



<https://hgic.clemson.edu/>

# DO IT YOURSELF: VISUAL INDICATORS, STICK TEST, AND JAR TEST FOR CYANOBACTERIA

Factsheet | HGIC 1899 | Updated: Dec 14, 2022

If your pond experiences a suspected cyanobacteria bloom (figure 1), limiting contact with the water is safest until it is confirmed as safe. The most accurate way to determine if a bloom is cyanobacteria or a type of algae is to **submit a sample to Clemson University's Plant and Pest Diagnostic Clinic**. Results are typically available by email within five business days of the lab receiving the sample.

In the meantime, it may be helpful to use a “do it yourself” field test to provide immediate information. Use precautions (e.g., gloves and mask) while collecting the water sample to avoid exposure to the bloom through skin contact, ingestion, or inhalation.

## Visual Indicators

While various cyanobacteria species can look and behave differently, there are a few common visual indicators of a cyanobacterial bloom, including:

- a resemblance to paint or pea soup
- a scum may form on the water's surface or along the shoreline
- small particles or patches are common, which are generally green or blue-green (but can be other colors)

Typically, cyanobacteria blooms are not yellow in color (that is more likely pollen) nor long stringy strands.<sup>1</sup>

## DIY Stick Test Steps

1. Use a sturdy stick or rake/shovel handle to lift the plant/scum out of the water.
2. If the stick appears to have a coating of paint on it, it is likely cyanobacteria (figure 2).
3. If the stick lifts out strands of material, which may resemble hair, it's more likely filamentous algae or other type of aquatic plant (figure 3).
4. If the stick appears clean, results are inconclusive.



Figure 1. Harmful Algal Bloom (confirmed cyanobacteria) on pond in the Upstate of SC.  
Image credit: SC Pond Owner

Keep in mind that while informative, this test is not 100% accurate for all types of cyanobacteria, so you should continue to be cautious until receiving a lab confirmation that the bloom is not a toxin-producing species.

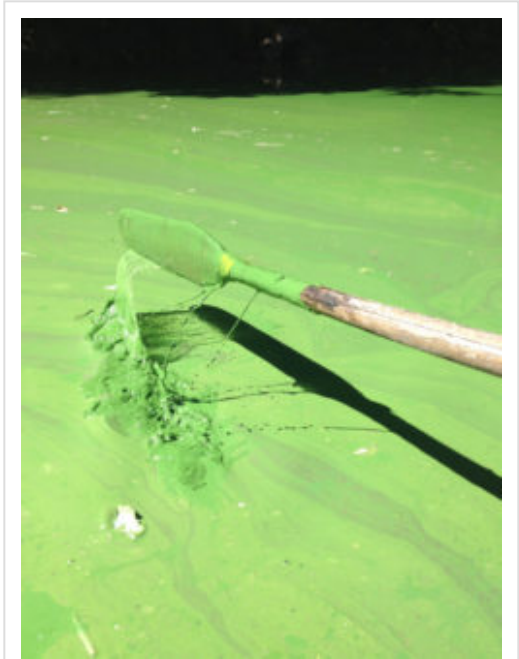


Figure 2. Stick test showing cyanobacteria covering paddle.

Image credit: Alanna Buckle, UKCEH

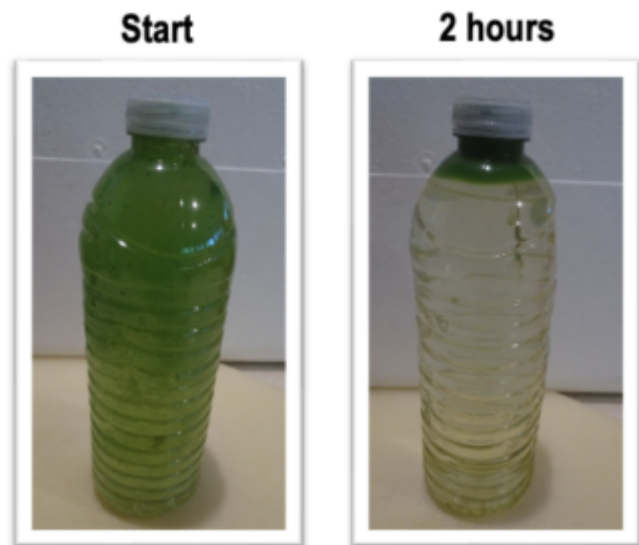


Figure 3. Stick test showing non-cyanobacteria aquatic plant growth.

Image credit: SC Pond Owner

## DIY Jar Test Steps

1. With appropriate precautions, collect a sample of the water and algae in a clear plastic or glass container (either a pickle or peanut butter jar work well). Be sure to leave some air space at the top of the bottle – only fill the container about 90% full. Place the cap on the container (figure 4).
2. Move the sample to a cool, dark location where it can remain undisturbed for 8-16 hours, although positive results may appear more quickly. Use either a cooler or refrigerator for sample storage. If using a refrigerator that may also contain food for human consumption, place the bottle in a clean, sealed plastic bag (e.g., Ziploc) to avoid the potential for contamination of food.
3. After the waiting period, view the sample – without moving it!
4. If a layer of cells or scum has formed at the water's surface, it is likely cyanobacteria (figure 4).
5. If the sample remains well-mixed, it may not be cyanobacteria (figure 4).
6. After the test is complete, jar contents can be poured onto a pervious surface outdoors, where it can soak into the ground.



The US Environmental Protection Agency offers several options for managing cyanobacteria blooms; additional information is available online at the [Control Measures for Cyanobacteria Blooms in Surface Water](#) webpage.

## References

Cyanobacteria (Blue-green Algae) Guidance for Vermont Communities. Vermont Department of Health. [accessed 1 Jul 2022].

<https://dec.vermont.gov/sites/dec/files/dwgwp/bluegreen/pdf/cyanoguidancevtcommunities.pdf>

## Related Fact Sheets

1. [HGIC 1889, \*Submitting an Algae Sample for Identification\*](#) (October 22, 2020)
2. [HGIC 1858, \*Cyanobacteria: Understanding Blue-Green Algae's Impact on Our Shared Waterways\*](#) (August 26, 2015)
3. [HGIC 1715, \*Biological Control of Aquatic Weeds\*](#) (December 5, 2015)
4. [HGIC 1720 \*Chemical Control of Aquatic Weeds\*](#) (December 8, 2015)
5. [LGP 1126, \*Pond Weeds: Causes, Prevention, and Treatment Options\*](#) (December 22, 2021)

*Originally published 08/22*

If this document didn't answer your questions, please contact HGIC at [hgic@clemson.edu](mailto:hgic@clemson.edu) or 1-888-656-9988.

## Author(s)

**Heather Bergerud Nix**, Upstate District Water Resources Agent, Clemson Extension

**John Hains**, Associate Professor Emeritus of Biological Sciences, Clemson University

**Debabrata Sahoo**, PhD, PE, PH, Associate Professor – Sustainable Water Resources Engineering, Clemson University

**Sarah A. White**, PhD, Nursery Extension Specialist, Clemson University

*This information is supplied with the understanding that no discrimination is intended and no endorsement of brand names or registered trademarks by the Clemson University Cooperative Extension Service is implied, nor is any discrimination intended by the exclusion of products or manufacturers not named. All recommendations are for South Carolina conditions and may not apply to other areas. Use pesticides only according to the directions on the label. All recommendations for pesticide use are for South Carolina only and were legal at the time of publication, but the status of registration and use patterns are subject to change by action of state and federal regulatory agencies. Follow all directions, precautions and restrictions that are listed.*

---

Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, gender identity, marital or family status and is an equal opportunity employer.

Copyright © 2023 Clemson University  
Clemson Cooperative Extension | 103 Barre Hall Clemson, SC 29634  
864-986-4310 | 1-888-656-9988 (SC residents only) | [HGIC@clemson.edu](mailto:HGIC@clemson.edu)