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

GB/T 15670.14-2017

Replacing GB/T 15670-1995

**Toxicological test methods for pesticides registration - Part 14:
Bacterial reverse mutation test**

农药登记毒理学试验方法 第14部分：细菌回复突变试验

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Foreword

GB/T 15670 "pesticide registration toxicology test method" is divided into the following sections.

- Part 1. General principles;
- Part 2. Acute oral toxicity test Horn's method;
- Part 3. Acute oral toxicity test sequential method;
- Part 4. Acute oral toxicity test probability unit method;
- Part 5. Acute dermal toxicity test;
- Part 6. Acute inhalation toxicity test;
- Part 7. Skin irritation/corrosivity test;
- Part 8. Acute eye irritation/corrosiveness test;
- Part 9. Skin allergy (sensitization) test;
- Part 10. Short-term repeated oral toxicity (28 days) toxicity test;
- Part 11. Short-term repeated transdermal (28 days) toxicity test;
- Part 12. Short-term repeated inhalation exposure (28 days) toxicity test;
- Part 13. Subchronic toxicity test;

1 Scope

GB/T 15670.14-2017 is the Chinese national standard on toxicological test methods for pesticides registration - part 14: bacterial reverse mutation test, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 12 July 2017 by the

General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2018. Classification: ICS 65.100, CCS B17. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section GB/T 15670 specifies the basic principles, methods and requirements of bacterial reversion mutation test. This section applies to the registration of pesticides for bacterial mutation test.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 Reverse mutation test reversemutationtest Using a panel of *Salmonella typhimurium* and/or *Escherichia coli* to detect chemicals that cause bacterial base-replacement or frameshift mutations Strains requiring certain amino acids (histidine or tryptophan, respectively) become mutations of strains that do not require exogenous supply of amino acids, that is, The auxotrophic back changes to the wild type.

2.2 Base substitutions mutagens basepairs substitutionmutagens A substance that causes the replacement of one or more base pairs in a DNA molecule. In a back-mutation test, this change may occur in bacterial genes Group of the original site of mutation or another site.

2.3 Frameshift mutagens A substance that causes the DNA molecule to increase or lose one or more base pairs.

3 Test purposes

Test the mutagenicity of the test substance to predict its genetic risk and potential carcinogenic potential.

4 Test Overview

Bacterial Reactivation Mutation Test *Salmonella typhimurium* and *Escherichia coli* are used to detect point mutations involving one or several bases of DNA Replacement, insertion or deletion of pairs. The principle is by observing the growth of the test strain on a medium lacking the amino acids required, a test Verify that the strain is capable of recovering the essential amino acids and evaluating the ability of the test substance to induce mutations.

5 Media and reagents

Note. Media components or reagents should be at least chemically pure, non-mutagenic.

Avoid repeated heat treatment, choose the appropriate storage temperature and deadline, such as broth preserved in 4 °C not more than 6 months, the other details see the following media and solution instructions.

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