Citronellol (167004) Fact Sheet

Active Ingredient Name: Citronellol (3,7-dimethyl-6-octen-1-ol)

OPP Chemical Code: 167004; (CAS # 106-22-9)

Summary

Citronellol is a fragrant chemical that occurs naturally in many plant oils, and in certain fruits and beverages. As a pesticide active ingredient, citronellol is used on food crops and ornamentals to attract mites, a significant agricultural pest. Because citronellol is used in tiny amounts compared to background exposures and shows minimal to no toxicity in laboratory studies, no harm is expected to humans or the environment when users follow label instructions.

I. Description of the Active Ingredient

Citronellol occurs naturally in more than 30 plant oils, in black tea, wine, and in certain fruits. It has a long history of use in cosmetics, flavorings and fragrances. It is a pale yellow oily liquid with an aroma described as sweet, rose, leather, musty, and floral. Citronellol is a component of citronella oil; the United States FDA considers both substances GRAS (Generally Recognized as Safe for food use).

Citronellol attracts mites, but apparently doesn't harm them directly. To control mites, citronellol can be used with other substances that disrupt the mite's normal life cycle. For example, the first pesticide product registered with citronellol contains several chemicals that interfere with mite mating, thereby decreasing the number of mites in the next generation.

II. Use Sites, Target Pests, And Application Methods

- **Use Sites:** Food commodities, ornamentals, landscaping, outdoors and indoors.
- **Target pests:** Mites that attack crops (mainly tetranychid or spider mites)
- **Application Methods:** Apply with conventional spray equipment when mites are seen on plants or when conditions favor mite outbreaks.

III. Assessing Risks to Human Health

Citronellol shows some dermal and oral toxicity when tested at high concentrations in laboratory animals. As a pesticide active ingredient, it will be used in tiny concentrations that will not measurably add to the amount of citronellol people are already exposed to in food and flavorings. No risk is expected if handlers and users follow label instructions.

IV. Assessing Risks to the Environment

Citronellol is found in many plants and animals and is readily metabolized to harmless substances. No adverse effects to non-target organisms or the environment are expected from use of this active ingredient in pesticide products.

V. Regulatory Information

The first pesticide product containing Citronellol as an active ingredient was registered on April 20, 2004. The product is BIOMITE, used for controlling mites, and it was the only registered product as of December 2005.

VI. Registrant Information

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VII. Additional Contact Information

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