

ICS 13.300
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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

SN/T 2497.15-2010

**Test method of import and export dangerous chemicals. Part
15: Test of PCR-SSCP**

进出口危险化学品安全试验方法 第15部分：PCR-SSCP实验
(English Translation)

Issued on: March 2, 2010

Implemented on: September 16, 2010

Issued by: General Administration of Customs

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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 --- Article 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 is Part 15 SN/T 2497 series of standards.

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 main reagents and materials import and export of hazardous chemicals PCR-SSCP experiments, the main instruments provided Equipment, test procedures and test results.

This section applies to screening DNA fragments can cause mutation of the import and export of hazardous chemicals.

2.1 Terms and Definitions

The following terms and definitions apply to this section.

2.1.1

Since the change of base pairs of DNA molecules increase occurs, deletions, or changes caused by gene structure.

2.2 Acronyms

The following abbreviations apply to this section.

2.2.1

PCR polymerase chain reaction 2.2.2 SSCP single strand conformation polymorphism

2.2.3 TEMEDN, N, N', N'- tetramethylethylenediamine Principle 3 Single-stranded DNA

fragments form a complex space-sheet conformation, this three-dimensional structure is mainly within the interior of its base-pairing interactions and other molecules Hard to maintain when there is a change in the base, it will more or less affect its conformation, so that conformational changes, spatial conformation Single-stranded DNA molecule that is different from the difference in size exclusion polyacrylamide gel. Therefore, non-denaturing polyacrylamide gel electrophoresis it can be very sensitive to the differences in the molecular conformation separated. The method for the single-strand conformation polymorphism analysis. For checking the SSCP PCR products amplified gene mutation, namely PCR-SSCP technique.

4 Reagents and materials

Unless otherwise specified, all reagents were of analytical grade, sterile distilled water was used or ultrapure water.

4.1 30% Acrylamide. Acrylamide 29g, N, N'- methylene bisacrylamide 1g, add distilled water to 60mL, heated to 37 [deg.] C to dissolve, Additional water to a final volume of 100mL, filter sterilized.

4.2 5 x TBE. 54gTris base, 27.5g boric acid, 20mL0.5mmol/LEDTA, adjusting the pH to 8.0.

4.3 10% ammonium persulfate. 1g ammonium persulfate was dissolved in 10mL of water, 4 °C stored for several weeks.

4.4

TEMED.

4.5 6 x sample loading buffer. 0.25% bromophenol blue, 0.25% xylene green FF, 30% glycerol solution, 4 °C preservation.