Bacta-Pur®

Industrial BACTIVATOR®
Automatic Preactivators/Preconditioners ©2009

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 worldwide reputation as state-of-the-art. The **BACTIVATOR®Ⓓ** is an automatic system, which continuously preactivates and optimizes the physiological condition of Bacta-Pur® products, prior to addition to the waste water. The **BACTIVATOR®Ⓓ** operates continuously, on a flow through basis, to feed the optimized cultures into the waste water stream. It is in this manner that the Bacta-Pur® System succeeds, where others fail.

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

1. awakens & grows the ECOPROBIOTICS™ to increase their numbers;
2. optimizes the physiological condition of the ECOPROBIOTICS™ to optimize biodegradation of grease, sludge, soluble organic pollutants, hydrocarbons, ammonia, nitrites, nitrates.

Industrial BACTIVATOR® principal unit mounted on a skid

The **Industrial BACTIVATOR®** is designed to be simple to use, to save operator time and money as well as to help optimize wastewater treatment efficiency.

Models available (110-120v, 60Hz or 220-240v, 50/60 Hz):

- **Model XLG50**: To biodegrade sludge, fats, oils and grease in sewer and wastewater treatment plants and to treat domestic/agricultural/aquacultural wastes to biodegrade soluble organic pollutants (BOD reduction). BOD can even be reduced in sewers before reaching a waste water treatment plant.
- **Model N40**: To nitrify and to denitrify.
- **Model H50**: To biodegrade hydrocarbons and other organic refractory pollutants.

Process and equipment components:

The **Industrial BACTIVATOR®** contains following principal components: (1) external reservoirs for the microorganisms and nutrients with low level liquid float switch assemblies, (2) multi-step bioreactor, (3) the water conditioning and flow control, (4) process control equipment and (5) electrical control box.

Bacta-Pur / IET-Aquaresearch Ltd.
P.O. Box 689, Derby Line, VT 05830 USA

IET-Aquaresearch Ltd.
P.O. Box 2680, North Hatley, QC, J0B 2C0 Canada

Phone: (877) bactapur [222-8278], (819) 842-2494, Fax: (819) 842-2414
Email: info@bactapur.com website: www.bactapur.com

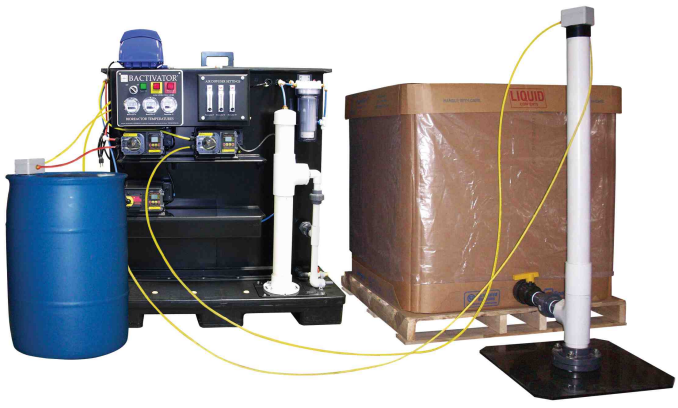
Bacta-Pur®

1. The reservoirs — are self-contained units located beside the principal unit mounted on the skid**.** They contain a supply of the ECOPROBIOTICS™ and the nutrients. Dosing peristaltic pumps transfer the precise quantity of the ECOPROBIOTICS™ and the nutrients to the bioreactor. Each reservoir has a low liquid float switch assembly that connects to the electrical control box. The low liquid level float switches assemblies send a signal to energize the red indicator lights on the electrical control panel when the reservoirs are running low and replacement is soon needed.

2. The bioreactor — has three internal compartments or growth chambers, with aeration and immersion heaters. The first compartment receives the incoming ECOPROBIOTICS™, nutrients and water. This compartment serves to bring the ECOPROBIOTICS™ out of dormancy and to begin their growth. The culture water then simply overflows into the other growth chambers and then leaves the unit to be fed into the treatment area.

3. The water conditioning and flow control — contains an activated carbon filter, flow control emitter & water well. City/municipal water is simply connected to the filter, which removes residual chlorine and large particles. For applications requiring augmented water flows (relatively long distribution lines), the water filter may be an external attachment to be located on an adjacent wall. Conditioned water flows to the water well that act as water reservoir. An emitter, attached on the top of the water well, controls water flow to the well. Water from the water well is delivered to the bioreactor by the water pump. The surplus water leaving the water well through the overflow pipe joins the bioreactor effluent to ensure rapid transfer of active cultures to the injection point.

4. Process control equipment - includes three pumps for feeding the bioreactor with ECOPROBIOTICS™, nutrients and water, the air supply, the distribution & flow control equipment (air pump, air flow meters, air distribution line and diffusers) & the temperature control equipment (submersible heaters, temperature indicators & probes). An additional, fourth pump is used in H model for supply of waste water to the bioreactor.



Industrial BACTIVATOR® with connected reservoirs

5. Electrical control box — contains all the circuits and the breaker for the system. The main power switch, the ON indicator (green light), the low level indicators (red lights) and temperature indicators are found on the electrical control panel.

Bacta-Pur / IET-Aquaresearch Ltd.
P.O. Box 689, Derby Line, VT 05830 USA

IET-Aquaresearch Ltd.
P.O. Box 2680, North Hatley, QC, J0B 2C0 Canada

Phone: (877) bactapur [222-8278], (819) 842-2494, Fax: (819) 842-2414
Email: info@bactapur.com website: www.bactapur.com

Bacta-Pur®

Technical Specifications: Industrial BACTIVATOR®

PHYSICAL SIZE (MINIMUM): CUSTOM UNITS WILL VARY IN SIZE.	The unit 48" height comes on a plastic pallet 48" W x 40" L (1.2 m x 1.0 m). This unit must be in a building large enough to provide a walking space around the unit and the reservoirs to make servicing possible.
RESERVOIR SIZE	**ECOPROBIOTICS™ bulk reservoir**: 265 US gal or 1000 L container mounted on a skid: 48" W x 48" L (1.2 m x 1.2 m). The reservoir height is 46" (1,16 m). **Nutrients bulk reservoir**: 30 US gal (110 L) drum, 19.5" D x 29.5" H (0.48 m x 0.75 m) or 55 US gal (208 L) drum 23" D x 36" H (0.58 m x 0.9 m) or 265 US gal (1000 L) container mounted on a skid 48" W x 48" L (1.2 m x 1.2 m).
WEIGHT	Dry Weight: 10,090 lbs (4,577 Kg) Wet Weight: 11,435 lbs (5,187 Kg)
RESERVOIR WET WEIGHTS	1000L: 2,339 lbs (1,061 kg). Forklift ready. 100L: 233.9 lbs (106.1 kg).
OPERATING CONDITIONS	Minimum Temperature: 68°F (20°C) Maximum Temperature: 77°F (25°C)
ELECTRICAL REQUIREMENTS	110/120v, 60Hz (15 Amp) is standard. 220/240v, 50/60 Hz (10 Amp) is a special order option. Electrical outlet should be a Ground Fault Interrupt (GFI), located 3 feet off the floor on the left side of the machine.
WATER REQUIREMENTS	Disinfected municipal water is required. Inlet water supply options: 3/8" OD Copper line or 3/8" OD rigid tubing capable of being used with quick disconnects (DO NOT USE THIN WALLED TUBING). Water line should be located within 6 feet of the unit.
WATER CONSUMPTION	150 US gal (545 L) per day, minimum. Water flow will depend on the distribution system to be installed and will be site specific.
PRODUCT OUTPUT (CAPACITY)	Factory adjusted from 2.64 US gal (10L) up to 13.2 US gal (50 L) per day. Factory adjustments are available in 0.26 US gal (1 L) increments.
OUTPUT	Output is by gravity feed. If the product must flow uphill, an auxiliary pump (not supplied unless otherwise stated) must be installed to accommodate the recommended flow (see section below). Outfall water connections: 3/4" ID tubing unless otherwise specified.
TOTAL OUTPUT FLOW	Total output flow is a sum of the water flow (see WATER CONSUMPTION) and the product output of the machine.

Bacta-Pur / IET-Aquaresearch Ltd.
P.O. Box 689, Derby Line, VT 05830 USA

IET-Aquaresearch Ltd.
P.O. Box 2680, North Hatley, QC, J0B 2C0 Canada

Phone: (877) bactapur [222-8278], (819) 842-2494, Fax: (819) 842-2414
Email: info@bactapur.com website: www.bactapur.com