

Addition of MB-04 Wastewater Treatment Enhancer

Wastewater Treatment Plant

Many wastewater treatment facilities have difficulties consistently meeting effluent standards. Upsets can occur on a seasonal basis peak seasons, during summer months, etc.; as flow rates approach design capacity; or as production changes are made. So problems arise. Many companies have found an answer in **MB-04**. Regular users of **MB-04** do so to:

- Improve BOD₅ removals
- Increase solids settleability
- Lower sludge volumes
- Control malodors
- Reduce hydrogen sulfide corrosion
- Accelerate digestion of solids
- Quicker recovery from upsets due to shock loadings
- Increase nitrification / denitrification efficiency
- Lower suspended solids in effluent
- Decrease oxygen demand

Programmed additions

MB-04 Wastewater Treatment Enhancer is introduced to the wastewater system to aid in maintaining a dominance of selected biological cultures. A typical treatment program entails a higher initial dosage of **MB-04** followed by regular maintenance applications. The maintenance dosage aids in stimulating the activity of desirable facultative anaerobes. This increase in facultative activity results in numerous practical advantages including substantial savings in cost and time.

Oils, petrochemicals, complex starches, phenolics and other troublesome substances are biodegraded more efficiently. Organic solids are usually more completely broken down in the process. Malodors are reduced or eliminated, as the growth of odor producing organisms are minimized by the overwhelming competition provided by the carbon reducing bacteria. The effluent quality from

an aerobic zone is improved through the increased facultative digestion of organic matter and improved settleability of solids in the clarifier. The product focuses on specific facultative bacteria which function in the presence or absence of dissolved oxygen.

The stimulation of facultative bacteria with micronutrients in anaerobic and/or aerobic modes reduces susceptibility to toxic substances such as heavy metals, germicides, strong acids or alkalis. If there is little or no biological activity in a treatment facility however, it is necessary to discover and eliminate any adverse conditions before bioaugmentation.

BENEFITS

- n **Reduction of costs.** Most of the benefits listed below generate obvious savings, either in construction or operational expenses.
- n **Eliminate, reduce or delay need for plant expansion or modernization by:**
 - Increase BOD removal efficiency via facultative anaerobes
 - Reduced sludge volume
 - Reduced oxygen requirements
 - Reduce chemical treatment requirements.
 - Provide more consistent, predictable results.
- n **Elimination of organic deposits.**
 - Less maintenance.
 - Cleaner sludge and scum lines.
 - Cleaner wet well and clarifiers.
 - Improved appearance.
 - Reduced chemical requirements for handling deposits.
 - Reduced energy requirements for pumping.
- n **Effective elimination of odors.**
 - Improved public relations
 - Avoid costly and time-consuming litigation.
- n **Reduction of hydrogen sulfide.**
 - Reduction in corrosion.
 - Improved safety.
 - Lowered toxicity of final effluents.
- n **Improved settleability of solids.**

- Elimination or reduction of flocculents.
- Increased sludge density.
- Less sludge pumping.
- Lowered transportation costs for sludge disposal.

n **Improved digestion of organic matter.**

- Onsite destruction of many organics.
- Reduced solids disposal and associated energy costs.

Anaerobic sludge digester:

- Increased organic removal efficiencies.
- Reduced sludge volume requiring disposal.
- Reduction of many scums and deposits.
- Increased gas production.
- More stable sludge, easier to dewater
- Reduced odors

Wet Wells:

- Odor Reduction
- Pretreatment of Wastewater Including;
- Increased Microbial Growth
- Enhanced biodegradation of fats, oils and grease
- Improvements in system stability and effluent quality
- Enhancement of oxygen transfer
- Increased sludge removal capabilities
- Improved sludge characteristics and dewaterability