



# Autumn 2010 Microfocus



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## A85 Anaerobic Workstation Launched

New from Don Whitley Scientific is the Whitley A85 Anaerobic Workstation, designed to enable both clinical and research scientists to carry out sample manipulation within a secure anaerobic environment. Gone are the dials and switches you may be used to seeing on earlier workstations – this workstation has an intuitive full-colour, touch-screen user interface.



### Main Features

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



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For more information on any issues featured in this newsletter, please contact your Don Whitley Scientific product specialist or call our head office on 01274 595728.



**Julie Robinson** joined the Accounts team in July to learn Elsie Mandreit's role, ready for when Elsie retires. Julie previously worked at Dales Holiday Cottages in Skipton.



**Thomas Janssen** joined our German subsidiary, Meintrup-DWS in August as a Service Engineer. He previously worked for Eurofins as an in-house engineer.



**Daniel Gutal** joined the Meintrup DWS sales team in September. Previously Daniel worked in a laboratory at Ganzlmmun AG.

### Service Engineer Raises £500

Steve Hughes, our service engineer for the Midlands and mid-Wales, has raised over £500 for the Alzheimers Society by competing in the 30th Great North Run. Steve was also particularly pleased to have achieved his personal best time - 1 hour, 57 minutes and 26 seconds.

54,000 runners competed in this year's half-marathon, which was won by Hailie Gebrselassie in 59 minutes and 33 seconds.



Steve Hughes, left, with co-runner Kris Gibson

### Distributor of the Year 2009

Congratulations to Microbiology International (USA) for achieving the award of Distributor of the Year 2009.

Our photo shows Kevin and Bill from Microbiology International accepting their award from Paul Walton.



[www.dwscientific.co.uk](http://www.dwscientific.co.uk)

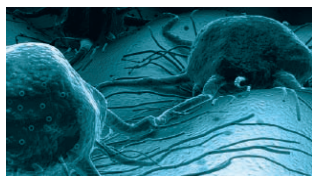
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## Product Application



Hypoxic research helps advance insight into tumour cell metabolism at the **Beatson Institute for Cancer Research in Glasgow**. **Prof Eyal Gottlieb** leads a research group studying **apoptosis and tumour metabolism**. The group is investigating the relationship between cancer, cell metabolism and cell death.

Many laboratory cell culture systems can only expose cells to more than twice the physiological concentration of oxygen found in most cells. The H35 Hypoxystation allows Prof Gottlieb's research to be carried out in a tumour-like hypoxic environment. Many solid tumours consist of large areas of poorly perfused cells leading to areas of low oxygen found throughout the cell mass. As cells are known to behave differently in hypoxic conditions, researchers rely on being able to recreate and maintain a tightly controlled low oxygen environment in order to more accurately reflect the cellular interactions within tumours.

The hypoxic tumour regions often produce the most aggressive and therapy-resistant cells, causing tumours to spread. Using Don Whitley Scientific's H35 Hypoxystation has allowed researchers to monitor and record consistently low levels of oxygen as well as measuring the alterations in tumour cell metabolism.

Prof Gottlieb studied the role of prolyl hydroxylases (PHD), the enzymes that sense oxygen in cells, in the metabolic adaptation to hypoxia. He observed that by keeping PHD active under hypoxia and hence preventing the hypoxia-mediated metabolic changes tumours would experience a metabolic crisis and undergo cell death. The ability of the Hypoxystation to generate and precisely control an hypoxic environment ensures that the required internal conditions remain constant at all times. Oxygen, carbon dioxide, temperature and humidity levels are continuously displayed on the touchscreen interface. This data, together with chamber pressure, can also be downloaded for further analysis.

Experimenting with the oxygen levels in tumour environment has helped Prof Gottlieb's researchers identify a new approach – direct targeting of PHDs by addressing hypoxia in general rather than targeting the hypoxia inducible transcription factor (HIF) only. PHDs in most tumours are functionally silenced by the prevailing hypoxia. The research has demonstrated that reactivating these enzymes under hypoxia may be a suitable approach for cancer treatment.

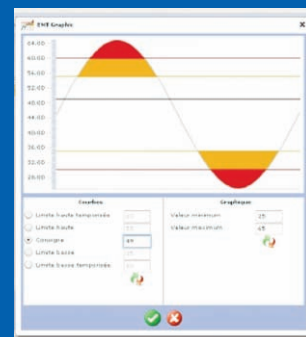
Commenting on the H35 Hypoxystation, Prof Gottlieb commended the design that allows the oxygen content to be changed as and when necessary (in 0.1% increments from 0.1% to 20%). This enables researchers to carry out a comprehensive and more accurate *ex vivo* analysis of hypoxic tumours that are known to be more aggressive, with high metastatic potential and more resistance to therapy.

Prof Gottlieb's research team continues to investigate the metabolic transformation process that cancer cells undergo in order to survive and grow. Future studies will continue to focus on the unique metabolic traits of cancer cells and how the survival mechanisms are regulated through the inhibition of PHDs.

## eviSENSE – new web-based software for Labguard

The Labguard temperature monitoring system now comes complete with the latest Windows-compatible software – eviSENSE – to make it even easier to use.

Being web-based there are no costly licences as access is available to an unlimited number of individual PCs. With three different levels to choose from, depending on the number of items to be monitored, you can have the perfect system for your laboratory.



For more information, please see our webpage at [www.dwscientific.co.uk/labguard.php](http://www.dwscientific.co.uk/labguard.php)

eviSENSE really has to be seen to be believed so book your demonstration today by calling **01274 595728** or enquire via our website at [www.dwscientific.co.uk/contactus.php](http://www.dwscientific.co.uk/contactus.php)

### Anaerobic monitoring for the Whitley A35/A85 Workstations

These Workstations are now available with a fully integrated anaerobic monitoring system.

This factory-fitted option displays oxygen levels in real time using coloured segments - green, amber or red - depending upon the amount of oxygen present.

The data gathered can be downloaded for traceability records.



### Microsearch Autoclave Delivered

A new Rodwell Ambassador 158E was recently installed at Microsearch Laboratories in Halifax. The customer had this to say of their new purchase:

“We recently purchased our new Rodwell autoclave from Don Whitley Scientific Limited. Buying a large piece of equipment like this involves a long, difficult decision-making process but that’s why we consulted DWS. They understand the needs of a busy contract laboratory and were able to provide advice to help us choose the right product for our particular requirements. There is also the added advantage of their excellent maintenance service, which we have used for several years. They maintain and repair our equipment to ensure we have the continuous capability to handle our ever-increasing workload.”



### New Humidification System for the H35

New from Don Whitley Scientific for the H35 Hypoxystation is the Whitley Automatic Humidification System. This unit is designed to provide a responsive, repeatable and sterile source of moisture to maintain pre-set humidity levels.

This system removes the need for the user to increase internal humidity by relying upon uncontrolled evaporation from open trays of water which can increase the risk of spillage and contamination.

The only required user maintenance is to occasionally top up the reservoir with deionised water when prompted.

The unit is very easy to control via the H35's full-colour touch screen interface.

[www.hypoxystation.co.uk](http://www.hypoxystation.co.uk)

Check out our new website for more information about Hypoxystation – our cell culture workstation.



[www.dwscientific.co.uk](http://www.dwscientific.co.uk)

## Product Videos Online



Now **LIVE** on our website are videos of the A35, A85, H35, 500/1000 and DG250 Workstations.

Log on and see how the different sleeve systems work, how the airlocks operate, and how the various product features could make your laboratory life a lot easier.

Go to: [www.dwscientific.co.uk/whitley\\_workstations.php](http://www.dwscientific.co.uk/whitley_workstations.php) and see our anaerobic and hypoxic workstations in action.

## Product Feature

It is difficult to escape media interest in genetically modified food, cloned meat entering the foodchain, and the world's apparent inability to continue to feed its growing population, all really important food-related issues. But what has this got to do with **gravimetric diluters** supplied by Don Whitley Scientific?

Food microbiology plays an important role in the economy and provides the consumer safeguards necessary for confidence in the food we all eat. Food laboratories benefit from the introduction of automated products to perform repetitive tasks or processes that need accuracy, repeatability and traceability. Such products are essential in reducing the risk of contamination and the cost per test. With increased scrutiny from legislative authorities and generally rising sample throughput levels, there is no better time to consider automating some of the processes in your laboratory to ensure compliance and better, faster results.

All contract and in-house food laboratories have procedures for sample collection and processing. They all encounter the same problem: the standardisation of dilutions to ensure each sample is consistent and the procedure is repeatable.

A gravimetric diluter – the working principles of which were first suggested by Don Whitley in the 1980s – adds the required amount of diluent automatically, based upon the weight of the sample, to achieve the dilution required. This eliminates the need to accurately weigh samples and manually calculate the required amount of diluent. Samples can be processed more efficiently and microbiologists provided with more time for analysis and evaluation.

There are two Dilumat gravimetric diluters in the Don Whitley Scientific range: Dilumat® 4 (which can be ordered as a 4x4 by specifying additional pumps) and the new Dilumat® S. Both products allow you to programme in parameters for the minimum and maximum allowable sample weight and the required dilution factor so the process is standardised and repeatable.

*Dilumat® is a registered trademark of AES Laboratoire*



For a no-obligation Dilumat demonstration, please contact us by phone: **01274 595728** or email: [sales@dwscientific.co.uk](mailto:sales@dwscientific.co.uk). For more information, please log onto our website at [http://www.dwscientific.co.uk/sample\\_preparation.php](http://www.dwscientific.co.uk/sample_preparation.php)

[www.dwscientific.co.uk](http://www.dwscientific.co.uk)

## Dilumat Features



- Microprocessor controlled
- Can be fitted with 2 pumps for different diluents
- Arm drops down automatically when ready to dispense
- User-friendly menu/LCD display
- Can be linked to a printer
- Separate tower and up to 4 pump heads can be added
- Optional barcode reader
- Designed for easy cleaning
- Automatically stops when diluent has run out



- Microprocessor controlled
- Rotating dispensing arm to facilitate sample addition
- Larger bore tubing for optimal process speed without loss of accuracy
- Icon-driven display to simplify operation
- Can connect to LIMS or operate independently
- Designed to be splash-proof and easy to clean
- Improved pump arrangement to facilitate loading of tubing
- Optional additional pump
- Automatically stops when diluent has run out



**Evan Kitsell, our Head of Design, is responsible for the look and feel of our products and the way we position and present our company. What is less well known is his design management mentoring of other UK businesses.**

The Design Council, the UK government-funded organisation that promotes best practice in many design disciplines, sought Evan's assistance when they wanted to develop a business improvement programme.

Says Evan, "I was the third design associate to be appointed to work within the scheme. It's called Designing Demand and helps small and medium-sized UK companies create world-class products, brands and services.

"I've worked with companies across a range of sectors and sizes from one-man bands up to businesses with an annual turnover of £60m. The design issues and likely remedies tend to be remarkably similar, irrespective of company size or sector. I've also helped to develop and refine the programme itself that now has more than 50 design associates who have already provided design mentoring to hundreds of UK companies. The opportunity to be involved with so many large and small businesses in many different sectors is, in turn, really helpful to my role at DWS.

"I'm very fortunate because my work at DWS is so varied – ranging from observing scientists at work so that we develop products that meet or exceed their needs; to overseeing product aesthetics and ergonomic considerations; to demonstrating our products; to creating exhibition materials, advertising campaigns and user manuals. We have an excellent product development team with a wide range of complementary skills – we work well together and create the best possible products. We strive to introduce one major new product every year. It's wonderful to have a career that I enjoy so much.

"It's sobering to realise", continues Evan, "that with more than 30 years experience in product design, some of my first product development work resulted in patents that have now expired after their full term of 20 years!"

Evan is a frequent speaker at business seminars and design events – his presentation skills are in demand when we welcome customers and distributors to learn about our company and how we develop products.

Evan is married with three children and two grandchildren - and has worked for DWS for 16 years.

## 2010/11 Exhibition Conference Dates

Don Whitley Scientific has confirmed attendance at the following exhibitions/conferences.

If you are visiting any of these events, come to our stand for the latest news on our product range.

Log on to:  
[www.dwscientific.co.uk](http://www.dwscientific.co.uk)  
for continuously updated exhibition information.

- **Welsh Microbiology Association Winter Meeting, 12-13 November 2010, Diplomat Best Western Hotel, Llanelli**
- **Society for Applied Microbiology Winter Meeting, 12 January 2011, Royal Society, London**
- **Biomedical Science Conference, 26-28 September 2011, ICC, Birmingham**

For more information on any of the products featured in this newsletter, please contact us:

01274 595728  
[sales@dwscientific.co.uk](mailto:sales@dwscientific.co.uk)