

POWERFUL
WATER
PURIFICATION



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.

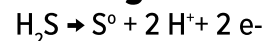
SPECTRUM removes hydrogen sulfide (H₂S), the cause of the rotten egg smell, from the sludge and muck which consumes a large part of the oxygen in an aquatic ecosystem for its reduction of sulfate (SO₄).

Sulfate Reducing Bacteria (SRB)

Organic Matter + SO₄ → New Cells + CO₂ + H₂S + Energy

****SPECTRUM** reverses this reaction using sulfur oxidizing bacteria

Sulfur Oxidizing Bacteria (SOB)



Photosynthetic Bacteria/ Sunlight



SPECTRUM

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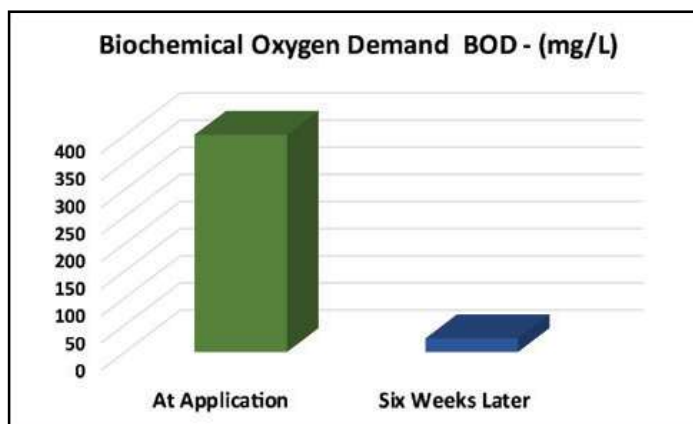
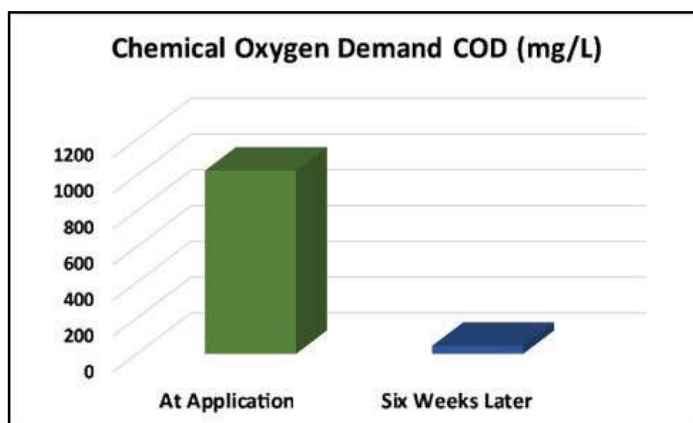
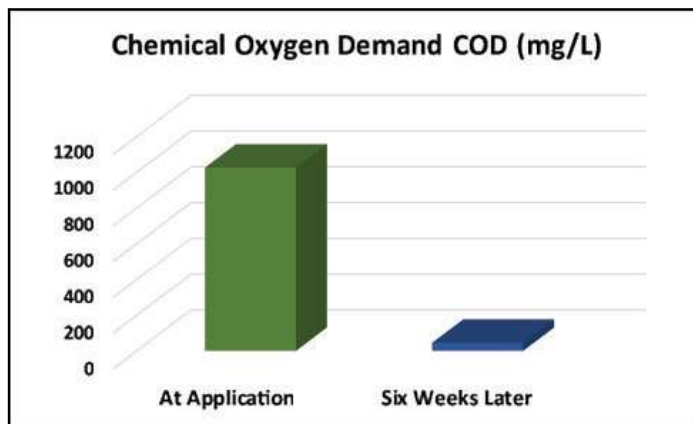
COMPONENTS:

- **Allochrochromatium 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** - Oxidizes hydrogen sulfide.
- **Thiobacillus denitrificans** - Removes nitrate from water, creating harmless nitrogen gas

BENEFITS:

- 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 (BOD).
- 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



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. You will see results in approximately two weeks.