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Chemicals-Enhanced ready biodegradability test

化学品 强化快速生物降解性试验

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is consistent with GB/T 27850 "General principles for the rapid biodegradability of chemicals" and GB/T 21801 "General principles for the rapid biodegradability of chemicals".

GB/T 21802 "Modified MITI test for the ready biodegradability of chemicals (I)", GB/T 21803 "Ready biodegradability of chemicals. DOC reduction test", GB/T 21831 "Ready biodegradability of chemicals. Closed bottle test" GB/T 21856 "Test for Carbon Dioxide Generation of Ready Biodegradable Chemicals" and GB/T 21857 "Test for Rapid

Biodegradability of Chemicals It should be used in conjunction with the OECD screening test for improved biodegradability.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee for Standardization of Hazardous Chemicals Management (SAC/TC 251).

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Introduction

When a compound does not show rapid biodegradability in a rapid biodegradability test, further screening is required.

Degradation tests, such as enhanced rapid biodegradability tests and inherent biodegradability tests, are recommended to identify potential persistence.

The enhanced ready biodegradability test is used to assess persistence, which provides a wider range of method choices and more comprehensive optimization conditions.

This document is incompatible with the general rules for ready biodegradability (GB/T 27850) and any of the test methods for ready biodegradability (GB/T 21801, GB/T 21802, GB/T 21803, GB/T 21831, GB/T 21856, GB/T 21857 and OECD Chemical Testing Guidelines No.310) and use the selected rapid biodegradability test standard as the basic method by In addition to the contents described in this document, other test contents and requirements can be found in the selected method standards.

When using this document to conduct tests using pre-exposure inocula or increasing

inoculum concentrations and using the data obtained for regulatory purposes, consideration should be given to the trial Whether the test results are sufficient and valid.

Enhanced Ready Biodegradability Test for Chemicals

1 Scope

This document describes the method overview, test substance information, reference substances, test preparation, test Procedures, quality assurance and quality control, data, reporting of results.

This document applies to enhanced ready biodegradability testing of chemicals.

2 Normative references

GB/T 21801

GB/T 21802

GB/T 21803

GB/T 21831

GB/T 21856

GB/T 21857

GB/T 27850

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 biodegradability

The biodegradability of the test compound after contact with the inoculum.

3.2 ready biodegradability

The biodegradability of a test compound after exposure to an inoculum for a defined period of time.

3.3 persistence

The ability of the test compound to remain unchanged in the environment or its tendency not to decompose or transform in the environment.

Note. The assessment is usually based on the half-life and/or biodegradation rate of the test substance in the environmental medium.

3.4 Preconditioning

In the absence of the test compound, the inoculum was incubated with aeration under the test conditions.

Note. Improve the test quality by reducing the inoculum blank value and enhancing the adaptability of microorganisms to test conditions.

3.5 Pre-exposure

Inocula are pre-incubated under test conditions in the presence of the test compound.