

## **Aquatic Algae: Characteristics and Methods of Control**

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Algae are one of the most diverse and widespread organisms, inhabiting almost every habitat on Earth and generating more oxygen via photosynthesis than all other plants combined. Their many forms, structures and other adaptations for survival can make control of problematic algal species difficult. In many situations, algaecides are the preferred management option due to rapid activity and their ability to at least temporarily alleviate the problems associated with high densities and secondary compounds (i.e. toxins, taste, and odor) that restrict critical water resource usages and require immediate intervention. For these situations, selection of an efficacious algaecide is crucial, since application of an ineffective algaecide or excessive amounts can be costly in terms of time, resources, as well as ecological risks.

Applied Biochemists in conjunction with Clemson University and other researchers have cooperated with public and private stakeholders over the past 10 years in advancing the science of algae control and aquatic management. A key focus and objective has been to optimize the use of U.S. EPA Registered Algaecides to manage algal problems within acceptable margins of safety to both man and environment. This Targeted Algal Management has involved development of effective algaecide screening protocols; corresponding algal toxin measurements; determination of impacts on non-target organisms; post-treatment residue levels; field trials to verify laboratory results and establishment of successful operational treatment programs. Applied Biochemists continues to develop and produce specific algaecide formulations to optimize the control of problematic algae and cyanobacteria species.