

# BIOPAQ<sup>®</sup>

## Modules for UASB reactors



### Advantages of the BIOPAQ<sup>®</sup> UASB reactor:

- Modular system
- Worldwide availability
- Corrosion-free design
- Ten-year guarantee
- Fully accessible for inspection and cleaning
- Closed system
- No odor emissions
- Limited reactor height

The Upflow Anaerobic Sludge Blanket (UASB) process is the most widely applied method for the biological treatment of industrial effluents. Paques has been applying the BIOPAQ<sup>®</sup> UASB technology for more than twenty years and has standardized the reactor into a modular system. Nearly four thousand BIOPAQ<sup>®</sup> modules are operating world-wide, treating 1,760,000 m<sup>3</sup> of effluent per day. One module has a capacity equivalent to about 1 ton COD/d e.g. 15-20 m<sup>3</sup>/hr and can be used to configure any UASB reactor size to meet specific layout and capacity requirements.

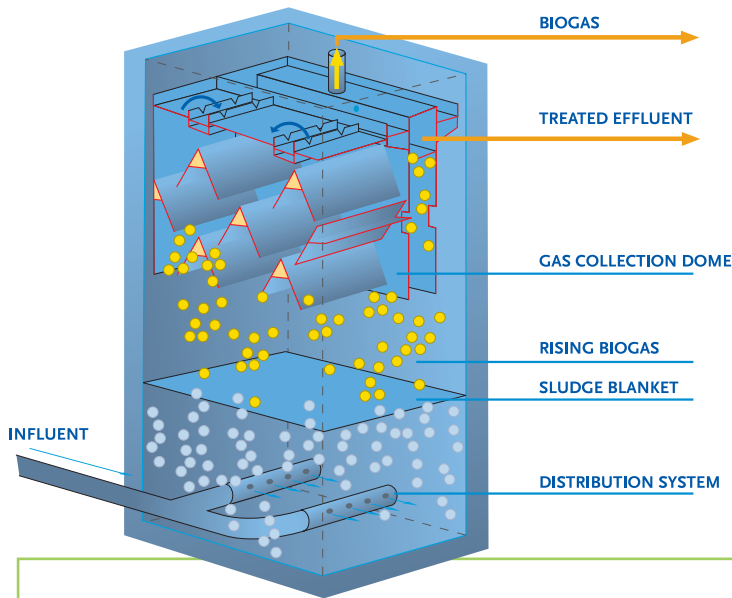


Natural Solutions

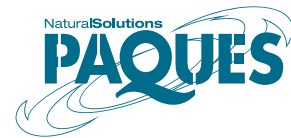
**PAQUES**

**BIOPAQ® UASB technology is used to treat a large variety of industrial effluents**

FOOD INDUSTRY		BEVERAGE	ALCOHOL DISTILLERY	PULP & PAPER	MISCELLANEOUS
Sugar	Cannery	Beer brewing	Sugar cane juice	Recycled paper	Chemical
Potatoes	Confectionery	Malting	Sugar cane molasses	Mechanical pulp	Pharmaceuticals
Starch	Fruit	Soft drinks	Sugar beet molasses	NSSC	Sludge liquor
Yeast	Vegetables	Fruit juice	Grape wine	Sulfite pulp	Municipal sewage
Pectine	Dairy products	Wine	Grains	Straw	Landfill leachate
Citric acid	Bakery	Coffee	Fruit	Bagasse	Acid mine water



The success of the BIOPAQ® UASB reactor is based on the so-called three-phase separator, which enables the reactor to separate gas, water and sludge mixtures under high turbulence conditions. This allows for compact, cheaper designs. The patented BIOPAQ® UASB design has multiple gas hoods for the separation of biogas. As a result the extremely large gas/water interfaces greatly reduce turbulence, making relatively high loading rates of 10 - 15 kg/m<sup>3</sup>.d possible. Separation in the BIOPAQ® UASB requires only 1.0 meter of height, which prevents flotation effects and, consequently, floating layers.



**For more information**

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