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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 31270.8-2025

Replacing GB/T 31270.8-2014

Test guidelines on environmental safety assessment for chemical pesticides - Part 8: Aquatic sediment system metabolism test

化学农药环境安全评价试验准则 第8部分：水-沉积物系统代谢试验

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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 is Part 8 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 31270.8-2014 "Test Guidelines for Environmental Safety Assessment of Chemical Pesticides Part 8: Degradation of Water-Sediment Systems".

Compared with GB/T 31270.8-2014, the main technical changes in the "Experimental Test" are as follows, except for structural adjustments and editorial modifications.

a) Terms and definitions have been changed, and the terms "water-sediment system degradation," "degradation half-life," "test substance," "chemical pesticide," "technical agent," "formulation," and "[unclear]" have been removed.

The terminology and definitions of active ingredients have been expanded to include major metabolites, extracted residues, unextracted residues, and mineralization (see [link to relevant documentation]).

3.1~3.4 (2014 edition 2.1~2.8)

b) The requirements for the test substance have been changed (see 8.1, 4.1.1 of the 2014 edition);

c) The sampling and testing requirements have been changed (see 9.5, 4.2.2 of the 2014 version);

d) Increased requirements for the qualitative identification of major metabolites (see 10.2);

e) The requirements for degradation kinetics assessment have been changed (see 10.3, 4.3 of the 2014 edition);

f) Additional requirements have been added for the determination of the physicochemical properties of the test water and sediments (see Appendix A);

g) The reasonableness judgment requirements for the extraction method have been added (see Appendix C).

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.

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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 31270.8-2014;

- 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 for test methods guiding environmental safety evaluation of pesticides in

China.

The standardization of pesticide environmental safety evaluation testing and the improvement of the scientific rigor and comparability of pesticide environmental safety evaluation testing consist of 23 parts.

- 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. Thanksgiving rate.

- Part 9: Short-term feeding toxicity studies in birds. The aim was to determine the short-term feeding toxicity of pesticides to birds.

- Part 10.Acute toxicity tests on bees. The purpose is to determine the acute toxicity of pesticides to bees.

- Part 11.Acute toxicity test on silkworms. The purpose is to determine the acute toxicity of pesticides to silkworms.

- Part 12.Acute Toxicity Tests in Fish. The purpose is to determine the acute toxicity of pesticides to fish.

- Part 13.Acute activity inhibition test of Daphnia. The purpose is to determine the acute toxicity of pesticides to Daphnia.

- Part 14.Algal Growth Inhibition Tests. The purpose was to determine the toxicity of pesticides to algae.

- Part 15.Acute toxicity test on earthworms. The purpose was to determine the acute toxicity of pesticides to earthworms.