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

GB/T 31270.15-2025

Replacing GB/T 31270.15-2014

**Test guidelines on environmental safety assessment for
chemical pesticides - Part 15: Earthworm acute toxicity test**

化学农药环境安全评价试验准则 第15部分：蚯蚓急性毒性试验

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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 15 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 31270.15-2025 is the Chinese national standard covering the earthworm acute test - *Eisenia fetida* in artificial soil, the exposure over fourteen days, the mortality and weight change, and the LC50 that becomes the soil organism endpoint in the risk assessment. Part 15 of the series. It replaces GB/T 31270.15-2014, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026, replacing GB/T 31270.15-2014.

This document describes the test method for the acute toxicity test of earthworms in the environmental safety evaluation of chemical pesticides. This document applies to acute toxicity tests of earthworms for the registration of chemical pesticides. This document does not apply to volatile 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.

GB/T 6682 Specifications and test methods for water used in analytical laboratories NY/T

52 Soil Moisture Determination Method

NY/T 1121.2 Soil Testing - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 The concentration of the test substance at which 50% of the test organisms die in an acute toxicity test.

Note. LC50 is used to express the value of milligrams per kilogram of dry soil (mg/kg dry soil).

4.Principles Earthworms were cultured under standard laboratory conditions after being exposed to artificial soil containing different concentrations of the test substance.

Earthworm observations and recordings were then conducted. The poisoning symptoms and number of deaths were recorded, and the LC50 and 95% confidence interval of the test substance for earthworms were determined.

5. Test conditions The temperature during the experiment was $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$, and the light intensity was 400lx~800lx.

15 Acute Toxicity Tests on Earthworms 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.