Consumer Factsheet on: DINOSEB

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

This is a factsheet about a chemical that may be found in some public or private drinking water supplies. It may cause health problems if found in amounts greater than the health standard set by the United States Environmental Protection Agency (EPA).

What is Dinoseb and how is it used?

Dinoseb is an organic solid - yellowish crystals with a pungent odor. Its greatest use is as a contact herbicide for post-emergence weed control in cereals, undersown cereals, seedling lucerne and peas. Dinoseb is also used as a corn yield enhancer and an insecticide and miticide.

The list of trade names given below may help you find out whether you are using this chemical at home or work.

Trade Names and Synonyms:

Aatox
Chemox
Gebutox
Knox-weed
Basanite
BNP 20
Butaphene
Dibutox
Dinitrall
Dinitro
Desicoil
Dow Selective Weed Killer
Hivertox
Ladob
Laseb
Nitropone C
Dytop
Premerge
Hel-fire
Caldon
Kiloseb
Sinox General
Subitex
Dinitrobutyl-phenol

Why is Dinoseb 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 dinoseb has been set at 7 parts per billion (ppb) 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 7 ppb 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 dinoseb to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: sweating, headache, mood changes.

Long-term: Dinoseb has the potential to cause the following effects from a lifetime exposure at levels above the MCL: decreased body and thyroid weight, degeneration of testes; thickening of intestinal lining.

How much Dinoseb is produced and released to the environment?

1982 production of dinoseb was reported as 6.2 million pounds, used primarily on soybeans and vegetables. Release of dinoseb has resulted primarily from its use as an herbicide on a variety of weeds.

What happens to Dinoseb when it is released to the environment?

Dinoseb is degraded slowly by soil bacteria and binds weakly to soil. Therefore, leaching in soil is possible and dinoseb has been detected in groundwater. In water, dinoseb is mainly broken down by sunlight. It is not likely to accumulate in aquatic life.

How will Dinoseb be Detected in and Removed from My Drinking Water?

The regulation for dinoseb 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 dinoseb is present above 0.2 ppb. 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 dinoseb so that it is consistently below that level. The following treatment methods have been approved by EPA for removing dinoseb: Granular activated charcoal.

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

If the levels of dinoseb exceed the MCL, 7 ppb, 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.

Drinking Water Standards:

Mclg: 7 ppb

Mcl: 7 ppb

Learn more about your drinking water!

EPA strongly encourages people to learn more about their drinking water, and to support local efforts to protect and upgrade the supply of safe drinking water. Your water bill or telephone book's government listings are a good starting point.

Your local water supplier can give you a list of the chemicals they test for in your water, as well as how your water is treated.

Your state Department of Health/Environment is also a valuable source of information.

For help in locating these agencies or for information on drinking water in general, call: EPA's Safe Drinking Water Hotline: (800) 426-4791.

For additional information on the uses and releases of chemicals in your state, contact the: Community Right-to-Know Hotline: (800) 424-9346