

*The Natural Solution  
when only the best will do*

System & Product Description

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**Bacta-Pur®**

## **BACTIVATOR® LS Series 4 for Restaurants and the Food Service Industry** © 2008

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*ECOPROBIOTICS™, of the Bacta-Pur® System, are beneficial communities of natural bacteria, which have been on earth for millions of years and have been selected for their synergistic ability to biodegrade pollutants and to improve water quality. ECOPROBIOTICS™ increase biodiversity. Just as people take probiotic yogurt for its' ability to assure the presence of the optimal community for digestion and immunity, ECOPROBIOTICS™ improve ecosystem health. EVERY PRODUCTION of Bacta-Pur® products is analyzed and cleared for shipment ONLY after passing all performance tests and being CERTIFIED PATHOGEN FREE using techniques from the food industry. ECOPROBIOTICS™ are purely natural and beneficial. They NEVER contain added chemicals such as surfactants, emulsifiers or enzymes..., nor do they contain genetically modified (GMO) or deliberately mutated organisms. ECOPROBIOTICS™ are safe and beneficial. Disease causing organisms are never used, as others do or permit.*

The Bacta-Pur® System, of ECOPROBIOTICS™ products combined with the **BACTIVATOR®**, has developed a world wide reputation as state-of-the-art. The **BACTIVATOR®** is an automatic system, which continuously preactivates and optimizes the physiological condition of ECOPROBIOTICS™, prior to addition to the waste water. It is in this manner that the Bacta-Pur® System succeeds, where others fail.

The **BACTIVATOR®** automatically performs the following operations:

1. awakens & grows the ECOPROBIOTICS™ to increase their numbers;
2. optimizes the physiological condition of the ECOPROBIOTICS™ to digest grease, sludge and soluble organic pollutants.

The **BACTIVATOR®** is designed to be simple to use, to save operator time and money as well as to help optimize treatment efficiency. The **BACTIVATOR®** is designed and built to operate for extended periods of time with a minimum of maintenance. The replacing the products is as easy as changing a box of soft drink syrup, in a restaurant.

**BACTIVATOR® LS series 4**, designed to biodegrade grease, fats and oils and prevent causes of noxious odors in restaurant grease traps, separators and drains, requires municipal or city (treated) water.

Two models are available:

1. BACTIVATOR® LS500 with product use rate adjustable to 500, 250 and 125 mL/day, and
2. BACTIVATOR® LS1500 with product use rate adjustable to 1500 and 1000 mL/day.

### **Process and equipment**

The **BACTIVATOR®** Series 4 LS series contains four principal components: (1) bag-in-box reservoir for the ECOPROBIOTICS™ (beneficial bacteria culture) and the ECOPREBIOTICS© (nutrients), (2) multi-step bioreactor, (3) water conditioning and flow distribution system, and (4) electrical controls.

**1. The bag-in-box reservoir(s)** consist(s) of two flexible plastic bags designed to hold bacteria and nutrient product separately within one box. The plastic bags are equipped with its specific connectors to make reservoir connection and disconnection quick and easy. Connectors are equipped with an automatic shut-off valve preventing contamination when disconnected for replacement. A dosing pump transfers the ECOPROBIOTICS™ & the ECOPREBIOTICS to the bioreactor. As the products are pumped from the bag to the bioreactor, the bag collapses, preventing oxygen from entering the package; this extends shelf life. The bags continue to collapse until they are completely empty. A vacuum



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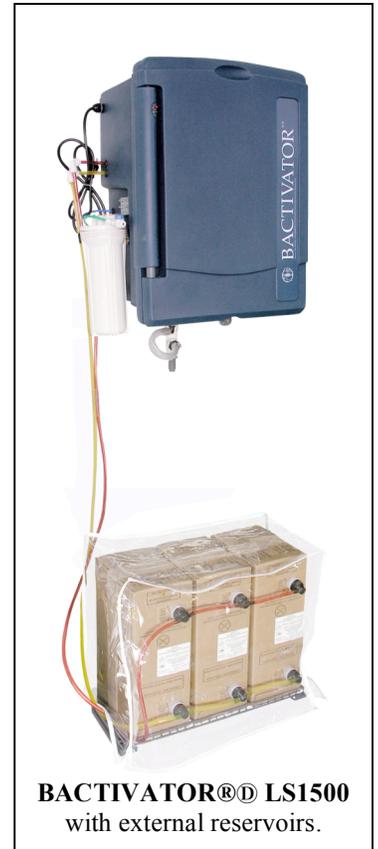
switch, detects when the bacteria bag is empty and sends a signal to the control box to turn off the and to turn on a red indicator light indicating that reservoir has to be replaced.

The BACTIVATOR® Series 4 LS500 is designed to operate with one bag-in-box reservoir installed inside the machine cabinet. The BACTIVATOR® LS1500 model requires two or three bag-in-box reservoirs stored on an outside shelf that has to be mounted on the wall below the BACTIVATOR® cabinet.

**2. The bioreactor** — has multiple internal compartments or growth chambers. The first contains an immersion heater and receives the incoming ECOPROBIOTICS™, ECOPREBIOTICS© and water. This compartment serves to bring the ECOPROBIOTICS™ out of dormancy and to begin their growth. The culture then flows through the next growth compartment before leaving the system and being fed into the drain or grease trap. Air is supplied to the bioreactors, by an internal air pump.

**3. The water treatment and distribution system** — contains an activated carbon filter, pressure regulators, a solenoid valve, a timer and drip emitters. The activated carbon filter removes chlorine from the water to be used in bioreactor. A solenoid valve and a timer are used to transfer precise quantities of treated water to the first bioreactor. Surplus water is added continuously into the bioreactor outlet pipe to enhance the flow of active cultures leaving the bioreactor to the injection point.

**4. Electrical control system** — is available for AC 115v, 50/60Hz or 220-240v, 50/60Hz service. UL/CSA approved components are used. A simple dial setting, within the electrical panel, allows the dose rates to be selected or adjusted to the levels listed in the table below.



**Products required:**

The BACTIVATOR® Series 4 LS requires the Bacta-Pur® XLG-KIT (14L) (item # 03385) for operation. Each KIT (14L) with bag-in-box packaging has two separate bags and quick connectors to the BACTIVATOR®. The Bacta-Pur® XLG and Bacta-Pur® ACTIVATOR GS are provided in correct ratio no mixing is required. Changing reservoirs is fast and clean. The bag, connectors and carton are all fully recyclable, making this an environmentally friendly package.

**Sizing** (based on meals per day):

The products use rate can be adjusted based on the number of meals served per day.

BACTIVATOR® LS Series Model #	LS500			LS1000	
Adjusted products use rate (ml/day)	125	250	500	1000	1500
Meals served per day (mpd) <sup>1</sup> up to	312	625	1250	2500	3750
# Bacta-Pur® XLG-KITs (14L) / year	3-1/4	6-1/2	13	26	39
# bag-in-box reservoirs connected for operation	1	1	1	2 (3 <sup>2</sup> )	3
# weeks between reservoir replacement	16	8	4	4 (6 <sup>2</sup> )	4

<sup>1</sup> If restaurant produces greasy food, the dose rate of the ECOPROBIOTICS™ should be increased. Higher dose rates give faster results.

<sup>2</sup> When three reservoirs are connected the number of weeks between reservoir replacements will be extended to 6.

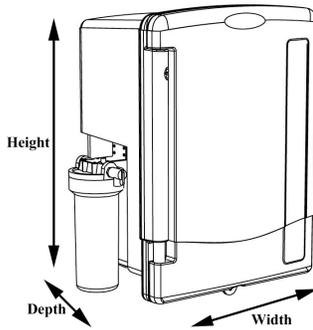


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**Bacta-Pur®**



INSTALLATION REQUIREMENTS:  
May vary by region/state and local codes.

BACTIVATOR® is approved by Massachusetts Plumbers Code.

### Technical Specifications: BACTIVATOR® LS series

INSTALLATION DIMENSIONS	The BACTIVATOR® LS cabinet: 24" (61 cm) Width x 14.5" (37 cm) Depth x 31.5" (81 cm) Height (56cm x 37cm x 76cm). LS1500 only: external reservoirs to be located on the shelf: 25" W x 13" D x 22" H (64 cm x 33 cm x 56 cm) mounted on the wall beside the cabinet of the BACTIVATOR®. The maximal allowed vertical distance between bottom of reservoir and bottom of cabinet to obtain published injection rates is between 45" (114 cm) and 58" (147 cm). Reservoir bottom must not be at higher level than the bottom of cabinet.
WET WEIGHT	LS500: 97 lbs (43.9 Kg); LS1500: 88 lbs (40 kg)
OPERATING CONDITIONS	Minimum Temperature: 63°F (17°C) Maximum Temperature: 86°F (30°C)
ELECTRICAL REQUIREMENTS	115v, 60Hz (0.7 Amp) is a standard option. 220-240v, 50/60 Hz. (0.35 Amp) is a special order option. GFI always required.
WATER REQUIREMENTS	Municipal or City water with minimal water pressure of 25 psi and maximal of 100 psi. <b>Inlet water supply options: 1/4" OD Copper line.</b>
WATER CONSUMPTION	LS500: ± 28 US gal (104 L) per day LS1500: ± 30 US gal (111 L) per day
PRODUCT USE RATE (CAPACITY)	LS500: 125, 250 or 500 mL per day LS1500: 1000 or 1500 mL per day
OUTFLOW	Water consumption + product use rate LS500: ± 104 L + 0.5 L per day LS1500: ± 111 L + 1.5 L per day
PRODUCT OUTPUT	Output is by gravity feed. If the product must flow uphill, an auxiliary pump (not supplied) must be installed. <b>Outfall water connections: 3/4" ID tubing.</b>



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