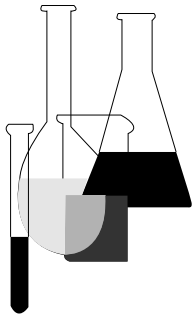
United States
Environmental Protection
Agency

Prevention, Pesticides
and Toxic Substances
(7101)

EPA 712–C–96–286
February 1996

Biochemicals Test Guidelines

OPPTS 880.4425 Dispenser Water Leaching



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 880.4425 Dispenser water leaching.

(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 155-5.

(b) **Leaching of biochemical pesticides**—(1) **Submission of required data.** Data on the leaching of a biochemical pesticide from a passive dispenser to the environment are required by 40 CFR 158.165 to support the registration of every end-use product intended for outdoor application in such a dispenser and each manufacturing-use product which legally may be used to formulate such an end-use product, whenever results of any one or more of the tier I tests specified in 40 CFR 158.690(d) indicate potential adverse effects on nontarget organisms and the biochemical agent is to be applied on land in a passive dispenser.

(2) **Test standards.** In addition to the general test standards specified in OPPTS 835.0001, the following apply:

(i) **Test substance.** Studies shall be performed using the end-use product when formulated for use in passive dispensers.

(ii) **Test procedure.** This testing period should be eight hours, and the leached pesticide should be extracted from the water in which the dispenser was soaked with a suitable organic solvent. The method should be that outlined in OPPTS 835.1230 and 835.1240.

(c) **Reporting and evaluation of data.** The following provisions for reporting and evaluation apply:

(1) **Describe any significant deviations from the protocol.** Report the percentage of biochemical leached, the percentage remaining in the dispensers, and the percentage unaccounted for.

(2) [Reserved]

(d) **Details of method.** The following is an example of an acceptable protocol for measuring leaching of the agent from the dispenser into water:

Example: Place a known amount of the formulated pesticide in unstirred water in a wide-mouth container. The water volume should be large enough so that the water solubility of active ingredients will not be exceeded if all of the active ingredients were to leach out of the dispensing device. Allow the pesticide/water mixture to stand for eight hours. Filter off or remove the pesticide dispensers and extract the water with hexane, or some other appropriate volatile organic solvent. Dry the extract and determine the amount of semiochemicals either by direct measurement or after separation or concentration. At the same time, extract the dispens-

ers that have been removed from the water, using an appropriate organic solvent. Sample this second extract directly or after a separation or concentration step, and determine the amount of semiochemicals that have not leached. Calculate the percent of semiochemicals that leached from the dispenser.