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

SN/T 2497.25-2010

**Test method of import and export dangerous chemicals. Part
25: Determination of humoral immune function**

进出口危险化学品安全试验方法 第25部分：体液免疫功能试验

(English Translation)

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Foreword

SN/T 2497 "Import and export of dangerous chemicals safety test method" series of standards is divided into 29 parts.

Part 1. In vitro mammalian hepatocyte programmed DNA synthesis (UDS) test;

- Part 2. Plaque - forming cells (PFC) test;

- Part 3. Large breeding test;

Part 4. *Saccharomyces cerevisiae* mitotic recombination test;

- Part 5. Testicular cell UDS test;

- Part 6. mammalian cells, sister chromatid exchange, in vitro test;

- Part 7. Mouse ear swelling test;

- Part 8. Lymph node test;

- Part 9. Determination of serum hemolysin;

- Part 10. T lymphocyte proliferation assay;

- Part 11. Germline mutation test;

- Part 12. Single cell gel electrophoresis analysis;

- Part 13. Fluorescence in situ hybridization test;

- Part 14. SDS - polyacrylamide gel electrophoresis test;

- Part 15. PCR-SSCP experiment;

- Part 16. Western-Blot experiment;

- Part 17. Mammalian behavior toxicology test;
- Part 18. Methods for the detection of DNA adducts;
- Part 19. NorthernBlot experiment;
- Part 20. Determination of protein content by Bradford method;
- Part 21. Agarose gel electrophoresis test;
- Part 22. Method for determining the T_m value of DNA;
- Part 23. Method for separation of organelles;
- Part 24. Methods for in vitro detection of cellular immune function;
- Part 25. humoral immune function test;
- Part 26. Macrophage function test;
- Part 27. Detection of apoptosis by flow cytometry;
- Part 28. Application of shuttle plasmids in mutation testing;
- Part 29. Determination of biochemical oxygen demand (BOD).

This section is part 25 of the SN/T 2497 series of standards.

This part of the revised use of "toxicology experimental methods and techniques" in the immunotoxicology research methods, the relevant technical content and the above method Exactly the same, in the standard text format by GB/T 1.1 made editorial changes.

This part of the State Certification and Accreditation Administration Committee proposed and centralized.

This part is responsible for the drafting unit. the People's Republic of China Tianjin Entry-Exit Inspection and Quarantine Bureau, the People's Republic of China Hunan Entry and Exit Inspection Epidemic situation.

1 Scope

This part of the SN/T 2497 specifies the test principle of the humoral immune function test in the Import and Export Hazardous Chemical Safety Test, Law and test results.

This part is applicable to the humoral immune function test for the detection of the immunotoxicity of imported and exported hazardous chemicals.

2 Normative reference documents

The terms of this document are hereby incorporated by reference in this part of SN/T 2497. Any reference to the date of the text , All subsequent amendments (excluding corrigenda)

or revisions do not apply to this part, however, encouragement under this section the parties to the agreement study whether the latest version of these documents can be used. For undated references, the latest edition of this document applies section.

GB 14924.1 General quality standards for laboratory animal feed Laboratory Animal Environment and Facilities

3 Terms and definitions

The following terms and definitions apply to this section.

Means that the sensitized body is in contact with the same allergen, causing self-tissue damage and/or physiological dysfunction. Hypersensitivity is an abnormal or pathological immune response.

According to the mechanism of hypersensitivity reaction, it can be divided into I, II, III, IV type, which type I hypersensitivity is also known as allergic reaction.

The antigen that causes the hypersensitivity is called the allergen.

4 Test principle

In type I hypersensitivity, the allergen for the first time into the body, to stimulate the plasma cells produce IgE, IgE Fc and mast cells or basophilic the FcepsilonR binding of the granulocyte surface allows IgE to adsorb on the surface of these cells, which is the stage of sensitization. When the same allergen is re-entered Sensitized cells, can be adsorbed on the surface of these cells in the IgE binding, causing a series of reactions, so that these cells release histamine and other biological activity Sexual medium, caused by the onset of type I allergic reactions, that is, sensitive stage. Histamine is a major bioactive medium, its rapid release, can expand Zhang small blood vessels and increase capillary permeability, stimulate smooth muscle contraction, promote mucosal gland secretion increased; lead to decreased blood pressure, difficulty breathing, Abdominal pain, and even cause anaphylactic shock, leading to death.

5.1 Test animals

Adult healthy guinea pigs. Test animal feeding conditions should comply with the relevant provisions of GB 14924.1 and GB 14925.