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

GB/T 31270.17-2025

Replacing GB/T 31270.17-2014

**Test guidelines on environmental safety assessment for
chemical pesticides - Part 17: Trichogramma acute toxicity test**

化学农药环境安全评价试验准则 第17部分：天敌赤眼蜂急性毒性试验

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part

1.Rules for the Structure and Drafting of Standardizing Documents. This Document is Part 17 of GB/T 31270 Test Guidelines on Environmental Safety Assessment for Chemical pesticides. GB/T 31270 published the following parts.

- 1.Soil Metabolism Test;
- 2.Hydrolysis Test;
- 3.Phototransformation;
- 4.Adsorption/Desorption in Soils;
- 5.Leaching Test in Soil;
- 7.Bioconcentration Test;
- 8.Aquatic Sediment System Metabolism Test;
- 9.Avian Short-Term Dietary Toxicity Test;
- 10.Honeybee Acute Toxicity Test;

- 11. Silkworm Acute Toxicity Test;
- 12. Fish Acute Toxicity Test;
- 13. Daphnia Sp. Acute Immobilisation Test;

1 Scope

GB/T 31270.17-2025 is the Chinese national standard covering the effect on the parasitic wasp used as a biological control agent - the exposure on a treated glass plate, the mortality and the effect on parasitism, and the hazard quotient that decides whether the pesticide can be used in an IPM programme. Part 17 of the series. It replaces GB/T 31270.17-2014, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026, replacing GB/T 31270.17-2014.

This Document describes the acute toxicity test method of Trichogramma in the environmental safety assessment for chemical pesticides. This Document applies to acute toxicity testing of Trichogramma for chemical pesticide registration. This Document does not apply to volatile pesticides.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 6682 Water for analytical laboratory use - Specification and test methods

NY/T 2882.7 Guidance on environmental risk assessment for pesticide registration - Part

3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

3.1 Median lethal rate The dose of test substance required to cause 50% mortality of the tested organisms. NOTE. Expressed as LR50, the unit is grams of active ingredient per hectare (g a.i./hm²) or grams of test substance per hectare (g test substance/hm²).

4 Principle

The test substance was prepared into a series of test solutions of different concentrations; quantitatively and uniformly added to finger-shaped tubes of a certain area or sprayed onto glass plates or leaf surfaces, and then dried before being transferred to Trichogramma. The number of dead Trichogramma is investigated 24 h after poisoning, and the LR50 and its 95% confidence interval for the Trichogramma are determined.

5 Test Conditions

The test shall be conducted at $25\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$, relative humidity 60% ~ 80%, and in the dark.

6.1 Reagents

6.1.1 Acetone ($\text{C}_3\text{H}_6\text{O}$, CAS No.. 67-64-1), analytically pure.

6.1.2 Water. Conforming to the provisions of Grade III water specified in GB/T 6682.

6.2 Test organisms *Trichogramma dendrolimi*, *T. ostrinae*, *T. japonicum*, etc.

6.3 Parasitizing eggs Inactivated eggs of *Antheraea pernyi* or *Corcyra cephalonica*, etc.

6.4 Plant leaves Suitable plant leaves of appropriate species, selected according to the test purpose. Leaves shall be fresh, clean, and uncontaminated.

6.5 Materials Finger-shaped tubes (with inner diameter of 1 cm ~ 2 cm, height of 5 cm ~ 15 cm) or glass plates and their fixing frames (see Appendix A), perforators (round or square, with diameter or side length of 7 cm ~ 9 cm).

7 Apparatus

7.1 Electronic balance (with sensitivity $\geq 0.0001\text{ g}$).

7.2 Artificial climate chamber and other culture equipment.

7.4 Temperature and humidity monitoring equipment such as temperature and humidity recorders.

7.5 Roller tube machine (suitable for finger tube poisoning method).

7.6 Spraying equipment (uniform spraying, quantitative calculation capability, suitable for glass plate and plant leaf poisoning methods).

8 Test Substance and Reference

8.1 Test substance The test substance is the pesticide technical (or parent material) or formulation. Before the test, it should understand the test substance's solubility in water and organic solvents, its stability in water and photolysis stability, saturated vapor pressure, n-octanol-water partition coefficient, recommended field application rate, number of applications, and application interval, etc. If it is a technical (or parent material), corresponding information on a representative formulation shall be available.

8.2 Reference Dimethoate technical is selected as the reference.

9 Test Procedures

9.1 Pre-culture Place the eggs of the *Antheraea pernyi* egg or *Corcyra cephalonica* egg parasitized by *Trichogramma* under the test conditions for incubation. The tested *Trichogramma* shall satisfy the following conditions.

- a) The parasitized eggs are from the same batch;
- b) The parasitized eggs begin hatching at the same time;

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