

BOD Reduction in Waste Water Treatment © 2009

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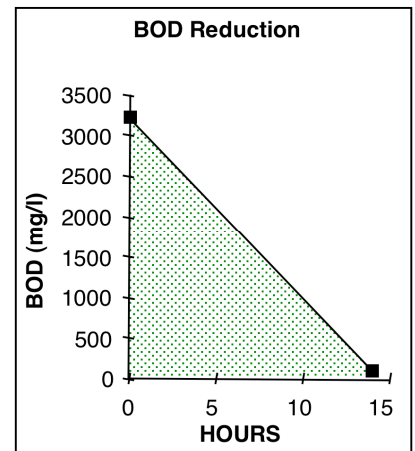
ECOPROBIOTICS® of the Bacta-Pur® System, are beneficial communities of natural bacteria, which have been on earth for millions of years and have been selected for their synergistic ability to biodegrade pollutants and to improve water quality. ECOPROBIOTICS® increase biodiversity. Just as people take 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. All bacterial cultures in the Bacta-Pur® product are listed on the Canadian DSL.

Summary	
SYMPTOMS	TREATMENT BENEFITS
• WWTP operation unstable & difficult to manage	• stabilize & facilitate operation
• influent pollutant loading near or above WWTP design capacity	• optimize biodegradation in existing facility
• high costs and energy expenditures	• reduce costs and energy expenditures
• difficult to restabilize WWTP after toxic shock or overload	• recover rapidly from toxic shocks
• discharge permit levels exceeded	• meet target concentrations in effluent

Requirements for Efficient Biodegradation of Organic Pollutants

Efficient and complete biodegradation requires a community of microorganisms working together where the by-products of one's metabolism serve as food for another organism. Lack of even one member of the microbial team will decrease treatment efficiency.

Organic substances are only a source of carbon for the microorganisms; nitrogen, phosphorous and many minor elements are also essential for the pollutants to be biodegraded. Sufficient oxygen and/or an alternative electron receptor and pH 6.0-8.5 are also necessary. Adequate equalization is important to minimize fluctuations (e.g. hydraulic, toxic and/or loading).



Why the Bacta-Pur® System is Effective

Bacta-Pur® XLG contains a community of non-pathogenic microorganisms selected for their synergistic ability to biodegrade organic pollutants. Bacta-Pur® XLG is one of the most concentrated products of its kind; the minimal visual cell count exceeds 10¹¹ cells/ml, which is more than 1000 times other brands. The advantage of the Bacta-Pur® System does not stop there. Our preactivation techniques of on-site growing and physiological engineering increase the population at least ten times and assure that:

- the microorganisms are in exponential growth upon addition, and
- the concentration of the preactivated microorganisms is up to a million times more concentrated than background levels of microorganisms in untreated WWTPs.



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

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

IET-Aquaresearch Ltd.
P.O. Box 2680, North Hatley, QC, J0B2C0 Canada

*The Natural Solution
when only the best will do*

BOD Reduction with Bacta-Pur®

Each waste water treatment system is a unique combination of equipment, influent quality and operational procedures. Use of the Bacta-Pur® System starts by defining certain physico-chemical and biological realities of the existing system; the Bacta-Pur® WWTP questionnaire is filled out. This information is then analyzed by the biological and engineering staff of IET-Aquaresearch Ltd. to select the most cost-effective physico-chemical and/or biological means to optimize treatment efficiency.

Small regular doses of Bacta-Pur® XLG are very effective. Best results will be achieved by introducing Bacta-Pur® XLG into the influent of the waste water treatment system. Contact IET-Aquaresearch Ltd. or an authorized representative for site-specific dose rates.



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