

ICS 13.300; 13.020.40
CCS A 80



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

GB/T 27850-2011

Chemicals -- Ready biodegradability -- General considerations

化学品 快速生物降解性 通则

(English Translation)

Issued on: December 30, 2011

Implemented on: August 1, 2012

Issued by: Standardization Administration of China

Table of Contents

Introduction

1 Scope

2 Normative references

3 Terms, Definitions and Abbreviations

4 Test substance information

5 Summary of Method

General Procedure 6 Test and ready

7 Test Operation

8 Quality Assurance and Quality Control

9 Data and Reports

Appendix A (informative) of the test substance inoculum growth inhibition process

Processing Annex B (informative) insoluble test substances

Calculation and determination of Appendix C (informative) corresponding parameter

Annex D (informative) nitrification oxygen consumption correction

Foreword

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

This standard is one of "Chemicals biodegradability" series standard, it with GB/T 21801 "rapid biodegradation of chemicals Respiratory metrology test ", GB/T 21802" Chemical biodegradability modified MITI Test (I) ", GB/T 21803 "Chemicals biodegradability DOC reduction test", GB/T 21831 "Chemical biodegradability. Closed bottle test Test ", GB/T 21856" Chemical biodegradability of carbon dioxide generation test "and GB/T 21857" rapid biological chemicals Degradability modified OECD screening test, "supporting the use of six criteria.

The Standards and Organisation for Economic Co-operation and Development (OECD) guidelines for testing of chemicals No.301 (1992 Nian) "biodegradability" (English Version) identical technical content.

This standard configuration and do the following editorial changes.

- The units of measurement to our legal units of measurement;
- Remove OECD301 "biodegradability" informative foreword Background section;
- The "stable", "biodegradability" and "inherent biodegradability" include provisions for

terms, definitions and abbreviations are used Consistent with the definition of national standards has been released.

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, Beijing Normal University, China National Academy of Environmental Sciences, Shenyang Research Institute of Chemical Safety Evaluation Center.

1 Scope

This standard specifies the chemical biodegradability of terms and definitions, methods overview, general test procedures and preparation, quality assurance and quality control, data and reports.

This standard applies to the screening and testing of chemicals in the water under aerobic conditions, rapid biodegradability.

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 21801 Chemicals biodegradability breath test measurement method GB/T 21802 Chemicals biodegradability modified MITI (I) test GB/T 21803 Chemicals biodegradability DOC reduction test GB/T 21831 Chemicals biodegradability Closed bottle test GB/T 21856 Chemicals biodegradability of carbon dioxide generation test GB/T 21857 Chemicals biodegradability modified OECD screening test

3 Terms, definitions and abbreviations

The following terms, definitions and abbreviations apply to this document.

3.1 Terms and Definitions

3.1.1

DO dissolvedoxygen, DO Concentration of dissolved oxygen in the water, in mg/L expressed.

3.1.2

BOD biochemicaloxygendemand, BOD the amount of oxygen consumed by the microbial decomposition of organic matter, can be expressed as the number of milligrams of oxygen

(mg/mg) of the test substance consumed per milligram.

3.1.3

COD chemical oxygen demand, COD in strong acid and heating conditions, a certain amount of dichromate oxidation of reducing substances in water samples of the amount of oxidant consumed, can be expressed as millimoles per Oxygen milligrams (mg/mg) g of the test substance consumed.

3.1.4

Dissolved organic carbon, DOC Solution, organic carbon content, often after filtration through 0.45μm membrane liquid organic carbon content, or by 4000r/min speed After centrifugation, the supernatant 15min organic carbon content.

3.1.5

Theoretical oxygen theoretical oxygen demand, ThOD Calculated according to the formula of the total amount of the test substance is completely oxidized oxygen required, it can be expressed as oxygen consumption per mg of the test substance in mg