

## Comparative Oral Toxicity of Aquatic Herbicides and Common Household Products

A common question posed to aquatic applicators is how dangerous is the herbicide product you are putting in the lake? Toxicology testing is performed on all pesticides, as well as on the chemicals found in all common household products. Among the tests conducted, the most common (and most useful) is referred to as the oral LD50.

In toxicology, an LD50 value represents the dose of a chemical required to kill half of a tested species after ingestion. LD50 values are expressed in units of milligrams (mg) of substance per kilogram (kg) of body weight.

Toxicity increases as LD50 values decrease. For example, a chemical with a LD50 of 10 mg/kg is 10 times more toxic than one with a LD50 of 100 mg/kg. Considering that LD50 studies are conducted on all chemicals sold in the United States, they can be used as a means to compare the toxicity of one chemical to another.

The table below presents the acute oral LD50 for the active ingredient of common aquatic herbicides in comparison to common household products. The active ingredient is the main or primate ingredient in a product that makes it effective.

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Herbicide	Oral LD50 (mg/kg)	Household Product	Oral LD50 (mg/kg)
2,4-D	3,129	Acetaminophen	1944
Bispyribac-sodium	4,077	Aspirin	200
Carfentrazone	>5,000	Bleach (Sodium Hypochlorate)	192
Diquat	866	Caffeine	140
Endothall	233	Cinnamon	275
Flumioxazin	>5,000	Deodorant	>2,000
Fluridone	>5,000	Hot Sauce (capsaicin)	161
Glyphosate	>5,000	Nail Polish Remover	>5,000
Imazamox	>5,000	Pink Bismuth (bismuth subsalicylate)	1,200
Imazapyr	>5,000	Table Salt	3,000
Penoxsulam	>5,000	Vinegar (Acetic Acid)	3,310
Topramezone	>2,000	Vitamin A	1,510
Triclopyr	1847	Vitamin C	2,000