



Cloudy water need never be a problem again! Enjoy a crystal clear aquarium with **Aqualife CLARIFY for Aquariums**. Suspended particles that are too fine to be removed by mechanical filtration cause water to appear cloudy. Whether resulting from overfeeding, a bloom of bacteria, or gravel dust, cloudy water can become clear water in minutes with **Aqualife CLARIFY for Aquariums**.

#### **Aqualife CLARIFY for Aquariums**

- Clumps suspended particles together
- Improves filter efficiency
- Safe for all aquatic life, pets and people
- Works in fresh or salt water

**Aqualife CLARIFY for Aquariums** rapidly clears water by pulling together (flocculating) fine particles, allowing them to be removed by the filter or settle to the bottom, leaving your aquarium crystal clear. Unlike other brands, our formulation will not affect biological filtration.

**Aqualife CLARIFY for Aquariums** is safe for all fish, plants and invertebrates, and suitable for use in all freshwater, saltwater and reef aquariums.

**Aqualife CLARIFY for Aquariums** does not alter pH or other water parameters, and is 100% phosphate free.

**Dosage:** Add 1 teaspoon (5 mL) per ten gallons. 1 tablespoon (15 mL) treats 30 gallons. 16 ounce bottle treats 960 gallons

**Product: CLARIFY for Aquariums**

**Category:** Additives and Supplements, Aquarium

**Unique Product Features: Aqualife CLARIFY for Aquariums** enhances filtration and clears cloudy water overnight.

**Packaging:** Available in 4, 8 or 16 ounce bottles.

#### **Product Rationale**

Suspended matter in aquarium water sometimes cannot be adequately removed by filtration, resulting in cloudiness. Suspended matter can consist of large solids that will settle out by gravity alone, and much smaller particles that neither will settle out nor can be removed by standard mechanical filtration. The presence of these smaller particles results in cloudy water. Removal of cloudiness can be accomplished by three processes: coagulation, flocculation, and sedimentation.

- Coagulation destabilizes suspended particles by neutralizing their surface charges. Once neutralized, the particles no longer repel each other and can be brought together.
- Flocculation brings together the destabilized, or "coagulated," particles to form larger clumps, or "flocs."
- Sedimentation refers either to settling of the flocculated particles, or to their physical removal by mechanical filtration.

#### **The Chemistry of Cloudy Water**

The particles that cause cloudy water repel each other because most of their surfaces are negatively charged. Coagulation of particles must occur before they can be removed. In aquariums with delicate fish, plants and aquatic life coagulation can be effected by the addition of certain low-molecular-weight, water-soluble organic polymers with numerous ionized sites. These polymers neutralize the surface charge on suspended particles, allowing them to clump together, or coagulate. By adding high-molecular-weight, water-soluble organic polymers coagulated suspended matter can be flocculated into larger clumps, or flocs. Polymers increase floc size by ionic binding to clumped particles. Polymers also work by molecular bridging, literally "tying" two clumps together like a piece of string.

Therefore, coagulation involves neutralizing charged particles to destabilize suspended solids. In most clarification processes, a flocculation step then follows. Flocculation starts when neutralized or entrapped particles begin to collide and fuse to form larger particles. This process can be enhanced by the addition of polymeric flocculant aids. **Aqualife CLARIFY for Aquariums** is formulated with both low and high molecular weight polymers for maximum effectiveness and economical dosing.

Available from  
Authorized Dealers nationwide  
Dealer Inquiries:  
[www.aqualifesupport.com](http://www.aqualifesupport.com)

