

*The Natural Solution
when only the best will do*

Questionnaire,
q08.09 *page 1 of 4*

Bacta-Pur[®]

Sequencing Batch Reactors (SBR) Characterization and Performance © 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.

The use of the Bacta-Pur[®] System is founded on solid and efficient technical support. The Bacta-Pur[®] System is comprised of various tools (ECOPROBIOTICS[®], growth enhancers and equipment), that we use as part of a process to optimize the efficiency of wastewater treatment. Thorough understanding, of the current operational realities of each potential site, is essential prior to beginning. This is particularly true for industrial sites where physical, chemical and biological realities must be defined to permit treatment optimization.

Once completed, this questionnaire will provide us an overview of the plant, treatment, problem areas and operational goals. The information is also used to assess whether or not biological manipulations offer the potential for improvement. This questionnaire should be filled out as completely as possible; just leave blanks if information is lacking.

| | |
|--------------------|--------------------------|
| Customer: | _____ |
| Address: | _____ |
| City: | _____ State/ Prov. _____ |
| | Zip or _____ |
| Country: | _____ Postal Code: _____ |
| Telephone: | _____ Fax: _____ |
| Field of Activity: | _____ |
| Data certified by | |
| Name (print): | _____ Title: _____ |
| Signature: | _____ Date: _____ |



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Process Loading:

| | Sewer Flow (<input type="checkbox"/> MGD or <input type="checkbox"/> m3/day) | | | Average BOD loading (<input type="checkbox"/> kg /d or <input type="checkbox"/> lb/day) | Average TKN loading (<input type="checkbox"/> kg /d or <input type="checkbox"/> lb/day) |
|---------------|--|------|-------------|--|--|
| | minimum day | mean | maximum day | | |
| Actual | | | | | |
| Design | | | | | |

Sewer Composition:

| | % | Describe Industrial and other sources: |
|-------------------|---|--|
| Domestic | | |
| Industrial | | |
| Other | | |

Operation Strategy:

| Phase | Duration (hours) or % total cycle | Aeration (yes / no) | Mixing (yes / no) |
|---------------|--------------------------------------|------------------------|----------------------|
| Filling | | | |
| Reaction* | | | |
| Sedimentation | | | |
| Draw | | | |
| Idle | | | |

* Please provide the information on anoxic, anaerobic and/or aerobic sequence of reaction if applicable

Number of cycles per day: _____ Number of tanks: _____

Tank volume (final liquid volume after filling): _____

Initial volume before filling: _____

Solids volume – activated sludge during idle period: _____

Sludge wasting: during reaction during idle mode





Operation Parameters:

| Sludge age (d) | F / M (kg BOD / kg MLSS) | SVI (mL / g) | Mixed liquor temperature (°C <input type="checkbox"/> or °F <input type="checkbox"/>) | Biomass production (lbs / d <input type="checkbox"/> kg / d <input type="checkbox"/>) | Wasted sludge (lbs MLVSS/ d <input type="checkbox"/> kg MLVSS/ d <input type="checkbox"/>) |
|----------------|--------------------------|--------------|--|--|---|
| | | | | | |
| | | | | | |

| | Before filling | Reaction Start | Reaction End | Settling Start | Settling End |
|--|----------------|----------------|--------------|----------------|--------------|
| OD (mg / L) | | | | | |
| pH | | | | | |
| Total alkalinity (mg CaCO ₃ /L) | | | | | |
| Biological solids, X (mg MLVSS /L) | | | | | |
| Biological solids, X (mg MLSS /L) | | | | | |

Plant Performance:

| Parameter | Influent | Reaction Start | Reaction End | Effluent |
|---------------------------------------|----------|----------------|--------------|----------|
| TOC Total (mg / L) | | | | |
| TOC Soluble (mg / L) | | | | |
| BOD5 Total (mg / L) | | | | |
| BOD5 Soluble (mg / L) | | | | |
| COD Total (mg / L) | | | | |
| COD soluble (mg / L) | | | | |
| SS / MLSS (mg / L) | | | | |
| VSS / MVLSS (mg / L) | | | | |
| TKN (mg / L) | | | | |
| NH ₃ -N (mg / L) | | | | |
| NO ₂ -N (mg / L) | | | | |
| NO ₃ -N (mg / L) | | | | |
| Soluble o-PO ₄ (mg / L) | | | | |
| Total P (mg / L) | | | | |
| pH | | | | |
| Alkalinity (mg CaCO ₃ / L) | | | | |

If possible provide profile during filling and reaction phase.



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Nutrients / Flocculants added:

| Product | Quantity (units) | Frequency | Location |
|---------|------------------|-----------|----------|
| | | | |
| | | | |
| | | | |

Energy Consumption Efficiency:

Aeration System:

| no | Location | HP | SCFM | Hr/day |
|----|----------|----|------|--------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

Mixing System:

| no | Location | HP | Amp. | Hr/day |
|----|----------|----|------|--------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

Description of problem(s) to solve or goals (your wish list):

**Process and instrumentation diagram of wastewater treatment plant:
(show all treatment basins & water flow):**



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