



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

GB 51459-2024

**Technical standard of sewage treatment engineering for
medical institution**

医疗机构污水处理工程技术标准

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Foreword

This document was issued on 8 May 2024 by the Ministry of Housing and Urban-Rural Development of the PRC and the State Administration for Market Regulation and takes effect on 1 September 2024.

It is a GB standard without the /T suffix: compliance is mandatory in China.

The document runs to 112 pages. The identification, the dates, the classification and the table of contents on this page are taken from the cover and the printed contents of the standard itself.

This standard was approved by the Ministry of Housing and Urban-Rural Development of the PRC under Announcement No. 81 of 2024 and takes effect on 1 September 2024.

Its editing department is the National Health Commission of the PRC.

Clauses 1.0.4, 3.0.4, 3.0.6, 5.0.9, 7.2.5 and 11.1.8 are mandatory provisions and must be strictly complied with; they are printed in bold in the standard.

1 Scope

GB 51459-2024 is the Chinese technical standard for sewage treatment works at medical institutions, and it carries mandatory provisions that must be strictly complied with. Hospital sewage is not ordinary wastewater: it can carry pathogens at concentrations that make discharge a public health event, it carries pharmaceutical residues and disinfectants that poison a biological process, and from nuclear medicine departments it carries radioactive isotopes that must be held for decay before release. The standard addresses each of those. It sets the basic requirements, the design water quantity and quality, the sewage collection arrangements, including the mandatory separation of rainwater from sewage and the

prohibition on reusing roof and ground rainwater at infectious disease institutions; then the treatment of special medical sewage, radioactive and other; the treatment technology flow and facilities; the disinfection, by ozone, ultraviolet or other disinfectants; the sewage treatment station itself, its site selection and setting requirements; the treatment and disposal of sludge and waste gas; the construction, civil and mechanical; the acceptance and commissioning; and the operation management, monitoring and control, and safety and emergency management. Three appendices give the acceptance divisions, the quality control data and the commissioning records. It applies to new, extended and rebuilt works.

2 Terms and symbols

Clause 2 is organised as follows: 2.1 Terms; 2.2 Symbols.

4 Water quantity and quality

Clause 4 is organised as follows: 4.1 Design water quantity; 4.2 Design water quality.

6 Special medical sewage treatment

Clause 6 is organised as follows: 6.1 Radioactive sewage; 6.2 Other sewage.

7 Treatment technology and facilities

Clause 7 is organised as follows: 7.1 Technology flow; 7.2 Treatment facilities.

8 Disinfection

Clause 8 is organised as follows: 8.1 General requirements; 8.2 Ozone disinfection; 8.3 Ultraviolet disinfection; 8.4 Other disinfectants.

9 Sewage treatment station of a medical institution

Clause 9 is organised as follows: 9.1 General requirements; 9.2 Site selection; 9.3 Setting requirements.

10 Treatment and disposal of sludge and waste gas

Clause 10 is organised as follows: 10.1 Sludge treatment and disposal; 10.2 Waste gas collection and treatment.

11 Construction

Clause 11 is organised as follows: 11.1 General requirements; 11.2 Civil construction; 11.3 Installation of equipment and pipelines.

13 Operation management and safety protection

Clause 13 is organised as follows: 13.1 Operation management; 13.2 Monitoring and detection control; 13.3 Safety and emergency management.

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