What is oxamyl and how is it used?

Oxamyl is a white crystalline organic solid with a slight sulfurous odor. It is widely used for control of insects, mites and nematodes on field crops, fruits and ornamentals. The majority of oxamyl is applied to apples, potatoes, and tomatoes.

Why is oxamyl being regulated?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine safe levels of chemicals in drinking water which do or may cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals.

The MCLG for oxamyl has been set at 0.2 parts per million (ppm) because EPA believes this level of protection would not cause any of the potential health problems described below.

Based on this MCLG, EPA has set an enforceable standard called a Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies.

The MCL has been set at 0.2 ppm because EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove this contaminant should it occur in drinking water.

These drinking water standards and the regulations for ensuring these standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

What are the health effects?

Short-term: EPA has found oxamyl to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: tremors, salivation and tearing due to interference with nerve function.

Long-term: Oxamyl has the potential to cause the following effects from a lifetime exposure at levels above the MCL: decreased body weight.

How much oxamyl is produced and released to the environment?

Oxamyl is released directly to the environment in its use as an insecticide and during its manufacture, handling and storage. EPA estimated that 400,000 lbs. of oxamyl were produced in the US in 1982.
What happens to methoxychlor when it is released to the environment?

Oxamyl is highly soluble in water, and is relatively stable in acidic waters. Otherwise it is readily broken down. Degradation is also rapid in soils which makes it unlikely that oxamyl will leach to ground water. Accumulation in aquatic life is not expected as oxamyl is rapidly absorbed, metabolized and eliminated in toxicological tests.

How will oxamyl be detected in and removed from my drinking water?

The regulation for oxamyl became effective in 1994. Between 1993 and 1995, EPA required your water supplier to collect water samples every 3 months for one year and analyze them to find out if oxamyl is present above 2 parts per billion. If it is present above this level, the system must continue to monitor this contaminant.

If contaminant levels are found to be consistently above the MCL, your water supplier must take steps to reduce the amount of oxamyl so that it is consistently below that level. The following treatment methods have been approved by EPA for removing oxamyl: Granular activated charcoal.

How will I know if oxamyl is in my drinking water?

If the levels of oxamyl exceed the MCL, 0.2 ppm, the system must notify the public via newspapers, radio, TV and other means. Additional actions, such as providing alternative drinking water supplies, may be required to prevent serious risks to public health.

This factsheet was adapted from U.S. EPA.
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