



**Aquashade® Aquatic Plant Growth Control  
Label Updates**

Applied Biochemists, an Arch Chemicals, Inc. company is pleased to announce the re-registration of Aquashade® Aquatic Plant Growth Control, after passing through EPA’s Re-registration Eligibility Decision (RED) and their updated Data Call-In (DCI) process. We have made some updates on the label including: more concise use directions; a user-friendly dosage chart; clarifications on restricted and non-restricted water use; additional contact information for medical emergencies; and modifications of how the active ingredients are presented.

**OPTIMAL RATIO OF BLENDED DYE**

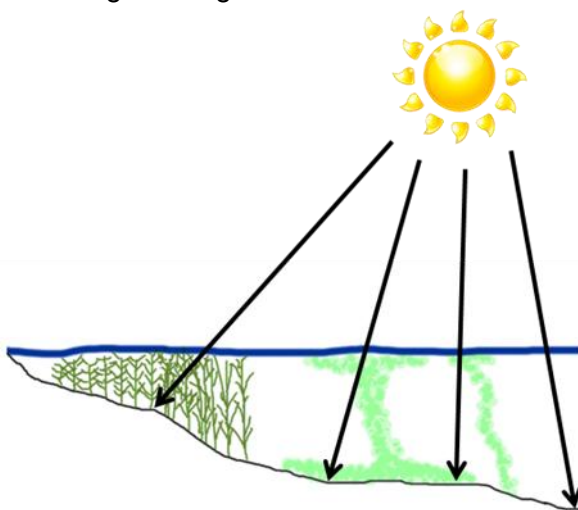
First and foremost, we want to stress that our formulation has **not** changed. The dye content is the same as when US Army Engineers said,

“Since Aquashade mostly absorbs light at wavelengths of 630 nm, it selectively absorbs light at wavelengths required for chlorophyll a excitation” (Madsen et al. 1999).

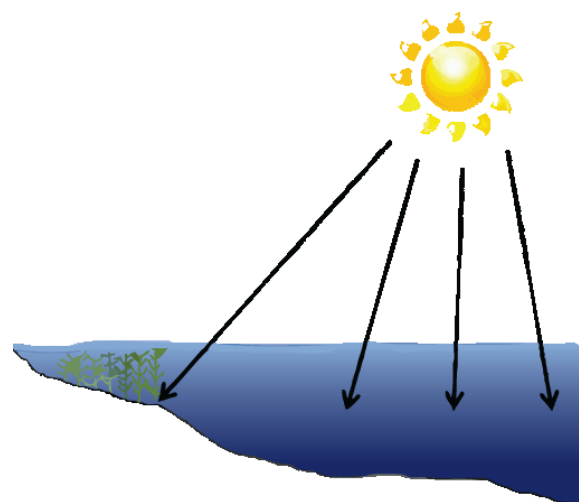
Aquashade is the optimal ratio of blended, quality Acid Blue 9 and Yellow 23 dyes scientifically proven to absorb specific wavelengths to control plant growth. The Aquashade® formulation will continue to be the same as that originally patented, EPA registered formulation that has been proven over many years of use and research.

However, in complying with new standards on how dye content is represented (since the original product registration was completed in the early 1980’s), the percentages of active ingredients now reflect pure dye content instead of measurements of the liquid concentrate considered to be the technical grade components. Beneath these new percentages we have listed pounds per gallon of the two actives to assist with measuring treatment amounts in parts per million as pure dye content.

Aquashade absorbs sunlight critical for plant growth. When applied at specified dosages underwater plants will not receive enough light to grow, however plants in shallow waters or on the surface will still be able to get sunlight.



Schematic drawing of untreated pond.



Schematic with Aquashade, showing sunlight penetration to only the top few feet of water.

### **SIMPLE RANGED DOSAGE CHART TO ONLY USE WHAT'S NEEDED**

The dosage chart, shown below, is revised to show standard application rates at the different parts per million required to control specific growth. The old label showed 1 ppm as the recommended dose to control most submerged aquatic plants. The new chart shows that most submerged aquatic plants can be controlled at between 0.5 and 0.8 ppm. These changes were not due to a change in the product, but from advancements in research. The higher rates 1.5 to 2.0 ppm will control more stubborn species specifically in shallow waters or where the plants have almost reached the surface.

<b>Dosage Rates for Aquashade*</b>				
<b>Aquashade (ppm)</b>	<b>0.5</b>	<b>0.8</b>	<b>1.5</b>	<b>2.0</b>
<b>Total Volume</b>				
<b>10,000 gal</b> <i>(37,850 L)</i>	<b>0.6 oz.</b> <i>18 mL</i>	<b>1.0 oz.</b> <i>30 mL</i>	<b>1.8 oz.</b> <i>54 mL</i>	<b>2.4 oz.</b> <i>72 mL</i>
<b>1 Acre-foot (326,000 gal)</b> <i>1,234 cubic meters</i>	<b>20 oz.</b> <i>0.6 L</i>	<b>32 oz.</b> <i>0.95 L</i>	<b>60 oz.</b> <i>1.8 L</i>	<b>80 oz.</b> <i>2.4 L</i>
<b>4 Acre-feet ( 1.3M gal.)</b> <i>4,936 cubic meters</i>	<b>80 oz.</b> <i>2.4 L</i>	<b>1 gal.</b> <i>3.8 L</i>	<b>1.9 gal.</b> <i>7.2 L</i>	<b>2.5 gal.</b> <i>9.6 L</i>

\*Use the lower (0.5-0.8 ppm) rates early for suppression of submersed plants (Leafy Pondweed, Chara, Slender Naiad, Watermilfoil, Hydrilla) and Filamentous Green (Spirogyra sp.) and Bluegreen algae growing at depths greater than 2 feet of the surface. Use higher rates (1.5- 2.0 ppm) in shallow waters or in-season where growth is within 2 feet of surface.

### **SHORT WAIT TIME TO USE WATER**

Water use restrictions have been addressed to more clearly state that swimming, irrigation and livestock watering is acceptable once the dye has dispersed evenly.

### **HIGHEST SAFETY STANDARDS AND CUSTOMER SERVICE**

To keep our safety standards at the highest level we have listed contact information for any emergencies that should arise, such as a spill, leak or medical incident. We have also updated our storage and disposal language to avoid any environmental incidents. Our determination to provide exceptional customer service has prompted a change in the use instructions to clearly state the capabilities of this product. We want our customers to understand the product they are purchasing to make sure they are selecting the best product for their situation.

These label changes were initiated on production runs made in late summer of 2009, however, it is possible some prior labeled product is still in the channels of trade. As with all aquatic products, always read and following all label instructions and precautions.

### **REFERENCES**

Madsen, J. D., K. D. Getsinger, R. M. Stewart, J. G. Skogerboe, D. R. Honnell, and C. S. Owens. (1999). "Evaluation of transparency and light attenuation by Aquashade.," *Journal of Lake and Reservoir Management* 15: 142-147