



## **PestWest Bio-Gel Bacilli Resource Cleaning (RC)**

**By James Shaffer**

Bacter or bacteria (plural) are single-celled microorganisms absent a nuclear membrane, metabolically active, and divide by a process called binary fission. In appearance, a relatively simple form of life, but are in fact, sophisticated and highly adaptable microorganisms.

Most bacteria multiply rapidly, and various species can utilize several hydrocarbon substrates, including phenol, rubber, and petroleum. Bacteria exist dramatically in both parasitic and free-living forms. Bacteria are ubiquitous and have an incredible capacity to adapt to modifying environments by selection of spontaneous mutants. Bacteria are essentially important to the science of medicine, food safety, and manufacturing.

Gram-positive (those stained dark-blue or violet) *Bacilli* ("stick shaped") are in the Phylum *Firmicutes* ("strong skin"). *Bacilli* species can be obligate aerobes (grow in an oxygen environment) or facultative anaerobes (non-oxygen methods of energy production).

In nature, *Bacilli* include both free-living and pathogenic species. Within robust environments, cells produce oval endospores (a simplified form that can stay dormant for long periods).

PestWest has co-developed a proprietary and beneficial *Bacilli* formulation called Bio-Gel. This formulation consumes organics.

As a result of fat, protein, and carbohydrate build-ups within drain systems, emanating odors develop and customer complaints emerge. As temperatures decline deep within the drain systems, "gunk" deposits accumulate. Bio-Gel removes organics within drain systems as well as numerous other areas where organic build-ups occur.

*Bacilli* within Bio-Gel secrete enzymes and organic breakdown begins. Selective *Bacilli* cell membranes absorb organics into the cell to be metabolized. Metabolic products are carbon dioxide and water. These are easily "washed" down the drainage system.

Through binary fission (“division in half”), *Bacilli* cells divide and double in number about every 20 minutes. These “hungry” cells begin the process of consuming existent organics.

Resource cleaning (RC) is quite effective versus intractable environmental organics. More needs to be discovered regarding how micros interact with various moist environments. As understanding increases, so does the applicability and efficiency of resource cleaning.

Bio-Gel is an adjunct resource cleaning material for cruise ships that have their own on-board septic vaults. Starting within passenger cabins and common areas (bars, galleys, and toilets), Bio-Gel *Bacilli* colonize the entire system, aiding free fluid flow and odor reduction.

Bio-Gel is positioned as a multi-purpose resource cleaner that provides a fresh scent. It is a thickened product with superior sheer-cling enablers. Sheer-cling enables Bio-Gel to stick to surfaces (especially porous surfaces).

Dynamic action reduces the chance of Bio-Gel being washed out within active drain systems. In addition, Bio-Gel increases *Bacilli* colonization potential throughout the entire drain system.

Bio-Gel dilution is appropriate for specific applications. *When using overhead, avoid contact with eyes.* Bio-Gel can be used in numerous applications.

Bio-Gel is available in 32 ounce (quart), 128 ounce (gallon), 6-gallon pails, and 55-gallon drums. *Mix 1:1 with water and trigger spray or foam. See the full label for directions. Use this product within active drains, toilets, holding-tanks, grease traps, and septic systems.*

With the *Bio-Gel Pro Series Automatic Inline Injection Pump System*, set the timer to dose Bio-Gel. Program the unit for any amount of run-time, and for any given time-period.

Secured by a key to prevent tampering, the *Bio-Gel Pro Series Automatic Inline Injection Pump System* is known for both reliability and durability during field deployment. Backed by a solid two-year warranty, this bio in-line and grease trap maintenance system is ideal for hospitals, universities, schools, supermarkets, restaurants, bars, offices, and many more!

**Bio-Gel, effective biological cleaning for challenging biological “gunk!”**

