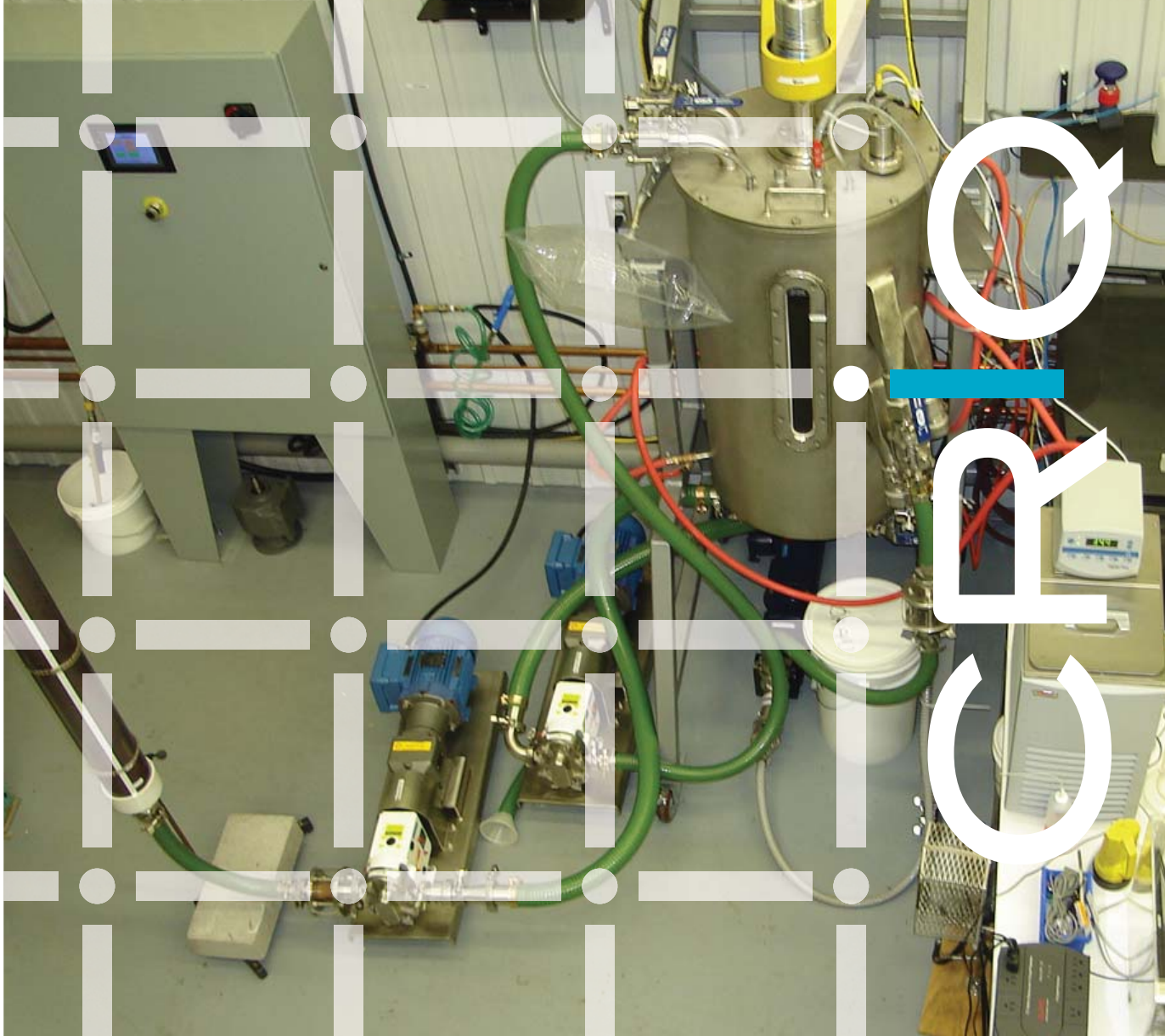


Reusing Waste



Waste Biomethanation

CRIQ can see the energy potential in biomass waste and is therefore involved in a number of innovative biogas (methane) production projects that rely on the anaerobic digestion of animal or plant waste. This technology is an excellent way for Québec businesses to both reduce greenhouse gas (GHG) emissions, waste management costs, and energy use.

OUR TRACK RECORD

Starting with slaughter waste, CRIQ experts optimized biogas production and anaerobic digestion, resolved inhibition problems, and came up with tools to measure and monitor the process.

Reusing Waste

Waste Biomethanation



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OUR EXPERTISE

- We finalize formulations to optimize waste management as well as anaerobic digestion operations and yield.
- We evaluate the methane-generating potential of biomass
- We characterize biogas and digester's sludge.
- We get realistic sizing parameters for industrial digesters.
- We simulate how a procedure will work (continuously and discontinuously) and pinpoint operating problems.
- We optimize performance (residence times, load, agitation, temperature, and pretreatment).
- We come up with unconventional anaerobic digestion procedures.
- We walk you through upscaling the procedure.
- We analyze the system technically and economically.

OUR STATE-OF-THE-ART FACILITIES

CRIQ has a testing area where all anaerobic digestion work is carried out. Three 100 L temperature-controlled reactors are available, with ongoing monitoring of gas and methane volumes. Operations are automated and continuously fed and the stability of the biomethanation process can be confirmed over several months.

These devices were specially developed by CRIQ to simulate various operating conditions and provide optimal sizing parameters for industrial upscaling.

OUR ANALYSIS EQUIPMENT

CRIQ has a well-equipped microbiology and chemistry lab for analyzing liquids, gases, and solids. Lab equipment includes:

- HPLC
- GC-MS
- Portable GC
- ICP
- FTIR
- UV-Vis spectrophotometer

For more on waste biomethanation, contact:

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