

**Summary from the Health Advisory (HA)
for
Dacthal and Dacthal Degradates (Tetrachloroterephthalic Acid
and Monomethyl Tetrachloroterephthalic Acid)**

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This is a Summary derived from the [Health Advisory for Dacthal and Dacthal Degradates](#) [Tetrachloroterephthalic Acid (TPA) and Monomethyl Tetrachloroterephthalic Acid (MTP)], unregulated contaminants occasionally found in drinking water. HAs serve as informal guidance on the concentrations of chemicals that may raise a health concern when spills or contamination situations occur. They are prepared for the Federal, State and local officials responsible for protecting public health. The guideline values are not enforceable Federal standards and are subject to change as new information becomes available.

What are dacthal and dacthal degradates?

Dacthal is a pesticide used to control the growth of weeds. It is sold as formulations of colorless and odorless crystals. It is only slightly soluble in water. In the environment, dacthal breaks down into TPA and MTP. No information on the physical properties of TPA and MTP is available, but both chemicals are expected to be more water soluble than dacthal.

What are the uses for dacthal and its degradates?

Dacthal is used as a pre-emergence herbicide to control grasses and weeds. It is applied to the fields where a variety of vegetable crops are grown and to lawns for the protection of turf from weed infiltration. MTP and TPA are formed when dacthal breaks down in the environment.

How do dacthal and its degradates get in my drinking water?

Dacthal is found in the soil wherever it is used. It is strongly bound to soil, but may enter water via runoff. The degradates, TPA and MTP, are more water soluble than dacthal and may leach to groundwater. The combined dacthal degradates were detected by 2.13 % of small Public Water Systems and 5.14% of large systems at levels $\geq 1 \mu\text{g/L}$; monitoring for dacthal was not conducted. The highest reported concentration for the degradates was 190 $\mu\text{g/L}$ in a small system; the median concentration was 2 $\mu\text{g/L}$ for large and small systems,

How much dacthal and its degradates am I exposed to from sources other than my drinking water?

Dacthal is not expected to be present in the air except during application. Dacthal and its degradates are found in soil following the use of dacthal as an herbicide. Because dacthal is used around food crops, trace amounts may be present on food. In a 1989-1990 survey of 6,970 samples of fresh produce such as broccoli, lettuce and turnips, dacthal was detected in <1% of the samples (50 samples); dacthal degradates were not monitored.

What adverse health effects have been observed in humans and animals exposed to high levels of dacthal, and its degradates?

There are no health data on excessive exposure of humans to dacthal or its degradates. In rodents, effects on the liver, kidney, and thyroid were observed following excessive exposure, along with some effects on the lungs. The toxicity data for TPA are limited but indicate that it is less toxic than dacthal. No standard toxicity studies have been identified for MTP.

What are the amounts of dacthal and its degradates that might cause adverse health effects?

The potential effects resulting from exposure to dacthal may include enlargement of the liver and thyroid. The One-Day and 10-Day HAs for a 10-kg child are both 8 mg/L. The Longer-term HA is 1 mg/L for a 10-kg child and 4 mg/L for a 70-kg adult. The Lifetime HA, applied to a 70-kg adult is 0.07 mg/L (70 µg/L). TPA is less toxic than dacthal. The 10-Day HA for TPA is 100 mg/L and the longer term value is 50 mg/L for children and 200 mg/L for adults. A Lifetime HA has not been established for TPA. There are no data on which to base advisories for MTP.

How will I know if I have dacthal, MTP or TPA in my drinking water?

The Federal Government does not regulate dacthal or its degradates in drinking water and public drinking water systems are not required to monitor for this contaminant. Some states have drinking water standards or guidelines for dacthal; these range from 0.17 µg/L to 2 µg/L. You may want to call your drinking water utility or state drinking water program to determine if monitoring is required in your state.

If there is no requirement for monitoring in your state, you can have your water analyzed by a laboratory that is certified for the analysis of similar compounds. Ideally the analysis would include both dacthal and its TPA and MTP degradates. The following EPA website provides a list of state certification officers or links to certified laboratories in your state: <http://www.epa.gov/safewater/labs/index.html>. The contacts provided may be able to assist you in finding an appropriate laboratory.

You can also call your local public health office or the Safe Drinking Water Hotline Phone: 800-426-4791- toll free; <http://www.epa.gov/safewater/hotline/index.html> to determine if they are aware of any problems with dacthal, TPA, or MTP in your area.

How can dacthal and its degradates be removed if they get in my drinking water?

Potential treatment technologies for removing dacthal and its degradates from drinking water include membrane processes, activated carbon, and advanced oxidation. Before installing a home treatment unit, the manufacturer should be contacted to determine if it can remove dacthal and its degradates from your water supply.

How can I find out more about dacthal and its degradates?

The Drinking Water Health Advisory will provide additional detail about dacthal and its degradates. You can access the Health Advisory at www.epa.gov/waterscience/

Reference

United States Environmental Protection Agency (U.S. EPA). 2008. Drinking Water Health Advisory for Dacthal and Dacthal Degradates: Tetrachloroterephthalic Acid (TPA) and Monomethyl Tetrachloroterephthalic Acid (MTP). *Prepared by Health and Ecological Criteria Division (HECD), Office of Science and Technology (OST), Office of Water (OW) for Office of Groundwater/Drinking Water (OGWDW), OW, U.S. EPA.*