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

**GB/T 40392-2021**

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**Detection of Legionella in circulating cooling water**

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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 of Standardization Documents"

Drafting.

This document is drafted with reference to ISO 11731.2017 "Counting of Legionella in Water Quality", and the degree of consistency is non-equivalent.

### 1 Scope

This document specifies the detection method for Legionella in circulating cooling water.

This document applies to the detection of Legionella in circulating cooling water, as well as Legionella in raw water, domestic water, other industrial water and wastewater.

Bacteria detection.

### 2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 6682-2008 Analytical laboratory water specifications and test methods

GB/T 27403 Laboratory Quality Control Specification Food Molecular Biology Testing

GB/T 27405 Laboratory Quality Control Specification for Food Microbiological Testing

### 3 Terms and definitions

The following terms and definitions defined in GB/T 27405 apply to this document.

#### 3.1

Legionella

A general term for a class of gram-negative bacilli, with blunt ends, flagella, no spores and capsules, and has the ability to contain L-cysteine and trivalent iron

The characteristics of growth on activated charcoal-yeast extract (BCYE) medium with salt buffer.

[Source: ISO 11731.2017, 3.1]

#### 3.2

Legionella pneumophila Legionellaneumophila; Lp

A pathogenic Legionella identified by biochemical tests and serological tests is the main bacterial type that causes Legionnaires' disease.

### 4 General

The testing specified in this document should comply with GB/T 27403 and should be completed in the secondary biosafety protection laboratory (BSL-2).

Bacteria samples and culture media should be treated in a harmless manner.