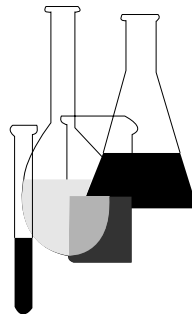




Product Performance Test Guidelines

OPPTS 810.3000

General Considerations for Efficacy of Invertebrate Control Agents



INTRODUCTION

This guideline is one of a series of test guidelines that have been developed by the Office of Prevention, Pesticides and Toxic Substances, United States Environmental Protection Agency for use in the testing of pesticides and toxic substances, and the development of test data that must be submitted to the Agency for review under Federal regulations.

The Office of Prevention, Pesticides and Toxic Substances (OPPTS) has developed this guideline through a process of harmonization that blended the testing guidance and requirements that existed in the Office of Pollution Prevention and Toxics (OPPT) and appeared in Title 40, Chapter I, Subchapter R of the Code of Federal Regulations (CFR), the Office of Pesticide Programs (OPP) which appeared in publications of the National Technical Information Service (NTIS) and the guidelines published by the Organization for Economic Cooperation and Development (OECD).

The purpose of harmonizing these guidelines into a single set of OPPTS guidelines is to minimize variations among the testing procedures that must be performed to meet the data requirements of the U. S. Environmental Protection Agency under the Toxic Substances Control Act (15 U.S.C. 2601) and the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. 136, *et seq.*).

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OPPTS 810.3000 General considerations for efficacy of invertebrate control agents.

(a) **Scope**—(1) **Applicability.** This guideline is intended to meet testing requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 U.S.C. 136, *et seq.*)

(2) **Background.** The source material used in developing this harmonized OPPTS test guideline is OPP guideline 95–1 General Considerations (Pesticide Assessment Guidelines, Subdivision G: Product Performance, EPA report 540/9–82–026, October 1982).

(b) **Overview.** (1) A wide variety of pesticide products are used for invertebrate control. These products are used in public health programs and in households, industry, and agriculture. They are applied against a tremendous variety of pests by many different methods in numerous kinds of formulations.

(2) The Agency has waived all requirements to submit efficacy data unless the pesticide product bears a claim to control termites or pests that may pose a threat to human health. However, each registrant must ensure through testing that each of its products is efficacious when used in accordance with label directions and commonly accepted pest control practices.

(3) For other uses the registrant must develop and maintain the relevant data upon which the determination of efficacy is based. The Agency reserves the right to require, on a case-by-base basis (e.g., significant new uses or benefits data in cases of special reviews), submission of efficacy data for any pesticide product, registered or proposed for registration, when necessary. Suggested performance standards for non-public health pesticides other than termiticides are contained in OPPTS 810.1000. Data for termiticides are required because the user cannot determine if they have performed their intended function.

(c) **Definitions.** The following definitions apply to all guidelines of Group C—Invertebrate Control Agents:

Invertebrate control pesticide. An *invertebrate control pesticide* means any pesticide product which is intended for preventing or inhibiting the establishment, reproduction, development or growth of, destroying, repelling or mitigating invertebrate animals declared to be pests,¹ including

¹ The pest names used in this unit on invertebrate control agents conform to those listed in the “Common Names of Insects and Related Organisms” published by the Entomological Society of America, 9301 Annapolis Rd., Lanham, MD 20706, and “The EPA List of Insects and Other Organisms”, published 1989. Contact the Scientific Information and Analysis Branch, Biological and Economic Analysis Division (Mail Code 7503W) of the Agency for the latest update on invertebrate pest names in the EPA listing.

any member of the Class Insecta, other allied classes in phyla *Arthropoda*, *Annelida*, and *Mollusca*, such as slugs and snails, but excluding nematodes.

Public health uses of invertebrates. The product performance requirements for public health uses apply to (but are not limited to) the following invertebrates: mosquitoes, biting flies, ticks, fleas, houseflies, cockroaches, fireants, hornets, wasps, poisonous spiders, scorpions, biting midges, centipedes, bedbugs, human lice, and dust mites.

(d) **General considerations.** (1) Efficacy data should be derived from testing conducted under conditions typical of actual or proposed use, or, where applicable, under controlled laboratory conditions which simulate actual use.

(2) The test substance should be the formulated product evaluated at various dosage levels including those dosage rates associated with its proposed use. It should be tested under all techniques intended to be used in applying the product.

(3) Data on the compatibility of the test substance with other substances will be developed in accordance with OPPTS 810.1000 if the test substance will be used in sequence or with another substance.

(4) Data should demonstrate the effect of the test substance on various life stages of pests and other significant factors. The data should clearly establish the method of action of the test substance in repelling, destroying, or mitigating pests.

(5) The efficacy of the test substance should be established with reference to the applicable suggested performance standard.

(i) The suggested performance standards contained in the following guidelines are generally stated in terms of percent control, based on a comparison of treated organisms and untreated control organisms. In certain situations, the test substance may be evaluated in comparison to a product of known efficacy. Under some other circumstances, the performance standards are expressed as acceptable levels of damage.

(ii) The conditions under which the suggested performance standards apply are listed in the following guidelines. These performance standards are not intended to be absolute or inflexible.

(iii) An analysis of variance and multiple range test or other appropriate statistical analysis should be conducted to determine the reliability of data, when a question of relative effectiveness occurs.

(6) Dose response data should accompany applicable site/pest crop combinations. The benefits such as increased yield, unblemished fruit, reduction in nuisance pest levels to be derived from each dosage rate to be registered for control of a particular pest should be clearly defined and

reported. Dose response data for crops other than the pesticide site/pest combination will be considered if submitted and referenced.