范 第1部分：通用要求和定义

(English Translation)

Issued on: July 17, 2008

Implemented on: February 1, 2009

**Issued by: The General Administration of Quality Supervision, Inspection
and Quarantine**

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Foreword

SN/T 2102 "Technical Specifications for PCR Detection of Foodborne Pathogens" is divided into four parts.

- Part 1. General requirements and definitions;
- Part 2. PCR test performance test requirements;
- Part 3. Qualitative testing methods for sample preparation requirements;
- Part 4. Qualitative detection methods for amplification and testing requirements.

This part is the first part of SN/T 2102.

This part is equivalent to ISO 22174:2005 "Food and animal feed microbiology food-borne pathogens PCR detection common Summation definition, and made the following editorial changes.

- Modified the "Foreword" and "Introduction";
- The description of the "normative reference document" was modified in accordance with the requirements of GB/T 1.1;
- Change some of the "notes" in the standard to the body according to the Chinese standard;
- Replace the international standards in the standard with the corresponding national standards or industry standards, such as. GB/T 27025 instead of ISO 17025;
- Change "Warning" to "Security Requirements and place it at the end of the standard".

This part is proposed and managed by the National Certification and Accreditation Administration.

This part is from the Shanxi Entry-Exit Inspection and Quarantine Bureau of the People's

Republic of China, Shanghai Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Chinese people Inner Mongolia Entry-Exit Inspection and Quarantine Bureau, Jiangsu Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, and entry and exit of Liaoning Province of the People's Republic of China the Inspection and Quarantine Bureau is responsible for drafting.

Introduction

Polymerase chain reaction (PCR) has the advantages of rapidity, sensitivity and specificity. PCR is used to detect foodborne microorganisms.

The law has developed very rapidly in recent years.

PCR technology can be divided into DNA amplification (reverse transcription PCR) and RNA amplification (PCR) depending on the type of target nucleic acid to be amplified.

Based on the above two types of PCR technologies, a variety of PCR detection techniques have been developed and derived.

ISO 22174:2005, by the European Committee for Standardization (CEN) Food Analysis - Level Method Technical Committee (CEN/T C275) and the Food Products Technical Committee (ISO/T C34) Microbiological Subcommittee (SC9) is jointly developed in accordance with the ISO and CEN Technical Cooperation Agreement.

This section is equivalent to ISO 22174:2005, which is the first part of the "Technical Specifications for PCR Detection of Foodborne Pathogens". Food source General requirements for in vitro PCR amplification and detection of sexual pathogens and to ensure comparability and reproducibility of test results from different laboratories.

SN/T 2102.1-2008/ISO 22174:2005 Technical specification for PCR detection of foodborne pathogens Part 1. General requirements and definitions

1 Scope

This part of SN/T 2102 specifies the general requirements for in vitro nucleic acid sequence (DNA or RNA) amplification. Provision for testing food and food PCR method for pathogens in product isolates.

This section applies to the detection of pathogens in food and feed, as well as to other samples (such as environmental samples) and non-pathogenic microorganisms.

2 Normative references

The terms in the following documents become the provisions of this part by reference to this part of SN/T 2102. For dated references, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, an agreement is reached

under this section.

The parties studied whether the latest version of these documents could be used. For undated references, the latest edition applies to this section.

General requirements for GB/T 27025 testing and calibration laboratory capabilities
Detecting of food-borne pathogens - Part 3. Qualitative test methods SN/T 2102.4 Technical specification for detection of foodborne pathogens - Part 4. Qualitative method Application of Polymerase Chain Reaction (PCR) Technology in WS/T 230 Clinical Diagnosis

3 Terms and definitions

The following terms and definitions apply to this part of the SN/T 2102.

3.1 General terminology

3.1.1

A biological macromolecule that acts as a genetic information medium or an information expression factor. Nucleic acids are available in both DNA and RNA types.

3.1.2

A deoxyribonucleotide polymer in the form of a double strand or a single strand.

3.1.3

A ribonucleotide polymer in the form of a double strand or a single strand.

3.1.4

Samples for analysis that may differ in chemical composition or physical state.

3.1.5

The same operator used the same instrument and method in the same laboratory to obtain independent results in shorter time intervals.

3.1.6

Different operators use different instruments and the same method in different laboratories to test the conditions of the same project to obtain test results.

SN/T 2102.1-2008/ISO 22174:2005