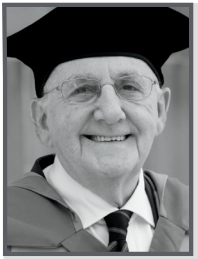


Anaerobic and Microaerophilic Workstations



01 | Our Credentials



Because his early career had been as a 'working-at-the-bench' microbiologist, Don Whitley set out to improve the microbiologist's working life by removing as much tedium as he could and by seeking to reduce the risk of tests being compromised by human error. This experience helped him to develop novel ideas for improving the working life of scientists through the use of labour-saving equipment and automated solutions, leading to the formation of Don Whitley Scientific Limited in 1976.

Don's first product was an improved anaerobic jar. His work resulted in a stream of innovations in the early years – and quite a number of products incorporating his inventions are still in production today.

Our patents include:

- Oval, sleeved ports
- Instant Access Porthole System
- Automatic Humidification
- Anaerobic Conditions Monitor

We have now sold thousands of anaerobic and hypoxic workstations in over 50 countries and have a worldwide network of distributors.

Don also made a significant contribution to the publication **"An Introduction to Clinical Anaerobic Bacteriology"**, a guide to enable the reader to isolate and identify 12 commonly occurring clinically important anaerobic bacteria. Considerable expert knowledge was combined to make this the most up-to-date reference guide for the modern clinical laboratory. Images were kindly supplied by the Anaerobe Reference Unit, Cardiff.



*Our greatest assets are our
satisfied customers...*

...the overall impact of improved anaerobic techniques to the laboratory itself is \$24,455 saved per year.

Dr Joan Barenfanger, et al Clinical Infectious Diseases, 2002;35(Supp11):s78-83

We grow both anaerobic and microaerobic bacteria and the Whitley Jar Gassing System has become a real asset. It has really improved our recovery of strict anaerobic organisms such as *Clostridium tetani*. We have been thoroughly satisfied with our recent results.

Dr Joy Olaya, Dick White Referrals

Both the high standard of the Don Whitley A35 Workstation and the helpful, easily approached staff at Don Whitley Scientific make recommending the company and their equipment a no-brainer.

Samantha Yuille, University of the West of Scotland

03 | Unique Innovations



Instant Access Ports

The patented Whitley Instant Access Porthole System is available on many Whitley Workstations. Not only does it enable instant access to your samples, this sleeveless system uses eight times less gas when entering the workstation compared with a conventional porthole system.



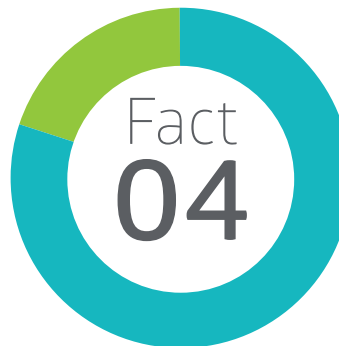
Anaerobic Conditions Monitor

With this option an animated two-tone striped green icon confirms that suitable anaerobic conditions exist in the workstation. Yellow and red icons provide an early indication if conditions begin to vary. Combining the use of this facility with bacterial control organisms is the most reliable way of confirming that suitable anaerobic growth conditions exist within a workstation.



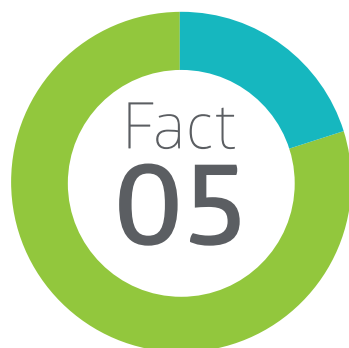
Colour Touchscreen

Operating conditions are configured and maintained by an intelligent, programmable logic controller in conjunction with an intuitive touchscreen interface. The touchscreen interface displays the status conditions of all controlled parameters and also allows the user to change operating parameters to suit specific test conditions. Alarm conditions are clearly displayed and pin code controlled user access levels protect user adjustable parameters.



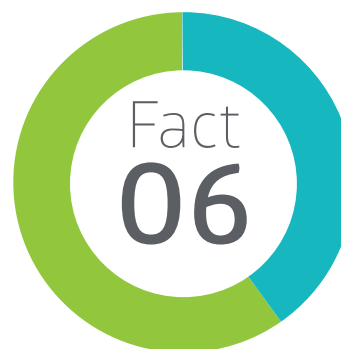
Automatic Humidification

The Automatic Humidification System provides a sterile source of humidity without the need for open trays/containers of water within the workstation. The automatic humidification system does not increase the maximum level of humidity that can be achieved but will increase the humidity very quickly and will not contaminate the atmosphere in the workstation.



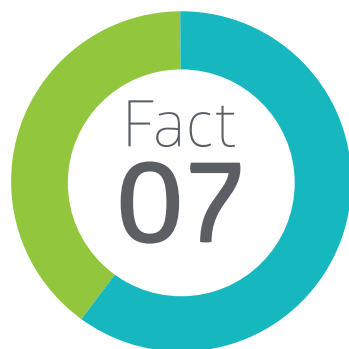
Three Gas Operation

Running your workstation on three gases can be very cost-effective in certain countries. Unique to DWS, some of our anaerobic workstations can operate on separate cylinders of N₂, H₂ and CO₂ to provide the most cost-effective anaerobic conditions (around 30% cheaper than a dual gas version).



HEPA Filtration

To quickly create and maintain a particle-free environment, some workstations are available with the unique Whitley Internal HEPA Filtration System. All the atmosphere in the chamber passes through the filter every four seconds (tested down to 0.3µm – exceeding ISO 14644 Class 3). Proof of atmospheric cleanliness can be provided. CO₂ monitoring and a removable front are supplied as standard on workstations fitted with HEPA filtration.



Data Download/Traceability

There is an option to purchase data logging software for some models of Whitley Workstation. This feature allows the recording of workstation temperature, humidity and chamber pressure for traceability or reference. The information is displayed on the touch screen in graphical format. The recorded data can be downloaded via the USB interface to a memory stick and imported into a spreadsheet for further analysis.



Remote Access

Most Whitley Workstations can be Ethernet-enabled for remote access to the touchscreen control panel. This allows you to log into your workstation when you are away from the lab and check current operating parameters, making changes if necessary. This feature also allows DWS engineers to log into your workstation remotely to assess the situation should a fault occur. They will then be able to provide instant feedback and avoid any unnecessary downtime.

05 | Whitley Anaerobic Workstations

Whitley DG250

The DG250 is an entry-level workstation suitable for anaerobic and microaerophilic applications, providing you with a generous working area and large incubation capacity in the smallest possible footprint. For emergency anaerobic incubation it will hold up to 400 x 90mm Petri dishes.

FEATURES

- Perfect for laboratories growing anaerobes and microaerophiles where space is limited - only 810mm of bench width required with no compromise of conditions.
- The user portholes act as **two** mini-airlocks so you can transfer plates at the same time as entering/exiting the workstation.
- The complete interior is temperature controlled – and can be set between 5°C above ambient and 45°C.
- The Whitley DG250 has an impressive 33% more capacity than any other unit of comparable size so you get more for your money.
- The whole top can be lifted off for thorough cleaning and the transfer of bulk samples and equipment.
- Automatic dehumidifier – no user maintenance necessary.



Whitley A35

Sample manipulation within a secure anaerobic environment is now as easy as working aerobically at the laboratory bench. The Whitley A35 Anaerobic Workstation fulfils the diverse specifications of both research and clinical customers. This workstation accommodates up to 600 x 90mm Petri dishes.

FEATURES

- Optional Instant Access Porthole System eliminates the need for gloves and sleeves and uses eight times less gas than conventional porthole systems.
- Rapid, built-in airlock with mechanical and electrical interlocks - no risk of compromising conditions inside the chamber; flushed with nitrogen as an additional cost saving.
- Innovative colour touch screen interface with password-protected user levels.
- Available with Removable Front / Dual gas operation / Automatic commissioning cycle.
- Automatic dehumidifier – no user maintenance necessary.
- Available with integrated Anaerobic Conditions Monitor.



Whitley A35 HEPA

The Whitley A35 HEPA Workstation is an anaerobic workstation with the addition of a unique internal HEPA filtration system. Like our other anaerobic workstations, the A35 HEPA provides excellent conditions for the processing, incubation and examination of samples without exposure to atmospheric oxygen.

FEATURES

- Fitted with the unique Whitley Internal HEPA Filtration System where all the atmosphere inside the chamber passes through the filter every 4 seconds. This ensures the chamber environment is cleaned quickly.
- Levels of atmospheric cleanliness inside the workstation exceed the requirements of ISO 14644 Class 3.
- Uses filters specially designed for Don Whitley Scientific.
- Fitted with patented, oval gloveports, equipped with sleeves and gloves, for greater freedom of movement and operator comfort.
- Automatic commissioning cycle to save time.
- Removable front, which aids cleaning and transfer of equipment, fitted as standard.



Note: All Whitley Anaerobic Workstations can be run as Microaerophilic chambers, simply by connecting the relevant gas mixture.

06

Whitley A45

The Whitley A45 Anaerobic Workstation has three ports for convenient access to the entire incubation and working areas. Even with a relatively small footprint incubation capacity is maximised and creates the perfect controlled environment for small or large sample numbers. Accommodates over 750 x 90mm Petri dishes leaving a generous working area.

FEATURES

- The choice of an Instant Access Porthole System or our unique oval porthole system.
- Rapid, built-in airlock with mechanical and electrical interlocks - no risk of compromising conditions inside the chamber; flushed with nitrogen as an additional cost saving.
- Innovative colour touch screen interface with password-protected user levels.
- Available with Removable Front / Dual gas operation / Automatic commissioning cycle.
- Automatic dehumidifier – no user maintenance necessary.
- Available with integrated Anaerobic Conditions Monitor.

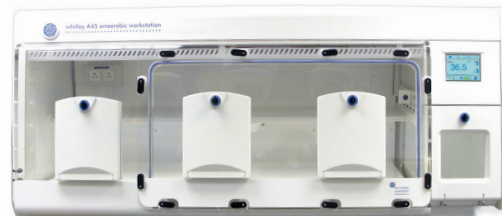


Whitley A45 HEPA

The A45 HEPA Workstation, like our other anaerobic workstations, enables the processing, incubation and examination of samples without exposure to atmospheric oxygen. This workstation is fitted with a unique internal HEPA filtration system and has three ports for convenient user access to the entire incubation and working areas.

FEATURES

- Fitted with the unique Whitley Internal HEPA Filtration System where all the atmosphere inside the chamber passes through the filter hundreds of times an hour, which ensures the chamber environment is cleaned quickly.
- Levels of atmospheric cleanliness inside the workstation exceed the requirements of ISO 14644 Class 3.
- Removable front fitted as standard to facilitate the transfer of items of equipment.
- Two manual, oval ports with sleeves and one Whitley Instant Access Port.
- Colour touchscreen interface that displays all monitored parameters and has PIN protected user levels.
- Rapid, built-in airlock that is flushed with nitrogen – a cycle takes only 60 seconds – ensuring no risk of compromising conditions inside the chamber.



Whitley A55

The Whitley A55 has a chamber size twice the width of an A35, with a huge working and incubation area, and an airlock at either end. Petri dishes and samples can be introduced at either end of the workstation creating a natural, Lean rhythm for your laboratory workflow. This system is ideal for the busy lab where organisation of samples and cultures is key.

FEATURES

- The choice of an Instant Access Porthole System or our unique oval porthole system.
- 2x Rapid, built-in airlocks; flushed with nitrogen as an additional cost saving.
- Innovative colour touch screen interface with password-protected user levels.
- Dual gas operation for real savings on gas.
- Comfortable to work in and excellent visibility.
- Available with integrated Anaerobic Conditions Monitor.
- Available as a dual temperature workstation to enable the use of different temperatures in each workstation chamber.



Whitley A85

The Whitley A85 Anaerobic Workstation has been created to enable both research and clinical scientists to carry out microbial manipulation within a secure anaerobic environment. Every aspect of system functionality has been thoroughly considered - a 30 litre airlock, environmental control systems, touch screen interface, workspace visibility, fabrication quality, the unique gloveport system and maximum incubation capacity. It provides the ideal controlled environment for small or large numbers of samples.

FEATURES

- Innovative touch screen interface with PIN number user access.
- Control temperature from 5°C above ambient up to 45°C.
- Modern, ergonomic design.
- Dual gas operation.
- Automatic commissioning cycle.
- Automatic de-humidification system - no user maintenance necessary.
- Patented multi-functional gloveports.
- Optional refrigeration unit available.



Whitley A85TG

This workstation is an extremely cost-effective option as it runs from three separate gases (N₂, H₂, CO₂). Running costs are 30% less than a dual gas version (which uses cylinders of ANO₂ and N₂). The Whitley A85TG Workstation has a capacity of up to 700 x 90mm Petri dishes and a huge 30 litre airlock.

FEATURES

All the same great features as the A85 but also with:

- Manual, oval ports enable gloved or bare handed working. Each porthole also allows the transfer of up to 10 plates each as you insert your arms.
- Full colour touchscreen control panel for ease of use and for visual display of parameters such as temperature, humidity and airlock cycle status.
- Large airlock accommodates up to 90 x 90mm Petri dishes.
- Fitted with an automatic de-humidification system to save time and resources.
- Comprehensive range of options available to tailor the workstation to your needs, ie single plate entry system, internal power socket, etc.

Whitley A95

The A95 Workstation is the largest anaerobic chamber in the Whitley range with a huge capacity of up to 1400 x 90mm Petri dishes, depending upon the way you choose to configure your working and incubation areas. This product incorporates the latest in touchscreen technology, which allows the incorporation of some unique features and benefits. The four manually operated, oval glove ports enable two people to operate within the same controlled atmosphere simultaneously. This is ideal for tutoring or for very busy laboratories. Each port also acts as a mini-airlock so you can transfer 10 plates through each time you insert or withdraw your arms, so reducing gas usage and the number of airlock cycles required.

FEATURES

- Innovative touch screen interface with password protected user levels.
- Rapid, built-in airlock with mechanical and electrical interlocks - no risk of compromising conditions inside the chamber, flushed with nitrogen as an additional cost saving.
- Available with integrated Anaerobic Conditions Monitor.
- Modern, ergonomic design.
- Dual gas operation.
- Automatic commissioning cycle.
- Automatic de-humidity control system – no user maintenance necessary.



Whitley A95TG

The Whitley A95TG is the second of our cost-effective, three gas workstations. Running from separate cylinders of N₂, H₂ and CO₂, this cabinet's operating costs are 30% less than the dual gas version. The huge double chamber can accommodate up to 1,400 x 90mm Petri dishes.

FEATURES

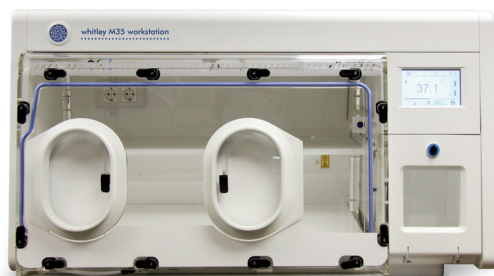
- Four manual, oval gloveports enable two people to work in the chamber, gloved or bare handed, simultaneously.
- Each gloveport acts as a mini-airlock for the transfer of 10 plates each at the same time as the operator's arms.
- The large 30 litre airlock can transfer up to 90 x 90mm Petri dishes.
- An ideal workstation for high throughput laboratories and for training purposes.
- Full colour touchscreen operation and visual display of parameters such as temperature, humidity and airlock cycle status.
- Available with integrated Anaerobic Conditions Monitor.

Whitley M35

The Whitley M35 is a microaerobic workstation ideal for the study and isolation of *Campylobacter* spp., *Helicobacter pylori* and other similarly fastidious organisms. It is a key component for any microbiology laboratory. This chamber provides the perfect way of manipulating samples in a sustainable microaerobic environment.

FEATURES

- Accommodates up to 600 Petri dishes.
- Supplied with an automated dehumidification control system with no user maintenance necessary.
- Allows bare hand working.
- Intuitive colour touch screen interface with PIN-code protected user levels.
- Rapid integral airlock - no risk of compromising conditions inside the chamber.
- Airlock flushed with nitrogen as an additional cost saving.
- Modern, ergonomic design.



Whitley Jar Gassing System

For those laboratories still using jars, the Whitley Jar Gassing System reduces the cost of creating microaerobic conditions by 98% and anaerobic conditions by 89% compared to gas packs. Jars can be useful for transporting samples and when a low number of cultures does not warrant the cost of a workstation.

FEATURES

- Creates perfect conditions for growing anaerobes in less than 2 minutes and for microaerophiles in just 15 seconds. This compares to between 30 - 180 minutes to achieve suitable conditions using gas generation sachets or kits.
- A full colour touch screen control panel allows you to monitor, in real time, that the criteria necessary for the creation of either anaerobic or microaerobic conditions has been met.
- It is easy to use so no complicated operator training is required.
- Incorporates PIN code protected user access levels for additional security.
- The optional printer enables you to create a hard copy audit trail for accreditation purposes.
- If you already have anaerobic jars that you wish to use you can order the adaptor kit, which will enable you to connect to your existing jars.



Whitley DG250 Workstation	Whitley A35 Workstation	Whitley A35 HEPA Workstation	Whitley A45 Workstation	Features
270 / 400	400 / 600	400 / 600	600 / 900	*Chamber Capacity
10 plates per port (20)	40 plates via airlock	40 plates via airlock	40 plates via airlock	Port / Airlock Capacity
Manual Ports	Instant Access or Manual Ports	Instant Access or Manual Ports	Instant Access or Manual Ports	Porthole System
ANO ₂ / N ₂	ANO ₂ / N ₂	ANO ₂ / N ₂	ANO ₂ / N ₂	Gas Supplies
Hardwired	Wireless	Wireless	Wireless	Footswitch
○	○	○	○	Auto Sleeve Gassing
○	○	○	○	Internal Mains Socket
○	○	○	○	Storage Trays
○	●	●	●	Lighting
●	○	○	○	Inspection Lamp
○	○	○	○	Single Sample Entry
Optional Liquid-based System	-	-	-	ANO ₂ Indicator
-	○	○	○	ANO ₂ Conditions Monitor
-	-	-	-	Refrigeration
-	○	○	○	Data Logging
15 second sample transfer via ports	60 seconds	60 seconds	60 seconds	Airlock Cycle Time
○	○	○	○	Extra Cable Glands
-	○	○	○	HEPA Filtration
-	-	-	-	Microscope
●	●	●	●	Automatic Dehumidifier
-	○	○	○	Automatic Humidifier
-	○	○	○	Chilled Incubation Compartment
Full lift off lid	○	○	○	Removable Front
○	○	○	○	Workstation Trolley
-	○	○	○	Remote Access
810 / 760 / 635	1255 / 720 / 710	1255 / 810 / 710	1660 / 720 / 710	Dimensions (w/d/h)
141 / 64	220 / 100	220 / 100	286 / 130	Weight (lbs/kg)
KEY:	● Fitted as standard	○ Option available	- Not applicable	

Features	Whitley A45 HEPA Workstation	Whitley A55 Workstation	Whitley A85 Workstation	Whitley A85 TG Workstation
*Chamber Capacity	600 / 900	800 / 1200	540 / 610	540 / 610
Port / Airlock Capacity	40 plates via airlock	40 plates via each airlock (2 airlocks)	10 plates per port + 90 plates via airlock (110)	10 plates per port + 90 plates via airlock (110)
Porthole System	Instant Access or Manual Ports	Instant Access or Manual Ports	Manual Ports	Manual Ports
Gas Supplies	ANO ₂ / N ₂	ANO ₂ / N ₂	ANO ₂ / N ₂	H ₂ / N ₂ / CO ₂
Footswitch	Wireless	Wireless	Wireless	Wireless
Auto Sleeve Gassing	○	○	○	○
Internal Mains Socket	○	○	○	○
Storage Trays	○	○	-	-
Lighting	●	●	●	●
Inspection Lamp	○	-	○	○
Single Sample Entry	○	○ (front loading version only)	○	○
ANO ₂ Indicator	○	-	-	-
ANO ₂ Conditions Monitor	○	○	○	○
Refrigeration	-	-	○	○
Data Logging	○	○	○	○
Airlock Cycle Time	60 seconds	60 seconds per airlock (2 airlocks)	5 minutes	5 minutes
Extra Cable Glands	○	○	○	○
HEPA Filtration	●	-	-	-
Microscope	-	-	○	○
Automatic Dehumidifier	●	●	●	●
Automatic Humidifier	○	-	-	-
Chilled Incubation Compartment	○	-	-	-
Removable Front	●	● (Right-hand side only)	-	-
Workstation Trolley	○	●	○	○
Remote Access	○	○	○	○
Dimensions (w/d/h)	1660 / 810 / 710	2510 / 720 / 710	1570 / 760 / 840	1570 / 760 / 840
Weight (lbs/kg)	330 / 150	440 / 200	330 / 150	330 / 150
	KEY:	● Fitted as standard	○ Option available	- Not applicable

Whitley A95 Workstation	Whitley A95 TG Workstation	Whitley M35 Workstation	Features
1080 / 1400	1080 / 1400	400 / 600	*Chamber Capacity
10 plates per port + 90 plates via airlock (130)	10 plates per port + 90 plates via airlock (130)	40 plates via airlock	Port / Airlock Capacity
Manual Ports	Manual Ports	Manual Ports	Porthole System
ANO ₂ / N ₂	H ₂ / N ₂ / CO ₂	H ₂ / N ₂ , CO ₂ , N ₂ , Air	Gas Supplies
Wireless	Wireless	Wireless	Footswitch
○	○	-	Auto Sleeve Gassing
○	○	○	Internal Mains Socket
-	-	○	Storage Trays
●	●	●	Lighting
○	○	○	Inspection Lamp
○	○	○	Single Sample Entry
-	-	-	ANO ₂ Indicator
○	○	-	ANO ₂ Conditions Monitor
-	-	-	Refrigeration
○	○	○	Data Logging
5 minutes	5 minutes	60 seconds	Airlock Cycle Time
○	○	○	Extra Cable Glands
-	-	○	HEPA Filtration
○	○	-	Microscope
●	●	●	Automatic Dehumidifier
-	-	○	Automatic Humidifier
-	-	-	Chilled Incubation Compartment
-	-	○	Removable Front
○	○	○	Workstation Trolley
○	○	○	Remote Access
2415 / 760 / 840	2415 / 760 / 840	1255 / 720 / 710	Dimensions (w/d/h)
506 / 230	506 / 230	220 / 100	Weight (lbs/kg)

*Capacity based upon using 90mm Petri dishes. Shown as working / short term maximum with limited working space

13 | What Can We Do For You?



SERVICE AND MAINTENANCE

Comprehensive service plans

We offer UK customers comprehensive maintenance and repair contracts on a variety of laboratory equipment from many different manufacturers.

We are the only company able to take advantage of training from our in-house colleagues who design and manufacture Whitley products – and, of course, have their day-to-day support.

We also ensure all our engineers have been trained by the manufacturers of any equipment they service.

- Engineer coverage across the UK
- Fast response time
- Stock of parts carried to ensure a first time fix



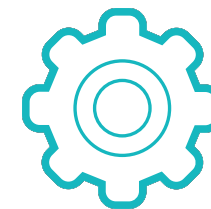
TEMPERATURE MAPPING

On-going compliance

In today's increasingly regulated environment, the need to demonstrate on-going compliance with quality and safety standards is part of laboratory life.

DWS is UKAS accredited to provide temperature mapping of Whitley Workstations, other anaerobic chambers, incubators, ovens, fridges or freezers using up to 12 thermocouples. This is useful when you need to identify any temperature gradients that may be present and need to be avoided when carrying out particularly sensitive incubation tasks.

Our on-site service means the work can be carried out at your convenience with prompt supply of certification. If you have a DWS service contract, you can arrange for your temperature mapping to be done at the same time as a routine service or repair work for the most cost-effective price.



UKAS CALIBRATION/ VALIDATION

100% confidence

To provide you with 100% confidence in your processes and ensure your equipment and procedures will stand up to scrutiny,

DWS offers UKAS calibration and validation services for heat sterilisation equipment, temperature controlled processes and temperature indicators. This flexible onsite and offsite service is undertaken by our team of experts who will take the time to explain the work they carry out.

If you are a service contract customer, we can schedule your UKAS calibration/validation work to take place at the same time as routine servicing to save you time and money.



MICROBIOLOGY LABORATORY

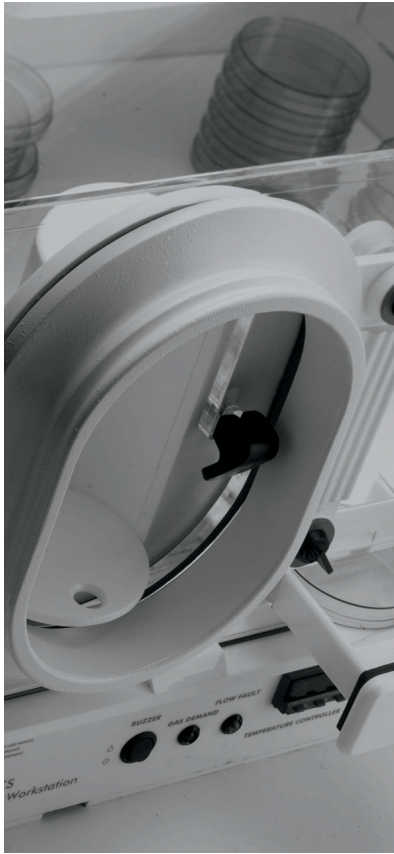
In-house laboratory services

It's not every laboratory equipment manufacturer that has its own in-house laboratory with experience in food, water, environmental, pharmaceutical and clinical work. As well as having developed a great deal of experience in culturing anaerobic and microaerophilic bacteria, the team of DWS scientists have a key role in new product development.

They are also on hand to help customers with the best practical, productive ways of using products supplied by DWS.

To support the design, manufacture and supply of Whitley Workstations, we have a range of complementary services:





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don whitley
scientific