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

GB/T 21805-2025

Replacing GB/T 21805-2008

Chemicals - Alga growth inhibition test

化学品 藻类生长抑制试验

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 21805-2008 "Test for Inhibition of Algal Growth by Chemicals". Compared with GB/T 21805-2008, it has the following differences. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

---The experimental principle has been revised (see Chapter 5, 4.1 of the.2008 edition);

---The test methods and procedures have been revised (see Chapters 7 and 8, and Chapters 5, 6, and 7 of the.2008 edition);

---Some parts of the data and reports have been changed (see Chapter 10, Chapter 9 of the.2008 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Hazardous Chemicals Management (SAC/TC251). This document was drafted by: Solid Waste and Chemicals Management Technology Center, Ministry of Ecology and Environment; and Shenyang Chemical Research Institute Testing Technology Co., Ltd. Evaluation Center, Shanghai Testing Center, Liaoning Provincial Ecological and Environmental Affairs Service Center, Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment, Shanghai Environmental Protection Bureau Institute of Environmental Sciences, Guangdong Academy of Sciences Institute of Microbiology

(Guangdong Provincial Microbiology Analysis and Testing Center). The main drafters of this document are. Hu Junjie, Liu Xiaojian, Liu Hongying, Dong Mengqi, Teng Xiaoming, Yang Hairong, Bai Yang, Yang Li, Ma Yan, Yang Kun, and Yang Li. Li Feifan, Li Wenchao, Yang Jing, Wang Lei, Song Jingyang, Yang Xuefei, Hu Shuangqing, Liu Yanzhen, Zhu Xinming, Ling Siyuan, Lu Ling. The release history of this document and the document it replaces is as follows:

---First published in.2008 as GB/T 21805-2008;

---This is the first revision. Chemical Algae Growth Inhibition Test

1 Scope

GB/T 21805-2025 is the Chinese national standard covering the algal test as a general chemicals method - the species and the medium, the exposure over 72 hours, the growth rate and the yield endpoints, the validity criteria on the control, and the EC50 with its confidence interval. It replaces GB/T 21805-2008, and it is the general counterpart of the pesticide-specific GB/T 31270.14-2025. In force from 1 February 2026. Issued on 5 October 2025, it has been in force since 1 February 2026, replacing GB/T 21805-2008.

This document specifies the test substance information, test principle, reference material, test method, test procedure, and quality control details for chemical algae growth inhibition tests. Quantity assurance and quality control, data and reporting. This document is applicable to evaluating the effects of test substances with low volatility, high environmental stability, and water solubility under test conditions on algal growth. The sound. If testing volatile, strongly adsorbent, colored, insoluble or poorly soluble substances in water, as well as substances that may affect the nutrients in the culture medium. For test subjects requiring efficient utilization of nutrients or minerals, modifications to the test procedure are necessary (e.g., using a closed system, appropriate test volume). (devices, etc.)

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 biomass Dry weight of living organisms per unit volume of test medium.

Note. For example, how many milligrams of dry algae are contained in each liter of test solution. Biomass is usually defined as mass, but in this document, it refers to the mass per unit volume. Biomass is usually measured by replacing the number of cells per unit volume or fluorescence.

3.2 The ratio of standard deviation to mean.

Note. The coefficient of variation is a dimensionless number, used for comparisons between samples, and is usually expressed as a percentage, denoted as CV%. The mean ratio of each parallel sample in the control group to the control group is... The average value of the coefficient of variation of the length rate is calculated as follows:

a) Calculate the coefficient of variation of the average specific growth rate of each parallel control group at each stage;

b) Average all the data obtained in

a) above to obtain the average coefficient of variation of the growth rate of each parallel control group.

3.3 Effect concentration (EC_x) The concentration of the test substance that causes a decrease in the growth of the test organism by x% compared to the control group within a given measurement period.

Note. EC_x is divided into ErC_x based on growth rate and EyC_x based on growth amount.

3.4 algal growth medium Artificially synthesized algae culture medium.

Note. In this document, when algae are exposed to the test substance, the test substance is usually dissolved in the culture medium.

3.5 growth rate The exponential growth rate of biomass during exposure.