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

GB/T 42366-2023

Chemicals - Lymnaea stagnalis reproduction test

化学品 静水椎实螺繁殖试验

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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: Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed and managed by the National Standardization Technical Committee on Hazardous Chemicals Management (SAC/TC251): This document was drafted by: Institute of Microbiology, Guangdong Academy of Sciences (Guangdong Microbial Analysis and Testing Center), Ministry of Ecology and Environment, Solid Waste With Chemical Management Technology Center, China Academy of Inspection and Quarantine, Hangzhou Ruiou Technology Co., Ltd., Xiamen Green Biotechnology Co., Ltd: Company, Guangdong Environmental Protection Engineering Vocational College, Guangdong Quanqing Testing Co., Ltd., Xi'an Kaijinzhe Testing Co., Ltd., Jinjiu Technology Co., Ltd: company: The main drafters of this document: Xu Meiyong, Fan Xueying, Xu Yujie, Liu Chunxin, Yu Mingxuan, Liang Qiu, Liu Taomei, Dou Congcong, Mei Chengfang, Yang Xunan, Zhou Lili, Feng Baoxin, Lu Jiahui, Peng Yijun, Wu Caichun, Mao Xiaoyao:

Review papers on mollusc toxicity testing highlight the need for aquatic mollusc reproductive toxicity testing for some chemicals: The lack of testing methods for the toxicity of such important ecological and economic organisms is particularly emphasized: Existing reproductive testing methods rarely involve females androgenetic aquatic species: The testing endpoints of the experiment were the number of surviving snails and the number of eggs produced by each snail during the 28d exposure period: shell length of each parent Growth and spawning numbers are also available as additional testing endpoints: If this

method is used to test the mixture and the data obtained are used for regulation, it is necessary to consider whether the test results are sufficient and valid: If there are regulations that clearly stipulate that the mixture can be tested, this document can be directly used: Propagation experiment of chemical hydrostatic snails

1 Scope

GB/T 42366-2023 gives the *Lymnaea stagnalis* reproduction test for chemicals. The great pond snail was added to the international test battery for a specific reason: molluscs proved far more sensitive than fish or daphnia to substances that interfere with their endocrine systems, and several compounds that passed the standard aquatic tests were later shown to suppress snail reproduction at much lower concentrations. The endpoint is the number of eggs produced over the exposure. The standard sets the test principle, the information required on the test substance, the reference substance, the test preparation, the test procedure, the quality assurance and quality control, the data processing and the report, with an informative annex on the laboratory acclimation and culture of the snails. It took effect on 1 October 2023.

This document describes the test principle, test substance information, reference substance, test preparation, test procedure, Quality assurance and quality control, data processing, reporting: This document is intended to evaluate the effects of long-term exposure to chemicals on the survival and Potential effects on reproduction:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 21801 Rapid Biodegradability Respirometric Test of Chemicals

GB/T 21802 MITI Test for Improved Rapid Biodegradability of Chemicals (I)

GB/T 21803 Rapid biodegradability of chemicals DOC reduction test

GB/T 21831 Rapid Biodegradability Test of Chemicals by Closed Bottle Method

GB/T 21856 Carbon dioxide generation test for rapid biodegradability of chemicals

GB/T 21857 OECD Screening Test for Improved Rapid Biodegradability of Chemicals

3 Terms, Definitions and Abbreviations 3:

1 Terms and Definitions The following terms and definitions apply to this document: 3:1:

1 The concentration of the test substance that results in a x% reduction in the reproduction of the snails in a given test period compared with the control group: 3:1:

2 The lowest concentration of test substance that produces a significant effect ($p < 0.05$) on the test organism compared with the control group during the exposure period, and all concentrations above the LOEC Toxic effects at the tested concentrations were equal to or significantly higher than those observed in the LOEC: 3:1:

3 The highest test substance test concentration below the LOEC in the experiment, i.e., no significant effect on the test organism during the exposure period compared with the control group Effect ($p \geq 0.05$) of the test substance concentration: 3:1:

4 Individual survival days numberofindividual-day; NID The total observation period of the individual: NOTE: During this period, individuals are involved in breeding: