



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

GB/T 51457-2024

**Technical standard for architectural design of clean nursing
and isolation units in hospitals**

医院洁净护理与隔离单元建筑技术标准

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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/T standard: recommended rather than compulsory, but it is the text a Chinese

reviewer applies.

The document runs to 83 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 and takes effect on 1 September 2024.

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

It defines three unit types: the intensive care unit; the infection-prone patient nursing unit, for haematopoietic stem cell transplant, severe combined immunodeficiency and burns patients whose immunity is extremely low; and the negative pressure clean isolation unit.

1 Scope

GB/T 51457-2024 is the Chinese technical standard for the architecture of clean nursing and isolation units in hospitals, covering the three ward types where air is the treatment: the intensive care unit; the infection-prone patient nursing unit, built for haematopoietic stem cell transplant, severe combined immunodeficiency and major burns patients, where the air must be clean enough to protect a patient with no immune defence of their own; and the negative pressure clean isolation unit, where the same discipline is applied in reverse to keep an airborne pathogen inside the room. The standard sets the classification and zoning of these units, then the architectural layout and decoration for each type, then the air cleaning and air conditioning systems for each type, which is the longest part of the document and carries the pressure regimes, airflow patterns, filtration, air change rates and airlock arrangements on which everything else depends. It then sets the guarantee and support systems, water supply and drainage, medical gas, electrical and fire protection, and the acceptance and maintenance, covering construction and testing, project acceptance and maintenance management. Three appendices give the basic ward equipment, the comprehensive performance test method and the acceptance items. It applies to the design, construction, acceptance and maintenance of new, extended and rebuilt units.

4 Architectural layout and decoration

Clause 4 is organised as follows: 4.1 General requirements; 4.2 Intensive care unit; 4.3 Infection-prone patient nursing unit; 4.4 Negative pressure clean isolation unit.

5 Air cleaning and air conditioning system

Clause 5 is organised as follows: 5.1 General requirements; 5.2 Intensive care unit; 5.3 Infection-prone patient nursing unit; 5.4 Negative pressure clean isolation unit.

6 Guarantee and support systems

Clause 6 is organised as follows: 6.1 Water supply and drainage; 6.2 Medical gas; 6.3 Electrical; 6.4 Fire protection.

7 Acceptance and maintenance

Clause 7 is organised as follows: 7.1 Construction and testing; 7.2 Acceptance of the project; 7.3 Maintenance and management.