

# Product Overview

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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 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 portfolio currently features two flagship products, among others. 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.

Providing a plethora of benefits, these automated analytical devices galvanise efficient, cost-effective operations, due to the reduction in time and labour. Extremely user-friendly and accessible remotely, the meticulously collected data can be reached whenever it is required. Moreover, these automated analytical devices provide standardised measurements, data and reports, delivering clear, comparable information on which evidence-based decisions can be made.

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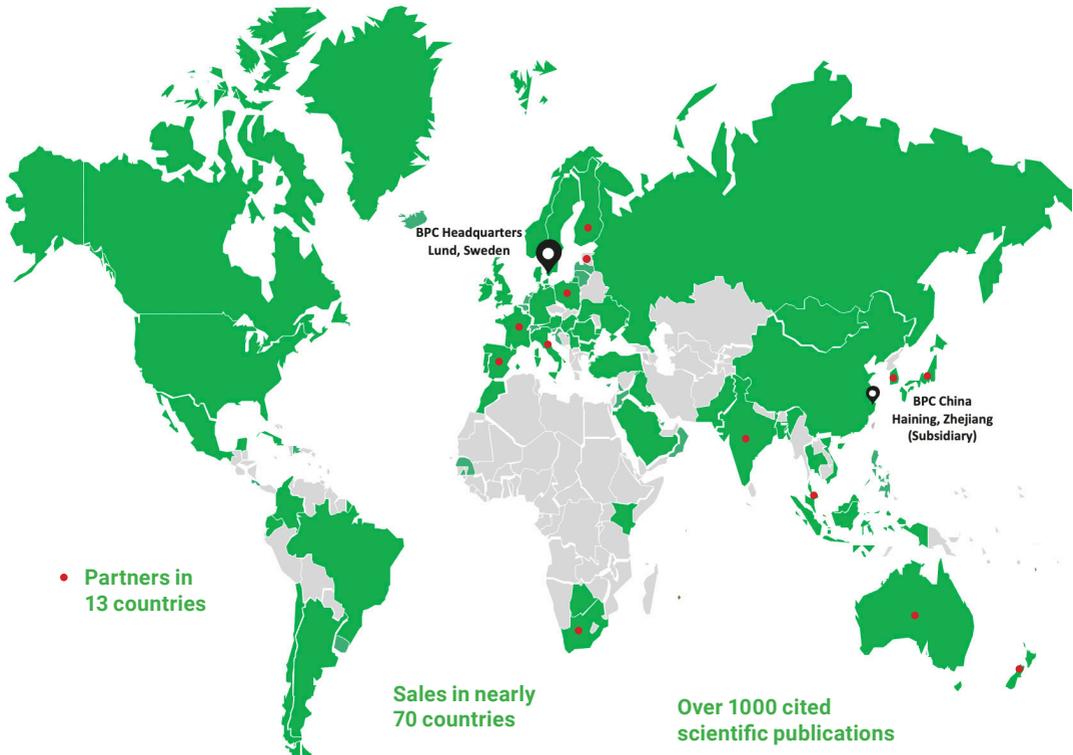
“Our focus is on investing in innovation and developing intelligent instruments, maintaining top-notch product quality across our portfolio, and prioritizing customer service by meeting their needs.”

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

# What we do

BPC Instruments brings to market analytical instruments enabling more efficient, reliable, and high-quality of research and analysis for industries in renewable bioenergy and environmental biotechnology. Our instruments are designed and manufactured in Sweden, incorporating the best elements of Scandinavian form and function for optimal quality and reliability.



# AMPTS<sup>®</sup> III – a tool for anaerobic batch fermentation tests

The Automatic Methane Potential Test System (AMPTS<sup>®</sup>) 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

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“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.”

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





# Gas Endeavour<sup>®</sup> – for anaerobic and aerobic biodegradability assays

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“...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.”

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

The Gas Endeavour<sup>®</sup> is a platform for analysing low gas volume and flow when high accuracy and precise measurements are required. The instrument can be used for research and industrial applications related to animal nutrition, wastewater, ethanol fermentation, aerobic and anaerobic respiration, greenhouse gas emissions, evaluation of microbial communities, and more.

- Simultaneous measurement of gas volume, flow and major gas composition in real-time
- Fully integrated and automated system for sampling, recording, and report generation
- Flexible system configuration with two different measuring resolutions
- Modular design for easy upgrade and maintenance
- Network ready

# BPC<sup>®</sup> Go – low gas volume & flow measurements made easier

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“...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.”

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

BPC<sup>®</sup> 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<sup>®</sup> Move – leading edge mechanical mixing for laboratory applications

BPC<sup>®</sup> 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

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“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.”

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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

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“We bought six CSTR-55 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 :-)”

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



# BioReactor Simulator – continuous fermentation made easy

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“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.”

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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.

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"...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!"

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Mr. John Hunt, Rothamsted Research, UK

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"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."

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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](mailto:sales@bpcinstruments.com)

General and technical enquiries:  
[support@bpcinstruments.com](mailto:support@bpcinstruments.com)





# Excellence is built on precision and accuracy

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. With deep knowledge and experience in target applications, BPC Instruments offers innovative products that feature high-quality hardware and software. 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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