

BIONEST KAMAKTM

INFRASTRUCTURE OPTIMIZATION

- Municipal and communal
- New or existing lagoons



THE TECHNOLOGY

 $KAMAK^{TM}$ was developed in Canada and its design ensures treatment performances for the harshest northern conditions. Materials used provide a high resistance level to waves, winds and ice.

Biofilm growth on its patented media provide for optimal performance in cold waters, for carbonaceous degradation as well as nitrification.

The technology relies on its ease of operation and energy efficiency.

FLOATING BIOLOGICAL REACTORS

- Modular according to lagoon geometry
- HDPE structure (weather resistant)
- Permanent diffusers = no replacement needed
- · Contain BIONEST® media

BIONEST® PATENTED MEDIA

- High treatment capacity: increases purifying bacteria concentration
- **Fixed:** no risk of media loss into the environment
- Permanent: no degradation over time
- Freestanding: no fluidization energy required
- Reliable: treatment resistant to hydraulic and toxic shocks

KAMAKTM TREATMENT CHAIN

The biological reactors act as the key element providing optimal treatment. Choose a system with low installation, operational and maintenance costs.



Guaranteed performances



RETROFIT

- Easy addition into existing lagoons
- Treatment capacity increase by 2 to 3 times, without new basins
- Reduced toxicity level by nitrification
- No additional footprint, so no need for new land acquisition

NEW INSTALLATION

- Low cost and compact basin(s)
- Reduced toxicity level by nitrification
- Reduced footprint

CUSTOMIZED PROJECTS

- Custom design for each project's specific needs
- Complete in-house fabrication
- Quick and easy installation by our technicians

A WISE INVESTMENT

KAMAK $^{\text{TM}}$ technology is based on floating biological reactors specifically designed according to actual treatment needs. It is the perfect solution for phasing capacity increase projects. Investment is thus gradual, as urban development progresses.







We are proud to put our know-how at your service, each step of the way to complete your project. From research and development to design, installation and operation, our team has developed a unique expertise in wastewater treatment. Through collaboration with the consultant and the client, our engineering team will design a system that takes into account the system's performance expectations, operational requirements and project costs. Our approach ensures an optimal working system and long-term protection of the environment.

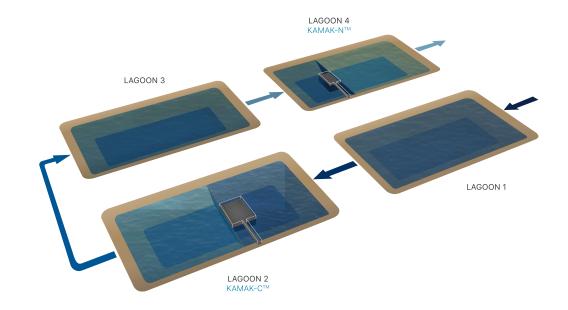
KAMAKTM PROCESS COMPONENTS

For your specific needs

Various configuration possibilities for different treatment types. The following components may be used separately:

Carbonaceous load: KAMAK-C™

Nitrogen treatment (toxicity): KAMAK-N™



KAMAK™: A RENOWNED PRODUCT -

What makes it different...

The Ministry of Sustainable Development, Environment, and Fight Against Climate Change, the Ministry of Economic Development, Innovation and Export Trade, Éco Entreprises Québec and the Fondation québécoise en environnement have awarded Bionest the Phénix de l'Environnement prize for developing KAMAKTM, a technology, process and environmentally friendly product, with proven positive impacts on the environment.

Réseau Environnement has awarded the *DISTINCTION GUSTAVE PRÉVOST* to Bionest to promote its knowledge, excellence and innovation in the environment sector. Its KAMAK $^{\text{TM}}$ product contributes to infrastructure improvement and good management.

Bionest received the Innovation and new market award for its KAMAK $^{\text{TM}}$ at the *Gala Distinction Desjardins*, for new process and innovative products, new market acquisition and continued action within its trade, adaptability and new technology application.

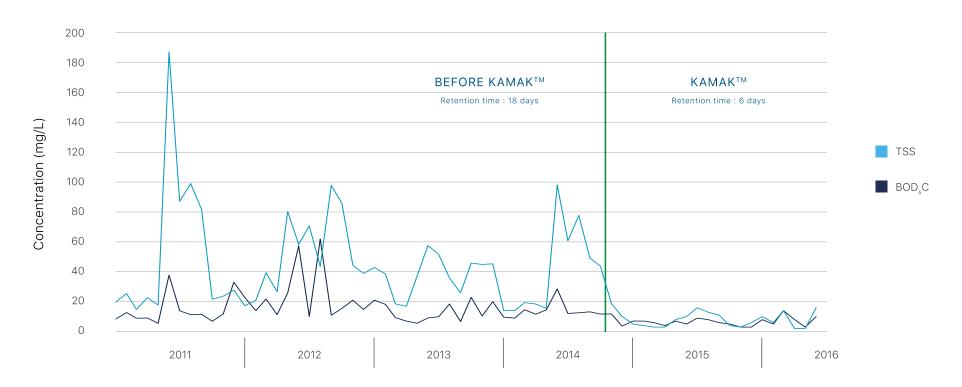






IMPROVED PERFORMANCES -

Municipality of Grandes-Piles, Qc





ABOUT BIONEST

Bionest is a Canadian based company founded in 1999 which specialises in developing environment friendly solutions for treatment of domestic type wastewater. Bionest has acquired an outstanding reputation, built on its team professionalism, the quality of its products and its exceptional service. With thousands of treatment systems installed, Bionest is now operating in several regions of the world and catering to residential, commercial, work camps and municipal needs.



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