



Diazinon

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Diazinon does not occur naturally in the environment. The pure chemical is oil that is colorless and practically odorless. Commercial diazinon is a pale to dark brown liquid [ATSDR].

Usage and exposure

Diazinon is the common name of an organophosphorus insecticide used to control pest insects in soil, on ornamental plants, and on fruit and vegetable field crops [ATSDR].

Diazinon may enter the environment from agricultural and household application of the chemical to control insects. After diazinon has been applied, it may be present in the soil, surface waters (such as rivers and ponds), and on the surface of plants. Diazinon is rapidly broken down to a number of different compounds [ATSDR].

People who work in the manufacture and professional application of diazinon have the most significant exposure to this insecticide [ATSDR].

Although diazinon was formerly used as the active ingredient in home and garden pest control products, sale of these home and garden products in the United States was stopped in 2004. However, previously purchased diazinon-containing home and garden products may still be in use and present the potential for exposure [ATSDR].

Diazinon is used in agriculture to control insects on fruit, vegetable, nut and field crops. It is also used to make ear tags for cattle. Diazinon has been used in the United States since 1956. Before the cancellation of residential uses in 2004, diazinon was used for household insects, lawn and garden insect control, and to control insects on pets [NPIC].

Routs of exposure

Inhalation, ingestion, dermal contact.

Target organs

Diazinon is cholinesterase inhibitor

Metabolism

Once in the body, diazinon is rapidly broken down and eliminated from the body mainly in the urine. Diazinon has not been shown to accumulate in any tissues and most of the chemical is eliminated from the body within 12 days [ATSDR].

Health hazards

Short exposures to high levels of diazinon can affect the nervous system. Symptoms include: headache, dizziness, weakness, feelings of anxiety, constriction of the pupils of the eye, not being able to see clearly, abdominal cramps, diarrhoea. [ATSDR].

Exposures to very high levels can cause more severe symptoms including: nausea, vomiting, abdominal cramps, and diarrhea, slow pulse, pinpoint pupils, difficulty breathing, and coma. Signs or symptoms of nervous system damage may occur within 30–60 minutes [ATSDR].

There is no evidence that long-term exposure to low levels of diazinon causes any harmful health effects in people [ATSDR].

There is no evidence that environmental exposure to diazinon causes birth defects or other developmental effects in people [ATSDR].

Diazinon has not been shown to cause cancer in people or animals. The International Agency for Research on Cancer (IARC) has not classified diazinon for carcinogenicity [ATSDR].

In animals, levels of exposure to diazinon high enough to affect the health of pregnant mothers caused developmental effects in their newborn babies. Animal studies have shown that diazinon and/or its breakdown products can be transferred from a pregnant mother to a developing fetus, but no human data were located regarding the transfer of diazinon from the mother to the fetus or nursing infant [ATSDR].

References

- ATSDR, Agency for Toxic Substances & Disease Registry. Public Health Statement for Diazinon.
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- NPIC, National Pesticide Informational Center. Diazinon.
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