

## **Product Efficacy Studies**

Three studies were performed on the efficacy of Orange Guard to control ants, fleas and cockroaches. These studies were performed in conjunction with obtaining EPA approval for the product. The results of the studies are summarized below.

Sierra Research Laboratories Study on Argentine Ants (*Iridomyrmex humilig*) dated June 21, 1997:

100% mortality in 15 minutes

Sierra Research Laboratories Study on Cat Fleas (*Ctenoncephalides felis*) dated June 30, 1997:

95% mortality in 15 minutes, 100% mortality in 45 minutes

International Institute for Urban and Social Insects, Field Efficacy Trial on German Cockroaches, June 1997:

70% decline in population after 7 days, 85% after 27 days

## **EPA Test Summaries**

The EPA requires extensive testing of insecticides to determine whether or not they are fit for general use by the public and what restrictions and warnings should be displayed on the product label. The active ingredient in Orange Guard occurs naturally in fruits and the ingredients in Orange Guard are listed by the FDA as generally recognized as safe.

<b>STUDY</b>	<b>RESULTS</b>
Acute Oral Toxicity Study	No change/effect.
Acute Dermal Toxicity Study	No change/short period of erythema and/or edema.
Acute Inhalation Toxicity	No changes/effect.
Primary Eye Irritation	Assigned Category III - Corneal involvement or irritation clearing in 7 days or less.
Dermal Sensitization	Not considered dermal sensitizing agent.
Primary Dermal Irritation	Assigned Category IV--possible mild or slight irritation.

Testing results demonstrated that the product has no significant toxicity to humans but may irritate the eyes or skin from contact.