

ICS 13.300; 13.020.40
CCS A 80



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

GB/T 21812-2008

Chemicals -- Honeybees, acute oral toxicity test

化学品 蜜蜂急性经口毒性试验

(English Translation)

Issued on: May 12, 2008

Implemented on: September 1, 2008

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- Introduction
- 1 Scope
- 2 Terms and definitions
- 3 Test principle
- 4 Effectiveness Test
- 5 Test preparation
- 5.1 Bee selection

Foreword

This standard is identical with the Organisation for Economic Co-operation and Development (OECD) guidelines for testing of chemicals No. 213 (1998), "bee acute oral Toxicity Test "(in English).

This standard made the following editorial changes.

- Increasing the scope section;
- The units of measurement to our legal units of measurement;
- The appendix of terms and definitions content into text terms and definitions section.

This standard is managed by the National Standardization Technical Committee chemicals dangerous (SAC/TC251) and focal points.

Introduction

This standard is being used to develop laboratory tests of pesticides and other chemicals to adult worker bee acute oral toxicity determination. The standard Side effects of the guidance document [1]. This standard takes into account the international 1993 Wageningen (Netherlands) at the relationship between plants and bees Fifth recommendations of the seminar on pesticides harmful to bees seminar proposed improvements EPPO test methods [2]. Other existing Guidelines have also been taken into account, see reference [3], [4] and [5].

In assessing the toxicity profile of the substance, when bees are exposed to chemicals, it must contain a bee acute oral toxicity test. anxious of oral toxicity test provides a determination of pesticides and other chemicals to bees intrinsic toxicity judgment basis.

The test results can be used as feed Based on the necessity of further assessment. In particular, the criteria used to evaluate pesticide hazards regression procedures in bees to determine the real Necessity laboratory toxicity tests and field trials, see Ref. [6]. Pesticides can be an active ingredient (A.I.) formulation can also be product.

The sensitivity and accuracy than the reference test was to verify the bees.

Chemicals bee acute oral toxicity test

1 Scope

This standard specifies the scope of chemicals bee acute oral toxicity test, the terms and definitions, test principle, the validity of the test, the test quasi Equipment, test procedures, and reporting data.

This standard applies to the determination of pesticides and other chemicals acute oral toxicity in adult worker bees.

2 Terms and definitions

The following terms and definitions apply to this standard.

During the period up to 96h of the test, a single oral dose of the test substance harmful effects.

The total amount of test substance consumed. Dose of the test substance mass (g) or a single test animals used in mass of test substance (g/bee) to table Up. When the bees are fed collectively, the actual dose can not be calculated, but an average dose can be estimated (in a cage test substance is Total consumption/number of test bees).

The test was administered orally lead to animal deaths up to 50%, a single dose by the statistics obtained. LD50 values $\mu\text{g/bee}$ to express.

For pesticides, the test substance may be an active ingredient (A.I.), the product may be a formulation containing one or more active ingredients.

Death of animals representing the ratio of the test animals.

3 Test principle

Adult worker bees by feeding sucrose solution thus ingestion of the test substance. Then, with the same food does not contain the test substance fed bees. In to Less within 48h mortality was recorded and the control group for comparison. If mortality continues to increase between 24h ~ 48h, while the control group mortality Maintained at not more than 10% of the acceptable level, should be considered to extend the trial period for up to 96h. Calculation 24h and 48h of the LD50, to and when LD50 values $\mu\text{g/bee}$ 72h and 96h after extended testing.

4 Effectiveness Test

The test shall meet the following conditions are valid.

- Average mortality rate at the end of the test the control group does not exceed 10%;
- Reference LD50 value thereof satisfies a specific range.

5.1 Bee selection

Test requirements for bee-nourished, healthy, and strong anti-virus capabilities, of the same age. The test may not be from the same bee bees, but His family background should be clearly known. In the morning use or test the night before collection, and raised under experimental conditions has been to test