

Black Pepper Oil (000669) Fact Sheet

OPP Chemical Code: 000669 (CAS #8006-82-4)

Summary

Black pepper oil is extracted from dried black peppercorns. As a pesticide active ingredient it is used for repelling mammalian pests such as dogs, cats, ground hogs, and squirrels. The first repellent end product containing this active ingredient is used in residential, non-food areas, such as attics, garages, and lawns. Oil of black pepper is commonly used in food, healing oils, and aromatherapy. Consequently, no adverse effects to humans or the environment are expected from the tiny amounts of this oil that will be used in pesticide products.

I. Description of the Active Ingredient

Oil of black pepper, a pale yellow irritating liquid with a sharp peppery odor, is obtained by steam distillation of the unripe dried fruit (peppercorns) of the plant *Piper nigrum* (black pepper). Researchers have found that the oil contains many different components, including chemicals commonly found in plant oils. Oil of black pepper has many non-food uses, including in aromatherapy and as a component of therapeutic skin products.

II. Use Sites, Target Pests, And Application Methods

- **Use Sites:** The first end product, Woodstream's "Animal Repellent Granular" is labeled for use indoors in non-living areas only (attics, basements, cellars, storage areas, garages, sheds, and barns), and outdoors on lawns, garden paths, flower beds, ornamental plants, trees, shrubs, and garbage bags.
- **Target pests:** Dogs, cats, ground hogs, squirrels, skunks, and raccoons.
- **Application Methods:** Granular formulation applied from the container by hand or spreader. Whether or not a substance poses a risk to humans or other organisms depends on two factors: how toxic the substance is, and how much of it an organism is exposed to. Therefore, the EPA considers toxicity data and exposure data in determining whether to approve a pesticide for use.

III. Assessing Risks to Human Health

No adverse effects to humans are expected from use of oil of black pepper in pesticide repellent products, because:

1. Oil of black pepper is considered GRAS (generally recognized as safe for use in food) by FDA, and is widely used as a flavoring agent in foods,
2. There is widespread exposure to oil of black pepper without any reported adverse effects to human health.
3. Therapeutically, the oil is mixed with other ingredients and applied to human skin with no apparent adverse effects
4. Only tiny amounts of oil of black pepper are present in the registered end product, so exposure is expected to be minimal.

IV. Assessing Risks to the Environment

No toxic effects have been identified in mammals, birds, or fish. No adverse effects are expected based on the widespread use of oil of black pepper and the lack of reported adverse effects. Oil of black pepper is intended to repel small mammals, and therefore is not expected to harm target or non-target organisms.

V. Regulatory Information

March 2004: Oil of black pepper initially registered (licensed for sale).

First end product for repelling small mammals is "Animal Repellent Granular" (OPP Registration # 50932-10), which also contains the active ingredients piperine and capsaicin.

VI. Registrant Information

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VII. Additional Contact Information:

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