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

GB/T 18204.5-2025

Replacing GB/T 18204.5-2013

**Examination methods for public places - Part 5: Central air
conditioning and ventilation systems**

公共场所卫生检验方法 第5部分：集中空调通风系统

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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 is part 5 of GB/T 18204 "Test methods for hygiene in public places". GB/T 18204 has been published in the following parts.

1.Physical properties;

2.Chemical properties;

3.Air microbial indicators;

4.Microbiological indicators for public supplies and utensils;

5.Central air conditioning and ventilation systems;

6.Technical specifications for health monitoring. This document replaces GB/T 18204.5-2013 "Public Place Hygiene Inspection Methods Part

5.Central Air Conditioning and Ventilation Systems" and Compared with GB/T 18204.5-2013, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) The scope of application has been changed (see Chapter 1, Chapter 1 of the.2013 edition);

b) Added the terms and definitions of "Legionella pneumophila", "total bacterial count", "total fungal count" and "beta-hemolytic Streptococcus" (see

c) Added the quantitative detection method for *Legionella pneumophila* and the rapid detection method of fluorescent polymerase chain reaction (PCR) (see

d) The microbial detection method for the inner surface of air-conditioning ducts has been changed (see Chapter 5, Chapter 6, and Chapter 11 of the 2013 edition). Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed and coordinated by the National Center for Disease Control and Prevention. This document was drafted by: Institute of Environmental and Health-related Product Safety, Chinese Center for Disease Control and Prevention, Inner Mongolia Autonomous Region Center for Disease Control and Prevention Center, Chinese Center for Disease Control and Prevention, Jiangsu Provincial Center for Disease Control and Prevention, Shenzhen Center for Disease Control and Prevention. The main drafters of this document are: Yao Xiaoyuan, Pan Lijun, Gao Sheng, Wang Zhe, Ding Zhen, Yu Shuyuan, Zhang Wei, Li Yunpu, Zheng Lei, Yan Xu, Shi Xiaolu, Yang Wenjing, Ye Dan, and Zhang Yujing. The previous versions of this document and the documents it replaces are as follows:

---First published in 2013 as GB/T 18204.5-2013;

1 Scope

GB/T 18204.5-2025 is the Chinese national standard on examination methods for public places - part 5: central air conditioning and ventilation systems, in the field of environment and health protection, safety. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 May 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2025. Classification: ICS 13.060, CCS C51. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the presence of *Legionella pneumophila*, total bacteria count, total fungus count, and beta-hemolytic enzymes in the central air conditioning and ventilation systems of public places. *Streptococcus pneumoniae*, fresh air volume, inhalable particulate matter (PM₁₀) in air-conditioning supply, dust accumulation on the surface of air-conditioning ducts, and air purification and disinfection devices Test method. This document is applicable to central air-conditioning and ventilation systems in public places, and the central air-conditioning and ventilation systems used in other places shall be implemented for reference.

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 4789.28 National food safety standard Quality requirements for culture media and reagents for food microbiology testing

GB/T 6682 Specifications and test methods for water used in analytical laboratories

GB/T 18204.1 Public place hygiene inspection methods Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Gram-negative rods with blunt ends, flagella, no spores and capsules, and have the ability to survive in a buffer containing L-cysteine and trivalent iron salts. *Legionella* spp. is a pathogenic bacterium that has been identified by biochemical and serological tests.

Bacteria are the main type of bacteria that cause Legionnaires' disease. [Source: GB/T 40392-2021, 3.2, modified]

3.2 Total bacterial count The growth of mesophilic aerobic and facultative anaerobic bacterial colonies on nutrient agar medium at $36^{\circ}\text{C}\pm 1^{\circ}\text{C}$ for 48h total.

3.3 Total fungal count The number of colonies formed on Sabouraud agar medium after cultivation at $28^{\circ}\text{C}\pm 1^{\circ}\text{C}$ for 3d~5d.