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

GB/T 25915.15-2022

**Cleanrooms and associated controlled environments - Part 15:
Assessment of suitability for use of equipment and materials by
airborne chemical concentration**

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Standardization Administration**

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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 15 of GB/T 25915 "Clean Rooms and Related Controlled Environments". GB/T 25915 has issued the following

part.

- Part 1. Classification of air cleanliness by particle concentration;
- Part 2. Monitoring of air particle concentration in clean rooms;
- Part 3. Detection methods;
- Part 4. Design, construction, start-up;
- Part 5. Operation;
- Part 6. Vocabulary;
- Part 7. Isolation device (clean air hood, glove box, isolator, micro-environment);
- Part 8. Classification of air cleanliness (ACC) grades by chemical concentration;
- Part 9. Classification of surface cleanliness by particle concentration;
- Part 10. Classification of surface cleanliness by chemical concentration;
- Part 12. Technical requirements for monitoring the concentration of nanoparticles in the air;
- Part 13. Surface cleaning to meet particle and chemical cleanliness requirements;

--- Part 14.Evaluation of equipment suitability by particle concentration;

--- Part 15.Evaluate the suitability of equipment and materials according to the concentration of gaseous chemicals.

This document is identical to ISO 14644-15:2017 "Clean rooms and related controlled environments - Part 15.Assessment by concentration of gaseous chemicals

Suitability of Equipment and Materials".

The following minimal editorial changes have been made to this document.

---Corrected the symbol meaning error in Table 1, and "x is related to the specific index related to the detection target" and "x is related to the evaluation target" in the table

The number of" is merged and revised to "x the area of testing materials or the number of testing equipment".

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

GB/T 25915 adopts the ISO 14644 series of international standards, and the settings of each part are consistent with the international standards. It is proposed to be composed of 15 parts

constitute.

--- Part 1.Classification of air cleanliness by particle concentration. The purpose is to differentiate the degree of particle contamination.

--- Part 2.Monitoring of air particle concentration in clean rooms. The purpose is to guide the monitoring of particle contamination to avoid possible contamination

risk.

--- Part 3.Detection method. The purpose is to guide the detection of various pollution and related environmental elements in the clean room.

--- Part 4.Design, construction, start-up. The purpose is to guide the design, construction and start-up of clean rooms.

--- Part 5.Operation. The purpose is to guide the operation of the clean room.

--- Part 6.Vocabulary. The purpose is to unify and standardize technical terms.

--- Part 7.Isolation device (clean air hood, glove box, isolator, micro-environment). The aim is to propose the basis for isolators for cleanrooms

This requirement.

--- Part 8. Classification of air cleanliness (ACC) by chemical concentration. The purpose is to distinguish the degree of air chemical pollution.

--- Part 9. Classification of surface cleanliness by particle concentration. The purpose is to differentiate the degree of surface particle contamination.

--- Part 10. Classification of surface cleanliness by chemical concentration. The purpose is to differentiate the degree of chemical contamination of the surface.

--- Part 12. Technical requirements for monitoring the concentration of nanoparticles in the air. The aim is to propose the detection of particle contamination at the nanoscale

Require.

--- Part 13. Surface cleaning to achieve particle and chemical cleanliness requirements. The purpose is to put forward the cleaning requirements for the surface of the clean room to

Avoid the risk of possible particle and chemical contamination.

--- Part 14. Assessment of equipment suitability by particle concentration. The purpose is to pass the relevant equipment that may generate particle contamination in the clean room

A test to determine the suitability of the device.

--- Part 15. Evaluate the suitability of equipment and materials according to the concentration of gaseous chemicals. The purpose is to make possible

Tests for gaseous chemical contamination in clean rooms to determine the suitability of equipment and materials.

--- Part 16. Improve the energy efficiency of clean rooms and air purification devices. The aim is to save energy consumption in clean room operation.

Cleanrooms and associated controlled environments provide contamination control at levels appropriate for operations sensitive to contaminants. Pollution control is good for aviation

Products and processes in industries such as aerospace, microelectronics, optics, nuclear energy and life sciences (pharmaceuticals, medical devices, food, medical).

This part uses the classification of air cleanliness according to the concentration of chemicals to evaluate the suitability of equipment in clean rooms and related controlled environments.

Appendices A, B, and C give examples of applicability assessments.

Cleanrooms and related controlled environments

Part 15. Assessment by concentration of gaseous chemicals

Suitability of equipment and materials

1 Scope

This document specifies requirements and provides guidance for assessing the suitability of equipment and materials for use in cleanrooms and related controlled environments.

This document does not apply to the following.

- Health and safety requirements;
- Compatibility of cleaning agents and cleaning technologies;
- cleanliness;
- Biological contamination;
- Process and product specific requirements for equipment and materials;
- Design details of the equipment.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

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

this document.

GB/T 25915.8-2021 Clean rooms and related controlled environments Part 8.Classification of air cleanliness by chemical concentration (ACC)

Class (ISO 14644-8.2013, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

Any non-particulate chemical substance present in the air whose chemical properties may adversely affect products, processes, and equipment.

[Source. GB/T 25915.8-2021, 3.1.3, modified]

3.2

Expressed in ISO -ACC, it represents the maximum allowable concentration in grams per cubic meter for a given chemical species or group of chemicals.