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

GB/T 33715-2025

Replacing GB/T 33715-2017

**Nanotechnologies - Health and safety practices in occupational
settings**

纳米技术 职业场所健康和安全指南

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 33715-2017 "Guidelines for Occupational Health and Safety in Nanotechnology Workplaces". (The document is consistent with GB/T 33715-...) Compared to 2017, the main technological changes are as follows.

- a) Added "abbreviations" (see Chapter 4);
- b) Added "Manufacturing of nanomaterials" (see 5.1);
- c) Section 5.1.1 "Carbon-containing nanomaterials" has been deleted (see 5.1.1 in the 2017 version);
- d) An "Overview" section has been added (see 7.1);
- e) A new exposure route, "injection/parenteral route," has been added (see 7.2.1);
- f) An overview and related updates have been added (see 7.3.1);
- g) Added "Dust Assessment," "Dose Assessment (Internal Exposure)," "Discussion," and "Summary" (see 7.4, 7.6, 7.7, 7.8);
- h) Added content such as "Challenges in establishing and implementing NOAA's specific OELs" (see 8.2.2);

- i) Added content such as "Release Scenario" and "Release Recognition" (see 8.2.5);
- j) Added content such as "Control Strategy" (see 9.2.2);
- k) Added "Ventilation and General Methods" and "Personal Breathing Zone Sampling. Statistical" (see 9.3.5.2, 9.3.7.3).

This document is equivalent to ISO/T R12885.2018 "Occupational health and safety guidelines for nanotechnology workplaces", and the document type is changed from [previous document type].

ISO technical reports have been adapted into my country's national standards.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Chinese Academy of Sciences.

This document is under the jurisdiction of the National Technical Committee on Standardization of Nanotechnology (SAC/TC279).

Introduction

The rapid development of nanotechnology has impacted all aspects of global industry and social life. It has contributed to economic development and improved living standards.

The international standardization of nanotechnology contributes to promoting human progress and sustainable development by improving and protecting public health and the environment.

Many new nanomaterials will enter the market and workplaces. These new materials will pose potential occupational safety and health risks to workers in related fields.

Risks. This document summarizes practical information on occupational safety and health regulations related to nanotechnology. Using the information in this document can help...

Helping companies, researchers, workers, and others prevent the production, handling, use, and removal of man-made nanoobjects and their aggregations larger than 100 nm.

Potential health and safety risks during the process of forming bodies and aggregates (NOAA).

This document is based on existing nanotechnology information, including characterization, health effects, exposure assessment, and control measures. As technology advances...

As knowledge and experience grow and develop throughout the process, this document will be revised and updated, and new safety standards will be established.

Nanotechnology involves materials at the nanoscale. "Nanoscale" refers to dimensions ranging from 1 nm to 100 nm (ISO/TC).