

Product Overview

Excellence is built on
precision and accuracy



From academic **know-how** to commercial products

Founded in 2005, BPC Instruments AB has become a successful company under the leadership of its co-founder and lead inventor, Dr. Jing Liu, who currently serves as the CEO. Leveraging nearly 20 years of industry-leading research in the development of smart analytical instruments, BPC Instruments has made a significant impact in the market.

BPC's impressive portfolio encompasses a range of exceptional products, including two flagship products. The first is the Automatic Methane Potential Test System (AMPTS®), which has become the preferred analytical instrument for conducting various anaerobic batch fermentation tests. The second is the Gas Endeavour®, a novel analytical platform that enables the determination of materials' biodegradability, analysis of bacteria respiration, and performance of biological batch fermentation assays under both anaerobic and aerobic conditions. BPC Blue is a novel respirometer based on the Gas Endeavour® platform, specifically designed for assessing the biodegradability of plastics in both aerobic and anaerobic environments.

These automated analytical devices offer an abundance of benefits, significantly enhancing operational efficiency while reducing both time and labor requirements. They boast a remarkably user-friendly interface and can be accessed remotely, allowing for convenient retrieval of meticulously collected data whenever necessary. Moreover, these automated analytical devices provide standardized measurements, data, and reports, supplying clear and comparable information upon which evidence-based decisions can be confidently made.

"Our focus is on investing in innovation and developing intelligent instruments, maintaining top-notch product quality across our portfolio, and prioritizing customer service by meeting their needs."

Dr. Jing Liu, CEO and co-founder of
BPC Instruments AB

AMPTS® III – a tool for anaerobic batch fermentation tests

The Automatic Methane Potential Test System (AMPTS®) III is the analytical tool preferred by scientists and engineers for conducting various anaerobic batch fermentation tests. This includes performing, with up to 18 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. In its standard form AMPTS III houses 18 glass reactors, but there is also a slimmed down version available, AMPTS III Light, which houses 9 glass reactors.

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



Gas Endeavour® MAX

Designed for the most demanding users, Gas Endeavour® MAX provides you with all the essential equipment and accessories necessary for both batch and continuous fermentation processes.



Gas Endeavour® III – for batch and continuous microbioassays

"...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

Gas Endeavour® III is an advanced laboratory instrument platform designed for precise evaluation of gas production or consumption in both batch and continuous processes. With its fully automatic operation, user-friendly interface, and high reliability, Gas Endeavour® III offers exceptional ease of use. The instrument features 18 or 9 parallel channels, allowing for simultaneous evaluation of a large number of samples. Key features include:

- A pre-calibrated for outstanding precision and accuracy, eliminating the need for frequent calibrations.
- User friendly interface and automated operation minimize the time and labour requirements, enhancing efficiency.
- Standardized measurements, data processing, and reports ensure consistency and facilitate data analysis.
- Easy-to-use software with large storage capacity simplifies data management and retrieval.

BPC® Blue – The Ultimate Choice for Material Biodegradability Assessment

BPC® Blue is a state-of-art laboratory instrument specifically designed to determine the aerobic and anaerobic biodegradability of various biodegradable plastics and polymer materials in a wide range of simulated environmental conditions. The instrument is fully compliant with the most important ISO, European and American standards for biodegradability evaluation in both aerobic and anaerobic conditions.

Featuring an automatic operation and an intuitive user-friendly design, the BPC® Blue enables almost anyone to carry out the test and obtain highly accurate results.

“In comparison to conventional techniques or other available alternatives, BPC Blue greatly reduces the need for manual labour and minimises the likelihood of human errors. Once experiment preparation and setup are completed, BPC Blue seamlessly takes charge of the entire running process, ensuring an automated test until completion. This allows for real-time review and calculation of experimental data, which can be conveniently accessed anytime through the software Aurora™ user interface and a downloaded report.”

Dr. Sten Strömberg, Product Manager
BPC Instruments, Sweden

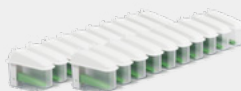


Photo of BPC Blue Premium.

BPC® Go – low gas volume & flow measurements made easier

"...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

BPC® Go is the next-generation gas volume and flow meter that simplifies and secures low gas flow measurements with its built-in computer. It automatically measures both wet and dry gases at a laboratory scale with high precision and accuracy, without the need for recalibration. Built to the highest standards of Scandinavian quality, it is easy to set up and use for online, real-time monitoring from any location.

- Two measurement resolutions (2 and 9 ml)
- Calibration-free
- Large storage capacity (up to 135 kilolitres of gas)
- Wide measurement range (up to 6 l/h)
- Run both batch and continuous experiments with remote access





BPC® Move – leading edge mechanical mixing for laboratory applications

BPC® Move is a compact standalone mechanical agitator ideal for easy, reliable mixing, dispersion, and dissolution of particle-free solutions and slurries. It combines the strength and reliability of mechanical agitation with the ease-of-use of magnetic stirring. Discover a new type of stirring that will improve users' laboratory experience significantly.

- A wide range of stirring intensity: 1-600 RPM
- Various mixing features and agitation movements for both simple and advanced stirring tasks
- Intuitive and precise control over agitation with OLED display and single multifunctional knob
- Suitable for both short- and long-term agitation in closed-chamber and open-vessel systems

"BPC Move offers a robust, user-friendly, and cost-effective mixing solution that can accommodate standard GL45 laboratory flasks of varying sizes. It allows for effortless switching between stirring rods, providing exceptional flexibility in dispersing various volumes and types of media."

Dr. Sten Strömberg, Product Manager
BPC Instruments, Sweden



Bioreactors – simulate continuous operation of anaerobic processes

The 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 biogas production processes in laboratory- and pilot-scale.

- Resistant to leakage and corrosion
- Flexible and modular design
- Easy to operate and maintain
- Available in CSTR, UASB, EGSB and IC configurations and three different sizes

"We bought six CSTR-5S reactors, six 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 BPC Instruments 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 BPC Instruments 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 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.

- A simple and intuitive experiment setup and follow-up
- Standardisation of data registration and presentation
- Secure and reliable data logging and storage
- Compatible with bioreactors in different configuration and sizes





Training course

Besides providing analytical tools, BPC Instruments also transfers know-how and add value through our specialists' expertise in the biogas field and application of ICA (Instrumentation Control and Automation) on various fermentation processes.

As an important part of knowledge transfer, we offer all customers a training course in which the basic operation and data processing are described. The customer gets to better understand different applications of the instruments, learn how the instrument and analysis works and how to get the most out of the equipment.

"...thank you all for the training course I attended this week.

It was an extremely informative, well organised, and interesting.

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

"We had the privilege of attending the AMPTS Training Course. This training course was designed to aid usages of the biogas testing equipment and also gave attendees a chance to pick the brains of the experts on techniques and experiences using the technology.

This was a great course for CREST to be a part of and was an excellent opportunity for widening our knowledge and clearing up any queries. At CREST we feel it is important that our knowledge is up to date and current, so that we can provide the best support to the businesses that utilise us every day. Not only did it expand knowledge, but also gave us the opportunity to meet experts in the field and other interested people from Finland, Sweden and other parts of the UK."

Shane McBrien and Gary Logue, CREST,
South West College, UK

Our team

At BPC Instruments, our team of experts is dedicated to providing friendly and approachable support for our technical products. Their extensive professional background and direct involvement with our products ensure that they can always respond to customer requests with expertise and enthusiasm. We go above and beyond a typical business exchange to ensure our customers receive the best possible service.

With an international presence, BPC Instruments is committed to delivering quality products and services to our valued customers. Our team provides technical support for product enquiries, maintenance, and applications, and we welcome you to visit our website and reach out to us for assistance.

Product enquiries:
sales@bpcinstruments.com

General and technical enquiries:
support@bpcinstruments.com





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BPC Instruments is a global Swedish-based technology company developing and offering analytical instruments enabling more efficient, reliable, and high quality of research and analysis for industries in renewable bioenergy and environmental biotechnology. The result is not only higher accuracy and precision, but also significant reduction in time consumption and labour requirement for performing analyses. BPC Instruments' innovative products offer high-quality hardware and software based on deep knowledge and experience of target applications. The solutions are the first of their kind, making the company a pioneer in its field. Today, BPC Instruments exports to nearly 70 countries around the world.



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