

Smart instruments for smart people



Academic **know-how** to commercial products

Bioprocess Control Sweden AB was founded in 2005. With the company's co-founder and lead inventor Dr. Jing Liu as the CEO, Bioprocess Control has developed into a successful company that brings to market nearly 20 years of industry leading research in the area of smart analytical instruments.

The company's flagship product, the Automatic Methane Potential Test System (AMPTS), has become the preferred analytical instrument around the world for conducting various anaerobic batch fermentation tests. Bioprocess Control's product portfolio offers academic and industrial actors working with biogas, animal feed, wastewater, and other fields exciting products for low gas flow measurements, substrate analyses and process simulations.

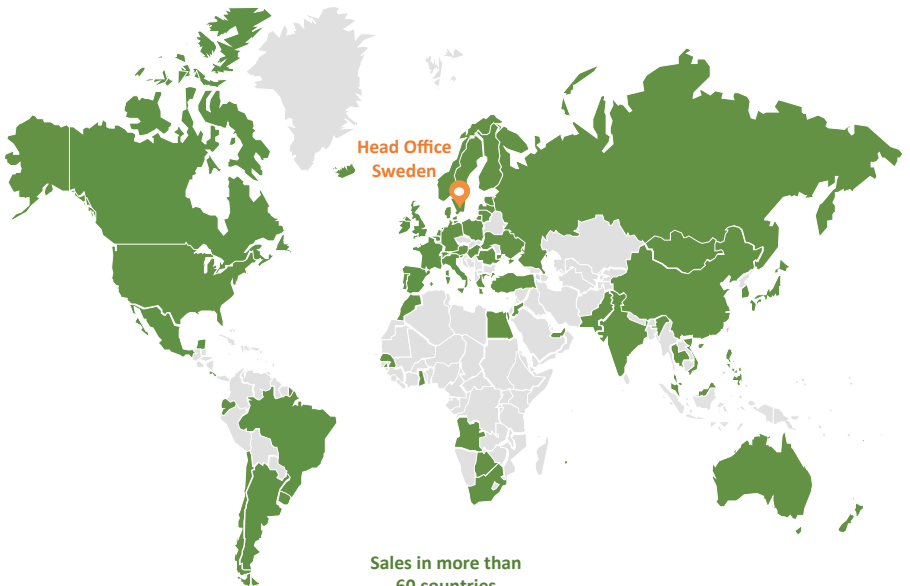
“We invest in innovation and the development of smart instruments, ensure the highest product quality throughout our portfolio, and focus on being service minded and always meeting the needs of our customers.”

Dr. Jing Liu, co-founder of Bioprocess Control AB and Associate Professor in Environmental Biotechnology and Bioenergy at Lund University, Sweden.



What we do

Bioprocess Control brings to market analytical gas flow instruments that allow for more efficient, reliable and high-quality research and analysis, leading to significant reductions in time and labour.



Partners in
16 countries

Sales in more than
60 countries

Over 300 scientific publications
and more added each month

AMPTS II – a tool for anaerobic batch fermentation tests

The Automatic Methane Potential Test System (AMPTS) II is the analytical tool preferred by scientists and engineers for conducting various anaerobic batch fermentation tests. This includes performing, with up to 15 test vials, biochemical methane potential (BMP) tests, anaerobic biodegradability studies, specific methanogenic activity (SMA) assays as well as conducting residual gas potential (RGP) analyses on digested slurry. All of this is performed with easy access to sampling, analysis, recording and report generation; fully integrated and automated.

- Highly precise and accurate data
- Significant reductions in time and labour
- Standardisation of measurement procedures, data interpretation and reports
- User-friendly operation with remote access

“AMPTS helped us minimising the differences in laboratory skills between different researchers by following the same procedure for BMP testing in which manual handling is minimised, while a huge number of data points are gathered...”

By using the AMPTS apparatus we can achieve reproducible results even with students who perform the test for the first time. We now include the AMPTS as a standardised test in our regular curriculum practical work.”

Prof. Jules van Lier, Delft University of Technology, the Netherlands



AMPTS II Light – simplify the selection & pricing of substrates

“We use the AMPTS for both sales process and technical process optimization. The biomethane potential test performed with the AMPTS II can provide useful data to demonstrate the benefits of Cambi thermal hydrolysis technology for sludge pre-treatment before anaerobic digestion. This allows our clients to evaluate the possible return of investment on implementing Cambi thermal hydrolysis treatment in wastewater treatment plants.”

The AMPTS II Light is a sister product of the AMPTS II. It is the instrument of choice for process engineers and plant operators when selecting and pricing substrates in biogas plants. The instrument is used for analysing, with up to 6 test vials, biochemical methane potential (BMP), residual gas potential (RGP) as well as anaerobic biodegradability and specific methanogenic activity (SMA) assays. All of this is performed with easy access to sampling, analysis, recording and report generation fully integrated and automated.

- Highly precise and accurate data
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Mr. Stefan Sandbacka, Vice President of Business Development at Cambi Group, Norway



μFlow – low gas flow measurements made easy

The μFlow is a compact standalone low gas flow meter with high precision and accuracy. With a detection range up to 4000 Nml/hour and a high linearity, it is a perfect flow meter for online, real-time monitoring of inert and slightly aggressive gases at laboratory scale.

- Unaffected by changes in gas composition
- Suitable for both wet and dry gas measurements
- Plug-and-play and easy to operate
- Available for two different measuring resolutions

“...the automation of the test minimises human errors, makes data collection more frequent than manual methods, and reduces operator time allowing more time for performing alternate tasks.”

Associate Prof. Bernadette McCabe,
University of Southern Queensland, Australia



Gas Endeavour – low gas volume and flow analysis

“...it saves time by enabling quick and automatic batch experiments with very little manual labour, and that it is “student proof”, because the instrument does not require long experience or training before you start using it.”

Mr. Aurelien Perrault, Project Manager, Sludge & Energy Innovation, Thames Water, UK

The Gas Endeavour is a novel platform for analysing low gas flow whenever there is a demand for highly accurate and precise measurements. The instrument can be used for research and industrial applications relating to: animal nutrition, wastewater, ethanol fermentation, aerobic and anaerobic respiration, greenhouse gas emission, evaluation of microbial communities and more.

- Modular design for easy upgrade and maintenance
- Simultaneous measurement of gas volume, flow and composition in real-time
- Fully integrated and automated system for sampling, recording, and generating reports
- Flexible system configuration with two different measuring resolutions
- User friendly operation with remote access



Bioreactors – simulate continuous fermentation processes

The CSTR bioreactors have a modular design, built with high-quality materials and robustness in mind. Intended for anaerobic fermentation tests, both for continuous and batch mode operations, the flexible design and user-friendly functionality makes them the ideal experiment platform for simulating full-scale fermentation processes at a laboratory scale.

- Resistant to leakage and corrosion
- Flexible and modular design
- Easy to operate and maintain
- Available in three different sizes and four configurations

“We bought six CSTR-5S reactors, six μ flow gas flow meters and one data logger for our pilot-scale experiments on anaerobic digestion of biowaste... All instruments are very easy to handle. We can easily set up an automatic feeding and discharging system which minimises the labour-demand for the experiment follow-up... The design of gas, liquid and solid in/outlets are suitable for our experimental needs. No blockage issue has ever been experienced. We are fully satisfied by Bioprocess Control's pilot scale solution, it earns us some envious looks from colleagues :-)”

Laëtitia Cardona and Olivier Chapleur,
Researchers, Microbial Ecology of Anaerobic
Digestion, IRSTEA, France



BioReactor Simulator – continuous fermentation made easy

“There are many instruments and methods on the market, but none are standardised the way the BioReactor Simulator and the other products from Bioprocess Control are. They provide market unique standardised systems and methods, which makes it easy to compare results.”

Mr. Bjarne Uller, Senior Technology Specialist,
Dong Energy, Denmark

The BioReactor Simulator (BRS) is a universal platform for simulating anaerobic fermentation processes in a continuous mode of operation. The system is controlled by a web-based software running on an on-site server or a remote cloud solution. The high quality of the data obtained from the BioReactor Simulator allows users to gain deeper knowledge for determining the suitability of a potential feedstock for biogas production, defining the suitable organic loading rate or retention time for a given feedstock, designing suitable feeding schedules, and assessing handling or disposal conditions for digested residues.

- Highly precise and accurate data
- Standardisation of measurement procedures, data interpretation and reports
- Storage and computation solution suitable for experiments with high data generation and prolonged timescales
- Compatible with bioreactors in different configurations and sizes



bioreactor simulator

Training course

Bioprocess Control offers all customers a training course where they meet experts in the field, learn to better understand different applications of the instruments and learn how to get the most out of the equipment.

- Two days of knowledge transfer
- Learn how the instrument and analysis works
- Get inspired
- See the products live and get hands-on practice

“...thank you all for the training course I attended this week. It was an extremely informative, well organised, and interesting two days. I have returned to UK with lots of new ideas about how I can improve the efficiency in using of our AMPTS analysers. It was also great to meet all of you in person, and the other users of your products. I loved visiting Lund. What a beautiful part of the world, I think I will definitely be planning my next holiday in Sweden!”

Mr. John Hunt, Rothamsted Research, UK



Our team

...thank you for standing over
your product and the scientific
response, and thanks for
producing such a wonderful
laboratory instrument.”

Dr. Eoin Allen, University College Cork, Ireland

Bioprocess Control has an international team all committed to delivering quality products and services. It is our ambition to make sure that your instruments from Bioprocess Control are always working and continually delivering value.

Our team provides technical support covering product enquiries, questions, maintenance and product applications. You are most welcome to visit our website and contact us for enquiries and support.

Product enquiries:

sales@bioprocesscontrol.com

General and technical inquiries:

support@bioprocesscontrol.com





Bioprocess Control

– a technology and market leader

Bioprocess Control is a market leader in the area of low gas flow analytical instruments for biotechnology related applications. We invest in innovation and development of smart instruments that allow for more efficient, reliable and higher quality research and analysis, leading to significant reductions in time and labour. We ensure the highest product quality throughout our portfolio, and focus on being service minded and always meeting the needs of our customers.

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