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

GB/T 27856-2011

Chemicals -- Aerobic and anaerobic transformation in soil test

化学品 土壤中好氧厌氧转化试验

(English Translation)

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Table of Contents

Introduction	
Introduction	
1 Scope	
2 Normative references	
3 Terms and definitions	
4 Test substance information	
5 3 Test principle	
6 Reference material	
7 Summary of Test Method	
8 5 test procedure	
9 8 Quality Assurance and Quality Control	
10 Data and Reports	
Appendix A (informative) water tension, field capacity (FC) and soil water holding capacity (WHC)	
Appendix B (normative) in different countries in different types of soil moisture	
Annex C (informative) Example 13 test device	
Appendix NA (informative) The main physical and chemical properties of different regions of 14 different types of soil	
References	

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard technical content and Organisation for Economic Co-operation and Development (OECD) guidelines for testing of chemicals No.307 (2002 Nian) "good soil Aerobic and anaerobic conversion of the "same (in English) of technical content.

This standard configuration and do the following editorial changes.

--- The units of measurement to our legal units of measurement.

--- Consistent with the existing standard series, the standard name will be changed to "chemical products in the soil Aerobic and Anaerobic transformation test."

--- Remove OECDNo.307 (2002 Nian) "soil aerobic and anaerobic conversion" Introduction of an information section.

--- The original "test substance" section on the physical and chemical properties are given five reference test methods. Six of nine tested party Indexes Our law has a corresponding standard. GB/T 21845 "Chemicals Water solubility test", GB/T 21852 "Chemical Distribution Department Number (n-octanol - water) HPLC test ", GB/T 21853" Chemical Distribution coefficient (n-octanol - water) shake flask Test method ", GB/T 21855" chemical hydrolysis test and pH-related ", GB/T 22052" with liquid vapor pressure Vapor pressure temperature relationship of the liquid and the initial decomposition temperature was measured by the method ", GB/T 22228" solid industrial chemicals the vapor pressure of the liquid in the body and to 105Pa 10-1Pa range measuring static method ", GB/T 22229" industrial chemicals Determination of vapor pressure of solids and liquids within range 1Pa 10-3Pa to the vapor pressure balance method ", GB/T 27854-2011 "Chemical soil microbial nitrogen transformation test" and GB/T 27855-2011 "Chemicals microbial biomass conversion test". Nine of Standards and Testing of Chemicals OECD Guidelines No.104 "vapor pressure", OECD Guidelines for the Testing of Chemicals no.112 "Water dissociation constant" together as this standard normative references.

--- Terms and definitions to add a "major transformation product" (see 3.12).

--- Increase the informative appendix NA "in different regions of different soil types in the main physical and chemical properties." this standard is managed by the National Standardization Technical Committee chemicals dangerous (SAC/TC251) and focal points.

This standard was drafted. Chemical Registration Center of the Ministry of Environmental Protection, Ministry of Environmental Protection, Nanjing Institute of Environmental Sciences, China Environmental Science Institute Hospital study, microbiological analysis Testing Center of Guangdong Province, the Shanghai Academy of Environmental Sciences.

Introduction

This test method is used to evaluate aerobic and anaerobic transformation of chemicals in soil. This test is used to determine (i) conversion of the test substance Rate, and (i) determining the nature of the plant and may be exposed to soil microbial conversion products and their production rate and degradation rate. The test Test test subjects who applied directly to the soil or is likely to enter the soil environment of chemicals. Such laboratory results Provides sampling and analysis program for the study of related fields.

Evaluation of the test substance conversion pathway only use a soil aerobic and anaerobic transformation of research, and the conversion of the test substance should be used Three or more to other soil Determination.

Soil type test shall be representative of the test substance use and release into the environment conditions. For example, may be released into the soil subtropical, tropical Chemicals is appropriate Ferrasols or Nitosols way to handle (FAO system). This method can also be used in paddy soil.

CHEMICALS Aerobic and Anaerobic Transformation in Soil Test

1 Scope

This standard specifies the terms and definitions of chemical products in the soil Aerobic and Anaerobic transformation test, the test substance information, test principle, reference material, again Overview of test methods, test procedures, quality assurance and quality control, data and reports.

The standard for evaluating aerobic and anaerobic transformation of chemicals in soil; for the determination of chemical substances in plants and soil for the nature and production rate conversion rate used under, and transformation products, degradation rate [1-9].

This standard applies to low-volatile, water-soluble or water-soluble, it can be accurately measured all chemicals (including radioactive marker or marker).

This standard does not apply to have volatile in the soil and the chemical substances under the experimental conditions can not be retained in the soil.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 21845 Chemicals water solubility test GB/T 21852 Chemical Distribution coefficient (n-octanol - water) high performance liquid chromatography test GB/T 21853 Chemical Distribution coefficient (n-octanol - water) shake flask method test GB/T 21855 chemicals and pH-related hydrolysis test the vapor pressure of the liquid and the temperature dependence of the initial decomposition temperature and a method GB/T 22052 measurement isoteniscope the vapor pressure of GB/T 22228 industrial solid and liquid chemicals in the measuring range 10-1Pa to 105Pa static method GB/T 22229 Industrial chemicals Determination of vapor pressure of solids and liquids within range 1Pa 10-3Pa to vapor pressure level Heng Law GB/T 27854 Chemicals Microbial nitrogen transformation test GB/T 27855 Chemicals Microbial carbon transformation test OECD Guidelines for the Testing of Chemicals No.104 vapor pressure (VapourPressure) OECD Guidelines for the Testing of Chemicals No.112 water dissociation constant (DissociationConstantsinWater)

3 Terms and Definitions

The following terms and definitions apply to this document.

Test substance any substance, including the parent substance or relevant transformation products.

Conversion products transformationproducts by the test substance by biotic and abiotic

transformation generated all substances, including CO₂ and bound residues in the product.