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

SN/T 2497.20-2010

**Test method of import and export dangerous chemicals. Part
20: Determination of protein content using Bradford method**

进出口危险化学品安全试验方法 第20部分：Bradford法测定蛋白质含量
(English Translation)

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Table of Contents

Foreword
1 Scope
3 Reagents
3.1 Water
3.2 Coomassie blue solution
4 Test Procedure
4.1 Standard curve
4.2 Testing Samples
5 Results

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 20 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 import and export of dangerous chemicals test measuring protein content of the test method of Bradford test Test sample solution and test procedures.

This section applies to the determination of protein content in the import and export of dangerous chemicals test Bradford method.

Principle 2

Coomassie Brilliant Blue G-250 dye in an acidic solution and protein binding, so that the position of the maximum absorption peak of the dye by 465nm change is 595nm, the color of the solution is also dark brown to blue. Measured at 595nm absorbance A₅₉₅, and the concentration of protein it is proportional.

3.1 Water

This part of the test method involves water are sterilized distilled water.

3.2 Coomassie blue solution

He said after 100mg Coomassie Brilliant Blue G-250, dissolved 50mL95% ethanol, then add 120mL85% phosphoric acid, diluted with water to 1L, filter paper, 4 °C preservation.

3.3 bovine serum albumin (BSA) solution of Formulated as a 1.0mg/mL solution using standard protein g- globulin or bovine serum albumin (BSA).

4.1 Standard curve

Standard protein solution 1.0mg/mL were added to each tube. 0mL, 0.01mL, 0.02mL, 0.04mL, 0.06mL, 0.08mL, 0.1mL, with deionized water and then added to 0.1mL, various concentrations of two parallel samples. Finally, each tube respectively Added 5.0mL Coomassie Brilliant Blue G-250 reagent, Shakers, standing 2min. Each sample was measured at 595nm on a spectrophotometer the absorbance A595. With a standard amount of protein (mg) as abscissa, with A595 absorbance as ordinate plotted to obtain a standard curve.

4.2 Testing Samples

Take a suitable volume of sample solution (protein content within the standard curve range) and add water to make up to 0.1mL, 3 parallel samples. Join 5mL Coomassie brilliant blue solution, oscillation mixing at room temperature for 2min. Each sample was measured in the light absorption at 595nm on a spectrophotometer Value A595.

5 Results

According to the measured value of A595 unknown samples in the standard curve to find out if the protein content of the unknown sample.