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

SN/T 2497.1-2010

**Test method of import and export dangerous chemicals. Part 1:
Unscheduled DNA synthesis (UDS) test with mammalian liver
cells in vivo**

进出口危险化学品安全试验方法 第1部分：体内哺乳动物肝细胞程序外DNA合成(UDS)试验

(English Translation)

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Foreword

SN/T 2497 "Test Methods for Chemical Safety & Exports dangerous" series of standards is divided into 29 parts.

--- Part 1. mammalian liver cells in vivo DNA synthesis (UDS) test;

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

--- Part 3. Large Zhuan reproduction test;

--- Part 4. *Saccharomyces cerevisiae* mitotic recombination test;

--- Part 5. testicular cells UDS test;

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

--- Part 7. mouse ear swelling test;

Part --- Article 8. fossa lymph node assay;

--- Part 9. Determination of serum hemolysin test;

Part --- Article 10. T lymphocyte proliferation assay test;

--- Part 11. germline mutation assay;

--- Part 12. single cell gel electrophoresis test;

--- Part 13. fluorescence in situ hybridization;

--- Part 14. SDS- polyacrylamide gel electrophoresis.

--- Part 15. PCR-SSCP experiment;

Part --- Article 16. Western-Blot test;

--- Part 17. Behavior of mammalian toxicology tests;

--- Part 18. Detection of DNA adducts;

- Part 19. NorthernBlot experiment;
- Part 20. Bradford protein assay;
- Part 21. agarose gel electrophoresis;
- Part 22. T_m value determination method of DNA;
- Part 23. organelle separation experimental methods;
- Part 24. cellular immunity in vitro assay method;
- Part 25. humoral immune function tests;
- Part 26. macrophage function tests;
- Part 27. Flow cytometry of apoptosis;
- Part 28. Application shuttle plasmid mutations Inspection;
- Part 29. Biochemical Oxygen Demand (BOD) was measured.

This section SN/T 2497 Part 1.

The partial modification of the use of the Organization for Economic Cooperation and Development (OECD) Chemicals testing guidelines NO. 486 (1997) "in vivo mammalian hepatocytes Outside the cellular DNA synthesis (UDS) test ", the technical content and the method described above exactly the same, in a standard text format press GB/T 1.1-2000 made editorial changes.

This section proposed and managed by the National Certification and Accreditation Administration Committee.

This section is responsible for drafting unit. People's Republic of China Tianjin Entry-Exit-Entry Inspection and Hunan People's Republic of China Quarantine Bureau.

1 Scope

SN/T 2497 provisions of this part of the import and export of hazardous chemicals in vivo mammalian hepatocyte unscheduled DNA synthesis (UDS) test Terms and definitions, test principle, test procedures and test results.

This section applies to the import and export of hazardous chemicals in vivo mammalian hepatocyte unscheduled DNA synthesis (UDS) test for detection.

2 Normative references

The following documents contain provisions which, through reference SN/T 2497 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this

section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

OECD486 mammalian liver cells in vivo unscheduled DNA synthesis (UDS) test

3 Terms and Definitions

OECD486 established as well as the following terms and definitions apply to this section.

Active quantitative determination, calculation of radiation from the developing UDS UDS test cell nuclear silver grains (NG) is equal to minus nuclear area the average number of silver particles within the cytoplasm (CG), namely NNG. NG-CG. NNG calculated by the number of cells, and then a parallel culture or cultures the cell NNG summary.

Silver Net nuclear grain (NNG) higher than the cells of the laboratory historical negative control values.

After the removal of DNA containing caused by chemical substances or physical damage to a section of DNA, carried out repair synthesis.

4 Test principle

Mammalian liver cells in vivo unscheduled DNA synthesis (UDS) purpose of the test is to identify infected animals can induce liver cells DNA repair materials.

In vivo test provides a research chemical liver toxicity effect of genetic methods, the end of the test showed that the liver cells DNA Damage and Repair ensued. The liver is the main organ of the body's metabolism of chemicals absorbed, so the liver is the in vivo detection of DNA damage Suitable injury site.

After the chemical or physical factors induce DNA damage, cell unscheduled DNA synthesis start procedure to excise or remove DNA damage in area Domain, UDS test in vivo mammalian liver cells is to detect damaged DNA repair synthesis. Liver cell cycle in the S phase frequency