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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 31270.14-2025

Replacing GB/T 31270.14-2014

Test guidelines on environmental safety assessment for chemical pesticides - Part 14: Alga growth inhibition test

化学农药环境安全评价试验准则 第14部分：藻类生长抑制试验

Issued on: October 31, 2025 **Implemented on: May 1, 2026**

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Standardization Administration of the PRC

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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 is Part 14 of GB/T 31270, "Test Guidelines for Environmental Safety Evaluation of Chemical Pesticides". GB/T 31270 has been published. The following section.

1.Soil Metabolism Test;

2.Hydrolysis Test;

3.Photolysis Test;

4.Soil Adsorption/Desorption Tests;

5.Soil Leaching Test;

6.Volatility Testing;

7.Bioaccumulation Assays;

8.Metabolic Experiments of Water-Sediment Systems;

9.Short-term feeding toxicity tests in birds;

10.Acute toxicity tests on bees;

11.Acute Toxicity Tests on Silkworms;

12.Acute Toxicity Testing in Fish;

1 Scope

GB/T 31270.14-2025 is the Chinese national standard covering the algal growth inhibition test in a pesticide dossier - the species and the culture conditions, the exposure and the growth measured over 72 hours, and the EC50 that becomes one of the numbers the registration decision rests on. Part 14 of the series. It replaces GB/T 31270.14-2014, under the Ministry of Agriculture and Rural Affairs. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 31270.14-2014.

This document describes the algal growth inhibition test method for environmental safety evaluation of chemical pesticides. This document applies to algal growth inhibition tests conducted for the registration of chemical pesticides.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

NY/T 3273 Guidelines for Toxicity Testing of Difficult-to-Treat Pesticides on Aquatic Organisms

NY/T 4195.6 Cultivation of biological test materials for environmental impact testing of pesticide registration - Part 6.*Neptunus cephalopoda*

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 During a certain exposure period, compared with the control, the concentration of the test substance that caused an increase in the biomass of the tested algae or a 50% decrease in the average specific growth rate was... Degree, expressed in EC50. Note

1.In this document, EC50, calculated based on the inhibition rate of algal biomass growth, is represented by EyC50, which is calculated based on the inhibition rate of the average specific growth rate of algae. The EC50 obtained by the rate calculation is denoted as ErC50. Note

2.Units are mga.i./L and mg test substance/L.

3.2 Average specific growth rate during a specific exposure period.

Note. μ is the difference between the natural logarithm of the biomass of the tested algae at the end of the exposure and the beginning of the exposure, divided by the duration (e.g., 3 days).

3.3 biomass yield Biomass growth during a specific exposure period.

Note. This refers to the biomass at the end of exposure minus the biomass at the beginning of exposure, denoted by Y.

4.Principles A series of test solutions of different concentrations were prepared using the test substance and algal culture medium. After mixing the test solutions with the algal solutions, the subjects were continuously exposed to the solution.

14 Algal Growth Inhibition Test Warning

---Personnel using this document should have practical experience working in a formal laboratory. This document does not address all possible safety issues. Users are responsible for taking appropriate safety and health measures and ensuring compliance with relevant national regulations.