



newsletter

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New facilities for product benchmarking include a suite of ovens and a dedicated product evaluation room

Refrigerated food survey

We have recently completed a study of how consumers treat refrigerated foods in the home, as part of a project for WRAP (Waste & Resources Action Programme) investigating losses through spoilage. In particular we looked at the effects on temperature of transporting refrigerated food from the supermarket to the home and storage in the domestic fridge. We concluded that there is scope to improve temperature control in the domestic chill chain. Key is improving consumer understanding of the importance of good temperature control and ensuring that tools such as fridge thermometers are used effectively. Regularly monitoring fridge temperature in a range of locations and storing the most temperature sensitive foods in the coldest part of the fridge could deliver significant benefits.

Amongst recommendations in the report are that food manufacturers should simplify the labelling of products with respect to storage conditions on-pack, aiming for a common approach, and choose to label with a choice of two phrases relating to temperature: i.e. either "Keep Refrigerated" or "Store at 5°C maximum". It was also felt that the use of reclosable packaging should be extended, particularly for products like cheese and cooked meat. There are several recommendations for food retailers, such as increasing the availability and visibility of fridge thermometers and 'cool-bags' in-store, and for the manufacturers and retailers of fridges and temperature measuring devices.

Research is now ongoing on temperature control from manufacture to point of sale.

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Organic ham dispute

New EU legislation has been proposed that would result in the banning of the use of nitrates and nitrites in organic ham and bacon. This would have significant effects on this sector. In order to make an informed response to this proposal, Defra commissioned us to review various aspects of nitrate/nitrite in cured meat, including the current legislative position, microbiological safety implications, quality implications, the use of alternative curing agents, and the effects on industry of the proposed withdrawal.

The project produced a review document that attracted significant praise from Defra for its usefulness. It also formed the basis of a meeting of interested parties - including Government, the meat industry and organic standards bodies - which was held here at Campden BRI. This helped shape a UK position on the EU proposal. The full report is available on the Defra website at randd.defra.gov.uk

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Packaging - testing glass and closures

With current movement towards reducing the weight of glass containers, it is important to ensure that they will still be fit for purpose. We offer a range of tests to help you ensure that your glass packaging will still meet its requirements. Rachel Gwinn of our Packaging Section explains:

"The empty container can be tested for a number of attributes such as thermal shock resistance, which ensures that glass is able

to withstand temperature fluctuations, and internal pressure resistance, which measures the pressure required to burst the container. The latter can be combined with carbonation testing, which is relevant to manufacturers who are carbonating their products, as the container needs to be able to withstand increased pressures resulting from this process.

Throughout the supply chain, glass containers will be exposed to a range of conditions. We now offer a service for vertical load testing of glass containers to test their ability to withstand compression forces, such as those from stacking. In addition, impact testing evaluates if a sample will break when exposed to a known force and can be related to a number of abuse conditions that could occur throughout shelf life.

We also undertake closure assessment, looking at issues such as leak testing, spontaneous popping, and the suitability of specific closures for glass containers."

Glass performance testing is part of a suite of packaging services and consultancy offered by Campden BRI, which include facilities for carbonation filling and capping.

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Service FEATURE

Challenge testing

The microbiological quality of a food or drink has a major bearing on the shelf-life that can be assigned to it. However, just because an organism is in a product, it does not mean that it will grow or compromise shelf-life, as Gail Betts, from our Microbiology Department, explains:

"Some pathogens and most spoilage organisms will need to survive and grow in order to reach levels at which the food is compromised. Challenge testing is a practical study to determine the behaviour of relevant organisms, should they be present in a product. It involves deliberate inoculation of the product with these organisms, typically a specific pathogen or group of spoilage organisms, after which the product is stored and tested during shelf life".

> Key factors

"The key factors are to select organisms that could realistically be in the food or gain access to it, inoculate them into the food in a form in which they could realistically be expected to occur, and then store appropriately. These factors will vary from product to product, and decisions over what microorganisms and storage conditions are 'relevant' are not always straightforward; pathogens such





as *Salmonella* and *Escherichia coli* O157 should not be present in any food, even at the lowest level, whilst others such as *Listeria monocytogenes* or psychrotrophic *Bacillus cereus* usually need to grow in foods in order to become a risk to consumers. We offer expert advice and guidance on the risks of micro-organisms to food products and consumers, and advice on challenge testing, and can undertake tests with a wide range of organisms, including *E. coli* O157 and *Clostridium botulinum*.”

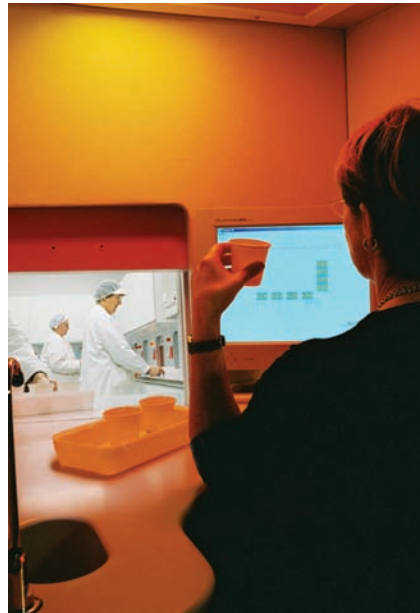
> Guideline

To back up our services in this area, we recently published a guideline (*Challenge testing protocols for assessing the safety and quality of food and drink - Guideline No. 63*), which contains the necessary information for companies wishing to follow a standardised protocol for challenge testing their food products.

We also offer a microbial growth prediction service, based on mathematical growth models. These allow cost effective testing of different ‘what if’ scenarios when reformulating or developing new products, in which salt, pH, and other factors can be varied, and microbial growth predicted. This can then be used to determine when challenge testing might be necessary. Both are discussed in a podcast by Roy Betts (see <http://www.campden.co.uk/podcasts.htm>). For a free fact sheet on Predictive Microbiology, send an e-mail to auto@campden.co.uk with the subject line: **send prediction**

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Expanded kitchen facilities for product evaluation

The recent significant increase in the amount of work we are doing on product evaluation has meant that we have expanded our kitchen and product preparation facilities, allowing us to maintain the service we are able to offer to clients. Janetta Hylands explains some of the developments:

“We have seen a huge increase in the awareness of benchmarking as a tool to gauge and manage product quality. Companies increasingly want to know how their products compare with the competition. Our new kitchen contains a suite of identical ovens - vital for ensuring consistency in cooking, which is essential for such comparisons. The adjoining evaluation room will allow us to maintain our high standards of impartial assessment.”

The new facilities can also be used for Focus group discussions and similar activities, with food being available to them directly from the kitchen through a serving hatch.

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Voting for member-funded research

If you have not yet voted for the research that you want us to carry out next year, time is running out. Voting closes on 21 October. Each year, around £2 million of member funds is allocated to research, across 6 strategic themes, that you vote for. Please contact us if you want to know more about how the voting system works.

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Documents direct to your desktop

Our autoresponder system has now been in operation for 3 years. Over the past 12 months in particular we have made a wide variety of publications available free of charge. As well as a large number of R&D Reports and back issues of the New Technologies Bulletins, we have also released fact sheets on predictive microbiology, allergen labelling, the Southampton 6 colours, and consumers' perception of healthy eating, as well as corporate documents describing our activities and aims. For a list of what is available to you, send an e-mail to auto@campden.co.uk with the subject line: **send index**

To ensure that you are alerted to newly available publications, you can opt in to different categories of our Newsfeed system by going to www.campden.co.uk/optin.htm

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Seminars

Campden site unless stated otherwise

Meat and poultry: latest developments
21 October 2010

Taint testing of food crops
9 November 2010

International food microbiology conference 24-25 November 2010

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Conference and exhibition collaborations

For many years we have collaborated with other organisations in the running of conferences and exhibitions. These help our members access the widest range of knowledge and expertise. One current example is our involvement in the Nutraformulate event at the Ricoh Arena, to be held on 2-3 March 2011. Campden BRI experts will be speaking at the event, and we will be present at Stand 300 (see www.nutraformulate.co.uk for more information).

We are also taking a major role in the Food and Beverage Test Expo, which is taking place in Cologne, Germany on 8-10 February 2011. This is a dedicated Trade Fair for personnel involved in testing and quality assurance - and will feature the instrumentation, technology and services needed for getting products through all stages of development and production. We will be holding another Campden BRI Food & Drink Forum at the event, at which we will be demonstrating some of our expertise and capabilities in the field of testing and analysis.

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Packaging videos on the web

In order to explain some of the many tests that can be carried out to test the performance and strength of packaging, we have made a number of short videos available on our website. These cover:

- permeability analysis
- leak detection
- burst testing
- peel testing
- compression testing

www.campden.co.uk/videos

WELCOME TO NEW MEMBERS

Campden BRI is delighted to welcome the following new members who joined in August:

Albert Bartlett & Sons (Airdrie) Ltd - a Scottish grower and packer of fresh potatoes

American Muffin Company Ltd - a specialist bakery based in London, England

Beijing Wanger Biotechnology Co Ltd - a Chinese biotechnology company based in Beijing, China

FoodService Packaging Association - a trade association

Four Anjels Ltd - a bakery producing handmade cakes and biscuits

Genius Gluten Free - a Scottish branding company specialising in gluten free bread

Headland Foods Ltd - a Welsh manufacturer of frozen own label, branded and airline ready meals based in Flint, Wales

Honeyrose Organic Bakery - an organic bakery producing a range of cakes, biscuits and other baked goods

Inner Zap - a company producing a range of functional shot drinks

Kilco (International) Ltd - a Scottish supplier of a range of bio security, animal health and dairy hygiene products

Lassila & Tikanoja plc - a Finnish company specialising in the provision of professional outsourcing cleaning services for the food industry

Luke Evans Bakery - a craft baker producing breads and cakes

Mackays Ltd - a Scottish manufacturer of a range of jams, marmalades, curds, chutney, mustards and mayonnaise

Potts Bakers - a craft bakery and retail business supplying a range of breads and other baked products

Q-Bioanalytic GmbH - a German producer of PCR and real time PCR based analytical test kits for detection of micro-organisms in food

Rainforest Cuisines Ltd - a manufacturer of soft drinks based on a Caribbean recipe

S Sexton Ltd T/A Sextons Village Bakery - a bakery producing a range of baked products

Spinneys Dubai LLC - a UAE company specialising in the distribution and marketing of consumer goods, supermarket retailing, food services, and exports of consumer products

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Please notify the Membership Department of any name or address changes with respect to our mailing list.