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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 31270.10-2025

Replacing GB/T 31270.10-2014

Test guidelines on environmental safety assessment for chemical pesticides - Part 10: Honeybee acute toxicity test

化学农药环境安全评价试验准则 第10部分：蜜蜂急性毒性试验

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Table of Contents

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

- Part 1: Soil Metabolism Test;

- Part 2: Hydrolysis Test;

- Part 3: Photolysis Experiment;

- Part 4: Soil Adsorption/Desorption Tests;

- Part 5: Soil Leaching Test;

- Part 6: Volatility Testing;

- Part 7: Bioaccumulation Assays;

- Part 8: Metabolic Experiments of Water-Sediment Systems;

- Part 9: Short-term feeding toxicity tests in birds;

- Part 10.Acute toxicity tests on bees;

- Part 11.Acute Toxicity Tests on Silkworms;

- Part 12.Acute Toxicity Testing in Fish;

- Part 13.Acute Activity Inhibition Test in Daphnia;

- Part 14.Algal Growth Inhibition Test;

- Part 15.Acute toxicity test of earthworms;

- Part 16.Soil Microbial Toxicity Testing;

- Part 17.Acute toxicity test of the natural enemy Trichogramma wasp;

- Part 18.Acute toxicity testing in natural enemy amphibians;

- Part 19.Experiments on the Effects of Non-Target Plants;

- Part 20.Short-term feeding toxicity studies in livestock;

- Part 21.Toxicity Testing of Large Crustaceans;

- Part 22.Photolysis Test of Soil Surface;

- Part 23.Acute oral toxicity test in birds.

This document replaces GB/T 31270.10-2014 "Test Guidelines for Environmental Safety Evaluation of Chemical Pesticides Part 10.Acute Toxicity of Honeybees".

Compared with GB/T 31270.10-2014, the main technical changes in the "Test" standard, apart from structural adjustments and editorial modifications, are as follows.

a) Definitions for bee larvae, adult worker bees, and brood comb have been added (see 3.2, 3.3, and 3.4);

b) The definitions of test substance, chemical pesticide, technical grade, formulation, active ingredient, and reference substance have been deleted (see sections 2.2 and 2.3 of the 2014 edition). 2.4, 2.5, 2.6, 2.7);

c) The basic procedures and objectives of single-exposure toxicity tests on bee larvae have been added (see 4.3);

d) The test conditions for single-exposure toxicity tests on bee larvae were increased (see 5.2);

e) The reagents and materials required for the experiment have been increased (see 6.1, 6.2);

f) Requirements have been added regarding the acquisition, feeding, composition, preparation, and storage of bee larvae (see 6.3.2 and 6.4);

g) The required instruments and equipment for the experiment have been increased (see 7.1, 7.2, and 7.6);

h) The requirements for test articles and reference articles have been changed (see 8.1, 8.2, and 4.1.2 of the 2014 edition);

i) The procedure for single-exposure toxicity testing of bee larvae has been improved (see 9.3);

j) The relevant descriptions of data processing have been revised, and the provisions for Koch's method, linear interpolation, and probability unit graphical method have been removed (see 10.1, (2014 version 4.3);

k) Added data processing methods for single-exposure toxicity tests on bee larvae (see 10.2);

l) The quality control requirements have been changed (see 11.1, 4.4 of the 2014 edition);

m) Added quality control requirements for single-exposure toxicity tests of bee larvae (see 11.2);

n) The test report requirements have been changed (see 12.1, Chapter 5 of the 2014 edition);

o) Increased the reporting requirements for single-exposure toxicity tests on bee larvae (see 12.2);

p) The classification of acute toxicity levels of pesticides to bees has been removed (see Appendix A of the 2014 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 by the Ministry of Agriculture and Rural Affairs of the People's Republic of China.

This document is under the jurisdiction of the National Technical Committee on Pesticide Standardization (SAC/TC133).

This document was drafted by the Institute for the Control of Agrochemicals, Ministry of Agriculture and Rural Affairs, and the Institute of Plant Protection, Chinese Academy of Agricultural Sciences.

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The release history of this document and the document it replaces is as follows.

- First published in 2014 as GB/T 31270.10-2014;

- This is the first revision.

Introduction

To reduce the impact of pesticide use on the ecological environment and provide data that meets the requirements of pesticide environmental risk assessment, an environmental safety assessment is necessary.

The experiment aims to clarify the characteristics of pesticides in the environment, such as metabolism, degradation, adsorption, leaching, and bioaccumulation, as well as their toxicity to non-target organisms.

GB/T 31270, "Test Guidelines for Environmental Safety Evaluation of Chemical Pesticides," is a standard test method that guides pesticide environmental safety evaluation tests in China.

The standard aims to regulate pesticide environmental safety evaluation testing and improve the scientific rigor and comparability of such tests. It consists of 23 parts. constitute.

- Part 1: Soil Metabolism Experiment. The aim is to clarify the metabolic pathways and rates of pesticides in soil.

- Part 2: Hydrolysis Tests. The purpose is to clarify the hydrolysis pathways and rates of pesticides.

- Part 3: Photolysis Experiment. The purpose is to clarify the photolysis pathway and rate of pesticides.

- Part 4: Soil Adsorption/Desorption Tests. The purpose is to clarify the soil adsorption characteristics of pesticides.

- Part 5: Soil Leaching Test. The purpose is to determine the leaching properties of pesticides.

- Part 6: Volatility Test. The purpose is to determine the volatility of pesticides.

- Part 7: Bioaccumulation Test. The purpose is to determine the bioaccumulation of pesticides in fish.

- Part 8: Metabolic Experiments in Aquatic-Sediment Systems. The aim is to clarify the metabolic pathways and metabolism of pesticides in aquatic-sediment systems.