

B.S.D

Bio Sulphite Digester and Odor Control



B.S.D is proven to digest sulphites and organic waste. **B.S.D** works with **Bugs in a Bag** to protect your community standing through odor control in strict anaerobic environments. Many odors in wastewater are formed as the result of unintended biological activity in anaerobic conditions in wastewater treatment and collection systems. Hydrogen sulfide, for example, is generated from sulfate-reducing bacterial that grow in anaerobic conditions. Hydrogen sulfide not only has a strong odor, but it is corrosive and a health hazard at high concentrations. Odor control strategies that focus only on neutralizing odor compounds after they are generated are often unsuccessful because they fail to moderate the conditions that facilitate the formation of odors.

B.S.D is used in combination with **Bugs in a Bag**. **B.S.D** allows **Bugs in a Bag** to work effectively in anaerobic zones in lagoons, sewer lines, lift stations and other areas of the wastewater conveyance or treatment system where anaerobic conditions may persist. **B.S.D** is critical part of an effective biological strategy using **Bugs in a Bag**.

B.S.D is an additive with microbes for use with **Bugs in a Bag** for controlling odors in anaerobic environments.

The benefits of using **B.S.D**

Low Operating Costs

- Reduces spending on odor control chemicals

Improved Plant Efficiency

- Improves **Mega Bac Plus** performance in anaerobic environments
- Prevents hydrogen sulfide odors

Simplified Operations

- Predictable odor control
- Reduces odor complaints

ONLY OMEGA™

Fairfield, CA 94534

1-800-571-7347 www.onlyomega.com www.facebook.com/onlyomega Fax: 707-864-8134

Additional Information

Omega Industrial Supply's odor control solutions are advanced blends of microorganisms that target the main odors associated with wastewater treatment plants, including sulfides, mercaptans, organic acids, and sludge odors.

BENEFITS

Odors in wastewater plants are an inherent part of the treatment process and come in a variety of classes, each having a different origin. Odors have the potential to become problematic, especially if the plant is in close proximity to residential or commercial areas. Compounds that most commonly cause malodorous smells are sulfides ("rotten egg" odor), mercaptans ("sulfur" odor), and volatile organic acids ("rancid butter" or "sweaty socks" odor). Controlling these odors is often necessary for maintaining a favorable reputation with the local community.

Odors are frequently the result of unintended biological processes taking place throughout the collection system and wastewater treatment plant and are often best solved using biological solutions. Chemical oxidizers are expensive and can be disruptive to the microbial community and the treatment process. Masking agents are temporary fixes and do not tackle the root of the problem.

Bugs in a Bag odor control technology increases the degradation of targeted odor compounds, reducing odor complaints as a result. **Bugs in a Bag** works within the existing plant infrastructure, is easy to apply, and helps lower the overall cost of odor control.

PRODUCT RANGE

Bugs in a Bag: Controls sulfur-based wastewater odors.

Bugs in a Bag also degrades a variety of volatile organic acids.

It works in both aerobic and anaerobic environments where odors are formed and can immediately respond when odorous sulfur compounds or organic acids are generated.

PERFORMANCE

B.S.D odor control solutions are proven to be effective in a variety of wastewater settings. A treatment strategy featuring **Bugs in a Bag** and **B.S.D** can address odor problems from two sides. In anaerobic environments, **B.S.D** is added to the wastewater to shut down the sulfate respiratory pathway by offering another one with a higher energy yield. It also provides microorganisms to accelerate the degradation of organic compounds. **Bugs in a Bag** is added specifically to improve the microbial community's ability to degrade hydrogen sulfide, mercaptans, and organic acids.

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PERFORMANCE

A paperboard mill received complaints from neighbors each spring when temperatures began to rise. The mill operated a 3,785 m³ (1 MGD) wastewater plant that included a 5,700 m³ (1.5 MG) clarifier followed by two aerated lagoons. Final discharge was to the local municipal treatment plant. Warm water temperatures promote faster bacterial growth in anaerobic environments and also lead to increased volatilization of odor compounds.

Hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl disulfide, butyric acid, and propionic acid were all detected. A plan calling for the addition of **Bugs in a Bag** and **B.S.D** to the clarifier influent to reduce the formation of odors was recommended.

The most recent pretrial data were recorded 15 days before the start of the program. Figures 1 and 2 show a reduction in all key odors as early as day 1 of the trial, compared to pretrial data with continued odor control over the first 2 weeks of the trial and beyond. Success was measured by noting a decrease in odor generation across the clarifier and the elimination of odor complaints.

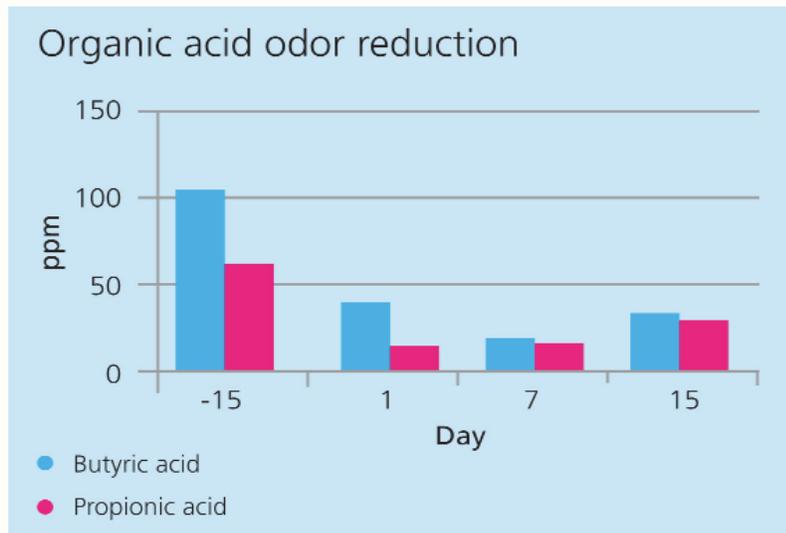


Fig.1

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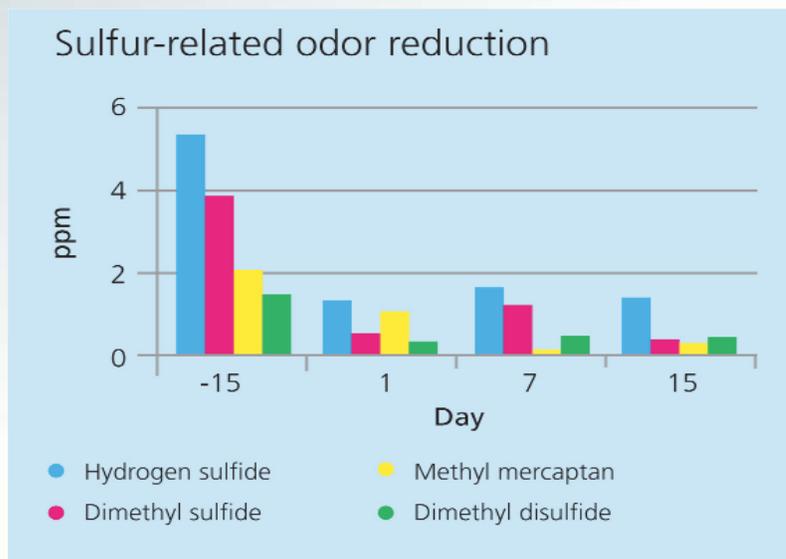


Fig. 2

RECOMMENDED USE

Bugs in a Bag

Bugs in a Bag can be added to any wastewater system where sulfur-based odors are a problem. The bacteria in **Bugs in a Bag** perform within a pH range of 6.0–9.0, with optimal performance at pH 7.0. Temperature affects the growth rate of the bacterial population with improving activity with increasing temperatures up to 40 °C (104 °F). Minimal activity can be expected below 5 °C (40 °F).

B.S.D

B.S.D is used in conjunction with **Bugs in a Bag** in anaerobic environments. Dosing is dependent on the oxidation reduction potential of the wastewater. Dosing should be adequate to create anoxic conditions.

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