

Endothall Screening Profile

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Endothall is a chemical that may be present in potential drinking water sources in Minnesota. The information in this profile was collected for the screening process of the Minnesota Department of Health's Contaminants of Emerging Concern (CEC) program in March 2012 and updated in November 2021. The chemicals nominated to the CEC program are screened and ranked based on their toxicity and presence in Minnesota waters. Based on these rankings, some chemicals are selected for a full review. CEC program staff have not selected endothall for a full review.

Endothall Uses

Endothall is a selective herbicide, defoliant, desiccant, growth regulator, and aquatic algaecide. Its primary use is to control aquatic vegetation and algae in lakes, ponds, and irrigation canals in Minnesota.



Endothall in the Environment

Endothall enters the environment through regular aquatic application. Prior to 2021, monitoring for endothall had not taken place in Minnesota waters. However, testing of finished drinking water supplies – from both groundwater and surface water sources – was initiated in 2021 by the Minnesota Department of Health under the federal Safe Drinking Water Act. Additionally, endothall has occasionally been detected in surface water in other states at levels that exceed federal guidelines.¹ The U.S. Environmental Protection Agency (US EPA) has established a maximum contaminant level (MCL) of 0.1 parts per million (or 100 parts per billion (ppb)) in drinking water.² Endothall will likely break down in water after a few weeks.³

Endothall may be harmful to aquatic life including fish and birds. Endothall is not expected to build up in tissues of fish or other wildlife.⁴ Dogs are particularly sensitive to endothall toxicity³.

Exposure to Endothall

Exposure to endothall may occur by drinking contaminated water or swimming in contaminated water. People who apply endothall to lakes, ponds, or canals are also exposed.

Potential Health Effects

Endothall is a caustic chemical and can cause severe irritation to tissue. In animal studies, endothall applied directly to the skin destroyed the upper layers of skin. Additionally, when animals ate endothall it caused decreased body weight in offspring and lesions in the stomach and intestinal tract.³

MDH developed a Pesticide Rapid Assessment value of 8 parts per billion (ppb) for endothall in drinking water.⁵ A person drinking water at or below this level would have little or no risk of

health effects. A full review of endothall is possible; however, it is ranked lower than other nominated CEC chemicals at this time.

References

1. National Water Quality Monitoring Council (2021). Water Quality Portal. Data retrieved November 2021. [US Geological Survey \(USGS\) – US EPA Water Quality Portal \(www.waterqualitydata.us/\)](https://www.waterqualitydata.us/)
2. [EPA National Primary Drinking Water Regulations \(www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations\)](https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations)
3. US EPA 2015. [Endothall: Human Health Risk Assessment in Support of Registration Review \(www.regulations.gov/document/EPA-HQ-OPP-2014-0613-0005\)](https://www.regulations.gov/document/EPA-HQ-OPP-2014-0613-0005)
4. U.S. Environmental Protection Agency. (EPA) 2005. [Reregistration Eligibility Decision \(RED\) \(www.epa.gov/nscep\)](https://www.epa.gov/nscep) - search: “738R05008 Endothall”
5. Minnesota Department of Health. 2021 Pesticide Rapid Assessment Table. [Rapid Assessments for Pesticides \(www.health.state.mn.us/communities/environment/risk/guidance/dwec/rapidpest.html\)](https://www.health.state.mn.us/communities/environment/risk/guidance/dwec/rapidpest.html)

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