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

GB/T 44708-2024

Chemicals - Earthworm reproduction toxicity test

化学品 蚯蚓繁殖毒性试验

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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. 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). This document was drafted by: Nanjing Institute of Environmental Sciences, Ministry of Ecology and

Environment, Solid Waste and Chemicals Management Technology Center, Ministry of Ecology and Environment, Shanghai Testing Center, China Inspection and Quarantine (Tianjin) Testing Co., Ltd., Ningbo Customs Technology Center, Shenyang Shenyang Institute of Chemical Technology Testing Technology Co., Ltd., Zhejiang Academy of Agricultural Sciences, and Suzhou Huace Safety Assessment Technology Service Co., Ltd. The main drafters of this document are. Guo Min, Shi Lili, Wang Lei, Liao Jianhua, Liu Chunxin, Wu Wenzhu, Ge Haihong, Zhou Lili, Zhu Yuxuan, Yang Xichen, Yuan Ye, Liu Hanwei, Shi Lingkun, Tang Tao, Pi Tianxing, Wang Lei, Zhang Yajing, and Li Beibei.

Chemical toxicity test on earthworm reproduction

1 Scope

GB/T 44708-2024 gives the earthworm reproduction toxicity test for chemicals. The acute earthworm test measures whether a substance kills; the reproduction test measures whether it stops the population continuing, which is the more sensitive and the more relevant endpoint for a soil in which a chemical persists. Adults are exposed in artificial soil for four weeks, removed, and the juveniles that hatch from the cocoons counted four weeks later, which makes the test long but decisive for the risk assessment of pesticides, sludges and industrial chemicals reaching soil. The standard sets the information required on the test substance, the test principle, the reference substances, the test system - instruments and equipment, test organisms and test soil - and the test procedure, covering the addition of the substance, the exposure conditions, the preliminary test, the definitive test and the limit test, followed by the data evaluation, the validity criteria and the report. It takes effect on 1 May 2025.

This document specifies the test substance information, test principle, reference material, test system, test procedure, Quality assurance and quality control, data and reporting requirements. This document is applicable to the testing and evaluation of the effects of chemicals on earthworm reproduction. This document does not apply to volatile chemicals, such as chemicals with an air-soil partition coefficient greater than 1, or a vapor pressure (25°C) greater than 300 Pa of chemicals.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. In this document.

GB/T 21801 Respirometric test for the rapid biodegradability of chemicals

GB/T 21802 Modified MITI test for the ready biodegradability of chemicals (I)

GB/T 21803 DOC reduction test for the rapid biodegradability of chemicals

GB/T 21809 Chemicals - Earthworm acute toxicity test

GB/T 21831 Ready biodegradability of chemicals. Closed bottle test

GB/T 21845 Test for water solubility of chemicals

GB/T 21852 Chemical Partition Coefficient (n-octanol x water) High Performance Liquid Chromatography Test

GB/T 21853 Chemical Partition Coefficient (n-octanol x water) Shake Flask Test

GB/T 21855 pH-dependent hydrolysis test for chemicals

GB/T 21856 Carbon dioxide production test for readily biodegradable chemicals

GB/T 21857 Improved OECD screening test for the ready biodegradability of chemicals

GB/T 22228 Industrial chemicals-Determination of vapor pressure of solids and liquids in the range 10-

3.2 No lethal concentration; LC

0 The highest concentration of a test substance that does not cause death to any test organism during a given test period. The amount of test substance contained is expressed.