

FOG Treatment Microbes

FOG 2000 FOG Reducing Microbes



IFM's Bacillus microbes for fats, oils and grease reduction

IFM's **FOG 2000 with BioS 3112** represents an advanced, unique biological treatment for fats, oils and greases (FOG). *BioS 3112* is a patented Bacillus strain that adds a novel, spore-forming bacterium to **FOG 2000**. The introduction of *BioS 3112* into a microbial blend that also degrades proteins, lipids and carbohydrates delivers a superb biological consortium for municipal grease applications.

The manufacturer of **FOG 2000** is a leader in the development of novel microbial consortia that degrade recalcitrant organics such as grease. Microorganisms are selected from the environment, from their stock culture collection of 25,000 characterized strains and from the million worldwide soil samples held by the manufacturer. **FOG 2000** results from their ability to identify novel strains and their expertise in developing effective, stable, synergistic microbial blends that enhance the degradation of waste organics.

Benefits

- **FOG 2000 with BioS 3112** is a synergistic blend of selectively-adapted bacteria which produce rapid degradation of FOG of animal and plant origin. **FOG 2000 with BioS 3112** is recommended for a wide range of municipal applications involving problematic accumulations of FOG in both treatment plants and collection systems
- *BioS 3112* is a stable, spore-forming strain that degrades the recalcitrant portion of the grease molecule, the long-chain fatty acids. These are known to be persistent in the environment where they cause the majority of maintenance and treatment problems.

- The active ingredients in **FOG 2000 with BioS3112** reduce the production of odors by inhibiting biological production of odor-causing compounds such as hydrogen sulfide and the rancid, foul-odored volatile fatty acids that result from septic or anaerobic environments.
- The partial breakdown of grease causes pH to drop, creating an environment that is inhibitory to most bacteria. *BioS 3112* is active at low pH levels generated. Furthermore, the addition of **FOG 2000 with BioS 3112** alleviates low pH problems by breaking down the fatty acids, thus maintaining an environment more amenable to active microbial degradation.
- **FOG 2000 with BioS3112's** microbial consortium degrades and digests grease, fatty acids, proteins, lipids and carbohydrates, removing the source of municipal organic waste problems.
- **FOG 2000 with BioS 3112** is an environmentally friendly formulation that is non-corrosive to plant equipment and mechanical systems
- **FOG 2000 with BioS 3112** is available in patented BIO-SOCK® delivery system or convenient *Solupak*, providing a powerful tool for grease maintenance throughout municipal operations.
- **FOG 2000 with BioS 3112** is also available in a liquid that can be applied manually or by using an automatic dosing system.
- **FOG 2000 with BioS 3112** is effective at temperatures up to 45°C (113°F)



Nonfood Compounds
Program Listed Category C1
Registration# 140465

Treatment of Lift Station with FOG 2000 with BioS 3112



Before addition of FOG 2000 with BioS 3112: 90% of lift station water surface was covered with a grease cap. The darkened, crusty areas on top of the grease indicates thick and aged grease in the lift station



After 6 weeks of treatment with FOG 2000: 90% of the lift station water has no grease cap. The tan color areas on top of the grease show the grease is thinner and has not been in the station for long periods of time.

Applications

In Treatment Plants, FOG 2000:

- Aerobically degrades fats and greases from primary clarifier skimmings, collection systems and other areas where they accumulate. Provides an alternative to land filling or use of anaerobic digesters.
- Allows tipping of commercial grease trap haulings to generate revenue.
- Reduces binding of fixed-film support media or sand filters.
- Handles high loadings of FOG and fatty acids without detriment to effluent quality.

In Collection Systems, FOG 2000 in the BIOSOCK® delivery system:

- Reduces line and pump station maintenance costs.
- Eliminates emergency blockages
- Reduces grease disposal costs.
- Eliminates customer complaints.

Storage and Handling

Store in a cool, dry place 10°-35°C (50°-95°F) Avoid inhalation of dusts. Wash hands thoroughly with warm, soapy water after handling. Avoid eye contact.

Product Characteristics

Bacteria Count	5 billion/gram
Stability	Max.loss of 1.0 log/yr when stored under recommended conditions
pH Range	6.0 — 8.5
Moisture Content	15%
Bulk Density	0.66-0.77 g/cm ³
Appearance	Free-flowing tan powder

Available Packaging

- 25 pound pail
- 1/2 pound Sol-U-Pak
- 1 & 2 pound BIOSOCK®

Optimum Conditions for Use

Bacteria in IFM's biological products perform within a pH range of 6.0—9.0, with optimum typically near 7.0. Wastewater temperature affects activity, with an approximate doubling in maximum growth rate for each 18°F (10°C) increase in temperature to an approximate upper limit of 104°F (40°C), unless otherwise indicated. Very low activity can be expected below 41°F (5°C).

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