



POWERFUL  
WATER  
PURIFICATION



UNTREATED



SPECTRUM

### What is SPECTRUM?

Spectrum rapidly consumes organic matter and detoxifies odorous compounds such as ammonia, organic acids and hydrogen sulfide. Spectrum is used frequently in outdoor ponds and lakes to purify dirty water, prevent algae proliferation and promote the healthy growth of fish and shrimp.

Removes hydrogen sulfide (H<sub>2</sub>S) or rotten egg smell from the sludge and muck which consumes a large part of oxygen in the aquatic ecosystem for its reduction of sulfate (SO<sub>4</sub>).

#### Sulfate Reducing Bacteria (SRB)



\*\*Spectrum reverses this reaction using sulfur oxidizing bacteria

#### Sulfur Oxidizing Bacteria (SOB)





### COMPONENTS:

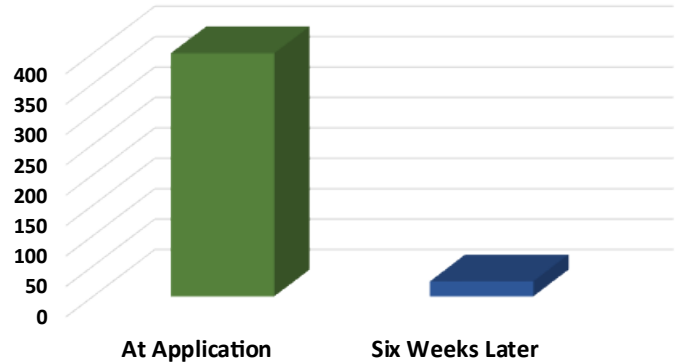
- Allochromatium vinosum - purple sulfur bacteria that consume hydrogen sulfide
- Bacillus species - primary organic matter decomposers
- Chloroflexus species - green non-sulfur bacteria that consume hydrogen sulfide
- Rhodobacter capsulatus - purple non-sulfur bacteria that eats organic acids
- Thiobacillus thioparus - oxidize hydrogen sulfide
- Thiobacillus denitrificans - remove nitrate from water creating harmless nitrogen gas

### BENEFITS FOR USERS:

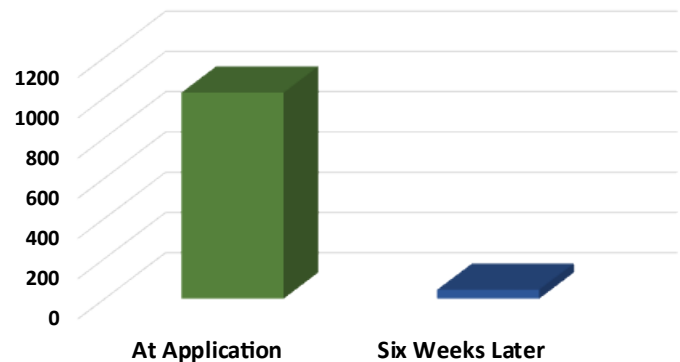
- Purifies the environment for your pond, promoting faster fish growth
- Reduces ammonia nitrogen and nitrate levels
- Digests organic sludge
- Seeds and maintains biological filters
- Significantly reduces noxious odors caused by dead algae, fish fecal matter, and urine
- Reduces hydrogen sulfide, which creates strong, offensive odors
- Reduces biological oxygen demand (B.O.D.)
- Reduces buildup of bird droppings, fish feed and dead leaves
- Breaks down dead algae
- Contains purple and green photosynthetic bacteria which reduce cloudy water by promoting flocculation and settling of organic and inorganic particles
- Effective over a wide range of pH conditions

## WATER QUALITY IMPROVEMENT

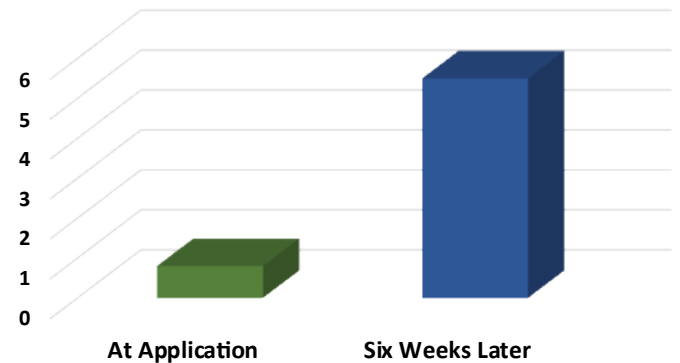
Biochemical Oxygen Demand BOD - (mg/L)



Chemical Oxygen Demand COD (mg/L)



Dissolved Oxygen DO (ppm)



### APPLICATION GUIDELINES:

- Use 1 qt. per 31,250 gallons
- Use 1 gal. per 125,000 gallons
- Use 10 gal. per 1,250,000 gallons

\*\*\*Product activates immediately and you will see results in two weeks.