

# Do It Yourself Chemical Treatment

*Limnopro Aquatic Science is selling chemical products retail this year as a separate option to doing shoreline applications. You do not need to hire a commercial applicator to treat your shoreline and can likely better time and target your treatments when compared to hiring out a commercial applicator. You can directly purchase selective chemicals and apply them yourself as long as you have a valid MN DNR APM Permit. We will have a limited supply of the following products for sale during the years. Here are some advantages and disadvantages to applying your own chemical as opposed to hiring a commercial applicator to do it.*

## Advantages

- You do not need to wait for an applicator to schedule your treatment, so can treat earlier in the year prior to plants becoming a nuisance.
- You can choose optimal treatment days in terms of wind and water movement so that chemical stays put, giving you maximum effectiveness.
- You can fine tune your treatment with a number of different herbicides and chemical concentrations until you get your desired results
- You will save costs of labor as you will not need a commercial applicator out to treat.

## Disadvantages

- You expose yourself to possibility of chemical burns if you do not properly use personal protective equipment as described on product labels
- You have to read the label and calculate the rate of treatments.
- You are not allowed by law to use diquat or liquid Hydrothol 191, two effective and relatively low-cost chemicals often used by commercial applicators.
- Although not impossible, it is more difficult sometimes to get the MN DNR to sign off on two treatments in a year so that you may be restricted to only a single application.
- You are responsible for following MN laws including obtaining permits, hanging signs, and reporting herbicide use at the end of the year to the MN DNR.

# Limnopro Products

**Hydrothol 191 Granular** – This is the most commonly used herbicide by lakeshore owners that do their own treatments. It will control submersed plants (e.g., pondweeds, milfoil, coontail, elodea, naiads, and more) and algae (e.g., chara/nitella/starry stonewort, filamentous and planktonic forms). We generally use 1.5 ppm of this product. If you used 1.5 ppm, the application rate would be 0.0074 pounds per square foot. For example, a typical 35 ft x 100 ft application (i.e., 3,500 square feet) would require 26 pounds of chemical. The manufacturer recommended rate for lake shoreline treatments is 0.75 ppm. To use the manufacturer's suggested rate, you would use 13 pounds of chemical. Allowed maximum labeled rate is 5.0 ppm. Limnopro sells this product in 20-pound bags for a cost of \$118 plus tax.



**Cutrine Plus Granular** – This is a chemical that has copper as its active ingredient. It will only control algae, not plants. Algae includes chara (also known as muskgrass), starry stonewort, slimy filamentous algae, or the microscopic algae that makes the lake look like pea soup. While *Hydrothol 191* will also control algae, *Cutrine* is less expensive, targets algae in different ways, and is the general go-to for big problems with algae. You can use both *Hydrothol 191* and *Cutrine* to get greater control of algae as they work in different ways. Unfortunately, algae reproduce and grows back much faster than plants do. This means repeated treatments may be necessary. We use the maximum labeled rate of 3 ppm for treatment. If you used 3.0 ppm, the application rate would be 0.0014 pounds per square foot. For example, a typical 35 ft x 100 ft application (i.e., 3,500 square feet) would require a total of 4.9 pounds of chemical. *Control of algae with copper requires special permission and authorization on your MN DNR Permit.* Limnopro sells this product in 12-pound containers for a cost of \$48 plus tax.



**Copper Sulfate Granular** – This is another chemical that has copper as an active ingredient. It is the only labeled product that can be used to kill the snails that host parasites causing swimmer's itch. There is research that indicates the effectiveness chemical control of swimmer's itch is not great, not because it doesn't work, but because the parasites can easily move into your shoreline from other areas of the lake after you clear out what you have. Really the best protection against swimmer's itch is to use a good waterproof sunscreen or other specific creams prior to going into the water. Copper sulfate will also control algae like *Cutrine*. *Cutrine* tends to be more environmentally friendly, but both will work. If you use copper sulfate, there is no reason to also use *Cutrine*. *Cutrine* is not labeled to control swimmer's itch even though it contains copper. The recommended rate to control swimmer's itch is 5 ppm. If you used 5.0 ppm, the application rate would be 0.0012 pounds per square foot. For example, a typical 35 ft x 100 ft application (i.e., 3,500 square feet) would require a total of 4.2 pounds of chemical. *Control of algae or swimmer's itch with copper requires special permission and authorization on your MN DNR Permit.* Limnopro sells this product in 5-pound container for a cost of \$34 plus tax.



**Roundup Custom Liquid** – This is the only liquid product that we sell, and it is specifically for the control of waterlilies, cattails and bulrushes. What all of these plants have in common is that portions of them are exposed to the air out of the water. Roundup Custom will not work on plants that are completely submersed and as such should be sprayed directly on the parts of the plants that are out of the water. The active ingredient in Roundup is glyphosate, which is currently in very short supply. While Roundup is a common brand name, *Roundup Custom* is a specially formulated version of glyphosate for aquatic treatments. Do not apply the Roundup products that you find in regular garden section at retail stores. It is illegal and will not provide the expected control. Roundup Custom needs to be diluted at 11.8 parts water to 1 part Roundup Custom. The labeled application rate is 0.000045 gallons per square foot. For example, a typical 35 ft x 100 ft application (i.e., 3,500 square feet) would require a total of 0.16 gallons of chemical. You would add the 0.16 gallons of Roundup Custom to 1.89 (11.8 x 0.16 = 2.05) gallons of water for a total tank mixture of 2.56 gallons. Spray the above water portions of the plants equally until the chemical is gone. Note that the area of waterlilies or bulrush are likely much smaller than your total area approved. Calculations should be based on actual plant beds to be treated rather than entire shoreline approved. *Control of waterlilies, cattails, or bulrush requires special permission and authorization on your MN DNR Permit.* Limnopro sells this product in 2.5 gallons for a cost of \$195 plus tax per bag.



**Bio-Buster Muck Reduction Pellets** – This is not a chemical but an organic product that contains beneficial bacteria, enzymes, and catalysts to speed up the decay of dying vegetation and other muck at the bottom of the lake. This product does not require any special permit or permissions from the MN DNR for treatment. The labeled rate for this product is 1 pound per 4000 square feet, once per month. To calculate your needs this is equivalent to 0.00025 pounds per square foot. For example, a typical 35 ft x 100 ft application (i.e., 3,500 square feet) would require a total of 0.9 pounds of product. Limnopro sells this product in 25-pound pails for a cost of \$395 plus tax per bag.



# CHEMICAL PREORDER FORM

To guarantee supply and prices for 2022 we are taking orders for chemical up to April 15 for delivery by May 15. You may order after April 15<sup>th</sup>, but we cannot guarantee availability. Call for availability. Do not send in payment with this form. Once received you will have an invoice with payment terms that includes tax and shipping charges. Free shipping will be offered on orders \$99+. We encourage group orders with other lake residents. Your order is not complete until it has been paid for. If you would like Limnopro to apply for your MN DNR permit on your behalf, please select the appropriate box below. This service includes the \$35 fee that directly goes to the MN DNR, permit submission, PDF signs that you can print out appropriate for the chemical you ordered, and the required end of the year reporting to the MN DNR. If you select this option, we will send an additional form to be filled out with your invoice.

Contact Person Name: \_\_\_\_\_

Email Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Product	Qty	Price	Total
Hydrothol 191 Granular (20 lbs bag)		\$118.00	
Cutrine Plus Granular (12 lbs container)		\$48.00	
Copper Sulfate Granular (5 lbs container)		\$34.00	
Bio-Buster Muck Reduction Pellets (25 lbs pail)		\$345.00	
Roundup Custom Liquid (2.5 gallon jug)		\$195.00	
MN DNR Permit Application, Signage, and EOY Reporting <i>*Includes the annual MN DNR \$35 permitting fee</i>		\$95.00	

**Please either scan this page and email it directly to me at [dan@limnopro.com](mailto:dan@limnopro.com) or mail it to the address below.**

Estimated  
Pretax/preshipping  
Grand Total Cost \_\_\_\_\_



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*Thank you*