



**Threshold Limit Values:** None established by OSHA  
**Routes of Contact-Eyes:** May cause mild irritation. Keep product away from children.  
**Routes of Contact-Skin:** Skin exposure not anticipated to be a problem. Individuals with chemically sensitive skin may notice slight irritation with product in concentrated form. Keep product away from children.  
**Routes of Contact-Inhalation:** N/A  
**Routes of Contact-Ingestion:** Irritation to G.I. tract mucous membranes.  
**Signs and Symptoms:** May produce eye irritation and infection. May produce gastric distress upon ingestion.  
**Chronic Over Exposure:** No data available. Not considered a problem.  
**Medical Conditions Aggravated by Exposure:** None known.  
**Chemical Listed as Possible Carcinogen:**

National Toxicity Program?	No
I. A. R. C. Monographs?	No
OSHA Regulated?	No

**SECTION 6- EMERGENCY FIRST AID PROCEDURES**

**Eye Contact:** Use preventive measures. If contacted with eyes, flush with copious amounts of water for 15 minutes. If irritation persists, seek medical attention. Keep product away from children.  
**Skin Contact:** Rinse with water for 5 minutes. If irritation is noticed, seek medical attention. Irritation after flushing in generally not anticipated. Keep product away from children.  
**Inhalation:** Do not spray in air. If aerosol is formed, leave the area immediately and start exhaust or open windows. Do not return until aerosol has been removed. Keep product away from children.  
**Ingestion:** Do not induce vomiting. If oral doses of concentrated product are taken internally give large doses of water milk or yogurt. If gastric distress occurs seek medical attention. Keep product away from children.

**SECTION 7- SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** Not normally necessary  
**Ventilation:** None required.  
**Protective Gloves:** Not normally necessary. If individual has chemically sensitive skin, gloves should be worn.  
**Eye Protection:** Not normally required unless splashing will occur in concentrated form.  
**Other Protective Clothing or Equipment:** HMIS PERSONAL PROTECTION: Safety Glasses, Safety Gloves.

**SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

**Handling & Storage:** Store in a cool place. leak.  
**Other Precautions:** Avoid eye contact, Limit skin contact.  
**Personal Hygiene:** Wash all exposed areas with soap and water. Do not allow material to contact open wounds. If such contact occurs, wash with soap and water and apply superficial disinfectant.  
**Spill/Leak Procedures:** Stop leak. Flush remaining residue with water to drain.  
**Disposal Procedures:** Product is self-disposing by application, is non-toxic, biodegradable and, meets requirements for NPDES discharge to POTW.

**GLOSSARY:**

N/A: Not Applicable	N/K: Not Known	<= Less Than	>= Greater Than
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**IMPORTANT NOTICE:** To the best of our knowledge, the information contained herein is true and accurate. The manufacturer warrants that this product conforms to the technical specifications provided that this product is maintained in its original container and stored as indicated in the instructions for use. The manufacturer's only obligation shall be to replace such quantity of the product proven to be defective. It shall be the obligation of the user, before using, to determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith. NEITHER THE SELLER NOR THE MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL OR CONSEQUENTIAL ARISING OUT OF EITHER THE USE, OR THE INABILITY TO USE THE PRODUCT.

**BIOLOGICAL SYSTEMS, INC.** Institutional Products Division, P.O. Box 92911 Austin, TX 78709-2911

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## BMET-1 BIO-DEODORIZER

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### PRODUCT INFORMATION:

#### Microbes as a Bio-deodorizer

The *Bio-Sys* bio-deodorizer consists of **BMET-1** microbial enzyme treatment in a nutrient solution. When diluted with 3 parts of water and sprayed on trouble areas, the microbial action destroys the odor causing material and the foul smelling bacteria that causes most of the odor. The *Bio-Sys* bio-deodorizer system does not mask odors, it neutralizes and destroys them. The millions of living organisms actually digest the material that is causing the odor at its source. It can be used in the kitchen (away from food processing areas), bathrooms, bar areas and for carpets, drains and garbage storage areas. It is environmentally safe, non-toxic and biodegradable.

The *Bio-Sys* **BMET-1** bacteria can be applied with a sprayer. The deodorizer can be used with all other *Bio-Sys* cleaning products. *While it is safe for most carpets, a small test area should always be utilized to insure that no staining will occur.* This product will not mask odors so it should not be sprayed into the air. Apply directly to the area where the odor is being produced. **BMET-1** can be used for fecal and urine odors, odors of pets, vomit and organic garbage. It can be used in trash containers and garbage storage areas.

### BMET-1 BIODEODORIZER LIQUID:

#### Microbial Odor Control

Noxious odors are caused by volatile chemical compounds migrating into the air. Some of these compounds are pleasant (for example, the esters produced by ripening fruits) and some are not (for example, the amine odors in urine, sulfur compounds, and the fatty acid odors in Limburger cheese). These odors are produced by complex organic compounds such as esters, alcohols, ketones, aldehydes and various ring structures.

Microbiological cultures attach to these compounds, reducing them to innocuous byproducts. **BMET-1** bio-deodorizer bacteria attack the complex organic compounds which produce noxious odors, including esters, alcohols, ketones, aldehydes, and various ring structures. **BMET-1** bio-deodorizer bacteria can be used in a variety of situations ranging from pet-stained carpets to runoff ponds, nursing home laundries to dumpsters. The organism in **BMET-1** bio-deodorizer directly metabolize long-chain amines. (These are the compounds which produce the distinctly noxious odors of urine and rotting corpses.) **BMET-1** bio-deodorizer destroys amines by a process known as *oxidative deamination*. This means that in the presence of oxygen the organism removes the ammonia of the amine, getting energy for itself and producing a residual compound with much less odor.

Once the amine odors associated with urine are removed the residual odors are much less noxious and can be covered by periodic application of common fragrant masking agents. A sixty-second sales presentation demonstrates the odor-control properties of the Bio-Sys BMET-1 bio-deodorizer liquid.

### **DEMONSTRATION:**

Artificial urine (monoethanolamine)

BMET-1 bio-deodorizer Solution: Add 3 drops to 10 ml of hot tap water. Let stand 10 minutes before use.

Add approximately 1 ml of artificial urine to an evaporating dish or small custard dish. Swirl vigorously to coat walls. Smell. Add 5 drops of BMET-1 bio-deodorizer solution. Swirl for 30 seconds. Smell a second time. The odor will be much less.

BMET-1 bio-deodorizer liquid is formulated into combination cleaning/deodorizing products for use by carpet cleaners, in nursing homes and in pet litter.

### **CARPET TREATMENT:**

**BMET-1 bio-deodorizer Liquid removes odor due to pet urine and feces on carpeting and the matting and base floors beneath.**

#### **Instructions:**

Dilute 1 gallon of BMET-1 bio-deodorizer with 4 gallons of hot water at a temperature (not higher than 180°F). With extremely heavy contamination, reapplication of the treatment may be necessary. Apply either with a fine spray or with a carpet shampoo machine so that the carpet is thoroughly saturated. Because free ammonia is produced by enzymatic action, turn off air conditioning and thoroughly ventilate the enclosed space to the outside atmosphere after BMET-1 bio-deodorizer is used.

*Some odors resulting from processes in carpeting manufacturing cannot be removed by BMET-1 bio-deodorizer. Most dyes contain synthetic components not subject to enzyme alteration—for example, the sour smell produced in certain types of wetted wool carpeting.*

### **OUTSIDE AREAS SPRAYED BY CATS:**

BMET-1 bio-deodorizer may be sprayed outside homes and apartments where cats have urinated as a means of alerting other animals. The use of BMET-1 bio-deodorizer will eliminate the odor and so discourage the recurrent use by dogs or cats.

### **Instructions:**

Dilute 1 part BMET-1 bio-deodorizer with 4 parts warm water (not greater than 120 F). Spray or mop diluted BMET-1 bio-deodorizer on contaminated surfaces.

### **KENNELS:**

BMET-1 bio-deodorizer is effective in the treatment of concrete runs where odors resist cleaning by detergents.

### **Instructions:**

After cleaning with detergent thoroughly, wet the surface with a dilution of 1 part BMET-1 bio-deodorizer to 4 parts warm water. Keep the area damp for at least 4 hours by lightly re-spraying with water when necessary.

### **URINALS:**

Use BMET-1 bio-deodorizer to eliminate stale urine odors indoors or outdoors.

### **Instructions:**

Dilute 1:4 with warm water Allow to sit 10 minutes before use. Mop BMET-1 bio-deodorizer on the floor around urinals and allow to remain for 20 minutes so that it may penetrate the tile and grouting or porous concrete if used outside. Repeated applications will completely eliminate the urine odor. Where fecal material has soiled the floor, it is first necessary to remove excess feces. To disperse free ammonia produced by BMET-1 bio-deodorizer's enzyme reaction, turn off the air conditioning and ventilate with fresh air and supplemental fan.

### **LAUNDRY:**

BMET-1 bio-deodorizer removes the odor of urine from sheets and pillow cases in nursing homes.

### **Instructions:**

Add 2 ounces of BMET-1 bio-deodorizer to each 35-pound load in an institutional washing machine.

### **TRUCKS & DUMPSTERS:**

BMET-1 bio-deodorizer removes garbage odors.

**Instructions:**

Dilute 1 ounce of BMET-1 bio-deodorizer in 30 gallons of water. Wash down the inside of the truck or dumpster and allow the water to stand for a period of time.

**RUNOFF POND:**

Use BMET-1 bio-deodorizer to reduce odor emanating from industrial runoff.

**Instructions:**

Spray the surface of the pond with undiluted BMET-1 bio-deodorizer. Use 1 gallon of BMET-1 bio-deodorizer for every 100,000 gallons of contaminated water. Aeration will significantly increase the odor-controlling action of BMET-1 bio-deodorizer.

**DO NOT DILUTE MORE BMET-1 BIODEODORIZER THAN WILL BE USED IMMEDIATELY. USE THE DILUTION RATIOS SPECIFIED IN THE EXAMPLES. IN SOME CASES SLIGHTLY MORE BMET-1 BIODEODORIZER MAY BE NECESSARY.**

FOR ADDITIONAL PRODUCT INFORMATION AND FOR ANY OTHER QUESTIONS THAT YOU MAY HAVE, CALL OR WRITE. THANK YOU FOR CHOOSING BIO-SYS.

**Manufactured By:**



(800) 284-7696

**Distributed By:**

