

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

SN/T 4151-2015

**Chemicals--Test method for bioaccumulation in terrestrial
oligochaetes**

化学品 陆生寡毛类的生物蓄积试验

(English Translation)

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Foreword

This standard and the United Nations Organization for Economic Co-operation and Development (OECD) Chemical Testing Guide No. 317 "Bioaccumulation of terrestrial oligochaetes" (2010.7) (English version) The technical content is the same.

Compared with the OECD Chemical Test Guide No. 317, the main changes are as follows.

--- Edited changes to the OECD Chemical Test Guide No. 317.

--- Change the introduction to an introduction;

--- Added a preface;

--- Added a chapter of scope;

--- Transfer the contents of Appendix 1 to the terms and definitions section;

---Adjusted the order of the appendix;

--- Remove the OECD reference section.

This standard is proposed and managed by the National Certification and Accreditation Administration.

This standard was drafted. Tianjin Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Ningbo Entry-Exit Inspection of the People's Republic of China Epidemic situation.

Introduction

In the OECD Test Guide, methods for testing the bioaccumulation of environmentally hazardous chemicals include. water flow published in 1996.

Fish test (TG305) and the marine oligochaete bioaccumulation test (TG315) published in 2008. But enriched data on aquatic organisms it is inferred that the enrichment of terrestrial organisms (such as ticks) is still difficult. Currently, the bioaccumulation assessment of

chemicals in soil is based on it is implemented by a model calculation method for compound lipophilicity, such as the EU Technical Guidance Document.

In addition, the evaluation of secondary poisoning in the terrestrial food chain is also particularly important, the special compartment test method (compartment-specific test Method) can meet the needs of this test evaluation. Some international methods that use other organisms other than fish to solve the richness of living organisms Set problems, such as the use of the American Society for Testing and Materials (Eusebia) Fetida, Savigny) and pot worms test experimental methods for bioaccumulation of contaminated soils. An internationally recognized standard for the determination of soil the bioaccumulation test method will help improve the chemical risk assessment of terrestrial ecosystems.

In zopic invertebrates exposed directly to the soil matrix, terrestrial oligochaetes play an important role in maintaining soil structure and function.

use. Terrestrial oligochaetes live in soil and are partially distributed on soil surfaces (especially litter layers), which are usually the most abundant in soil.

Representative of biomass (biomass). By conducting soil bioturbations and preying on other animals, such animals are against other organisms such as invertebrates.

The bioavailability of (predatory crickets and beetles) or vertebrate carnivores (foxes and seagulls) is enormous.

Laboratory soil toxicity and bioaccumulation Lu (LumbricidEarthwormEiseniafetida) and (Enchytraeid PotwormEnchytraeusalbidus) ASTM test guidance provides a lot of weight for the operation of current soil bioaccumulation test methods Want and useful details. Practical experience and soil bioaccumulation studies and literature publications are also the main sources of information for this standard. This standard the method is mainly applicable to stable and neutral organic chemicals that are easily adsorbed to the soil. This method may be applied to soil-associated organisms, stable metals Bioaccumulation test of organic compounds. The method can also be applied to metals and other trace elements.

Bioaccumulation test of chemical terrestrial oligochaetes

1 Scope

This standard specifies the terms and definitions of bioaccumulation tests for terrestrial oligochaetes, test validity, test methods, test procedures, data and report.

This standard is applicable to the bioaccumulation test of stable, neutral and easily adsorbed organic chemicals. It can be used for soil concomitant and stable.

Metal organic compounds can also be used for bioaccumulation tests of metals and other trace elements.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 21809-2008 Chemical ?? acute mildew test

3 Terms and definitions

The following terms and definitions apply to this document.

Bioaccumulation

The concentration of a test substance in a test organism (or a particular tissue) is increased relative to the concentration of the test substance in the test medium.

Bioconcentration

The increase in the concentration of the test substance in the test organism or on the body surface is relative to the concentration of the test substance in the surrounding medium, and is determined by the test organism.

The result of absorbing the test substance from the surrounding medium (such as absorption through the body surface and absorption by swallowing the soil).

Biomagnification

The increase in the concentration of the test substance in the living organism or on the body surface, relative to the concentration of the test substance in the food or its food, mainly from the test the result of an object absorbing the test substance from contaminated food or its food. Biomagnification can lead to the transfer of test substances in the food chain and accumulation.

Elimination of elimination the active or passive loss process of the test substance in the test organism (or specific tissue), and the presence or absence of the test substance in the surrounding medium Nothing.

Bioaccumulation factor; BAF at any time during the absorption phase of the test, the concentration of a test substance (C_a , g·kg⁻¹ test insect net weight) in the test organism (or specific tissue) and the ratio of the concentration of the substance (C_s , g·kg⁻¹ medium net weight) in the test medium; the unit is kg (medium)·kg⁻¹ (test insect).

Steady state bioaccumulation factor; BAF_{ss} in a steady state, the concentration of a test substance (C_a , g·kg⁻¹ test insect net weight) in the test organism (or specific tissue) and the test medium