

# Newsletter

March 2011



## Will *Listeria* grow in your product?

We have recently investigated a novel approach to *Listeria* challenge testing to see if it would give similar results to the standard more complex methods.

Microbiological challenge tests are essential for assessing the potential for growth of specific foodborne pathogens or spoilage microorganisms in a food product from point of manufacture through to consumption. This involves the inoculation of a product with relevant microorganism(s) and storing under controlled environmental conditions in order to assess the risk of food poisoning or to establish product stability.

### Product safety and stability

The use of challenge testing to assess product safety and stability has increased over the past few years, particularly with respect to food pathogens such as *Listeria monocytogenes*, where evidence is required to demonstrate the potential for growth of this organism throughout life. However, existing recommended procedures are often complex.

### New approach

We explored the new approach with a pre-packed sliced ham product. Results showed that a single storage temperature could be used and that a lower temperature could be included in challenge test protocols if this could be maintained throughout part of the manufacture and distribution chain. The need to adapt the cultures by growing under chilled conditions prior to inoculation was also shown to be unnecessary.

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## Safety and quality management

Many food businesses use standards such as ISO 22000, the BRC Global Standards or SALSA, but which one to choose can be a difficult decision. Many businesses are helped in their decision by the requirements of their customers; however, as businesses often supply to more than one customer they may be faced with multiple standards and requirements.

We offer independent advice and consultancy to help food businesses to develop and implement effective management systems. The types of services include: advice on specific quality standard clauses, pre-audits (informing you of any non-conformances prior to your audits) and help with writing policies and/or procedure documents. We also have a wide range of training courses available in the fields of food safety management, quality systems management and quality standards.

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## Packaging testing - tensile strength on camera

A new video clip on the Campden BRI website ([www.campden.co.uk/videos.htm](http://www.campden.co.uk/videos.htm)) shows how we test the tensile strength of seals and packaging materials - both important in product protection and safety assurance. This is one of a series of packaging testing videos.

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## Find us on the latest social media

You can now keep in touch with the latest news from Campden BRI on Twitter: you can find us at <http://twitter.com/campdenbri>. We also have items of interest on YouTube - subscribe to our channel at <http://www.youtube.com/user/campdenbri>. This is in addition to our presence on iTunes, where you can find our series of podcasts.

## Leading food and health innovation for Scotland

We are delighted to have successfully led a consortium bid to support food and health innovation in Scotland. The work will be funded by Scottish Enterprise and is worth £4.4m over 5 years. Its aim is to ensure that the food and drink industry in Scotland is aware of and reacting to the key global trends in food and health. We will use our expertise in product development and processing technology to help companies in the development and innovation of 'healthy' products. Prof. Philip Richardson explains:

*"This is a great example of how we can play to our strengths - in practically applying technical excellence. We have a wealth of experience with ingredients, product formulation, and emerging and established processing technologies - and can call upon our experts in consumer and marketplace studies, sensory science, food microbiology and chemistry, safety assurance and hygiene, and food and drink legislation."*

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## What makes a good pea?

The sensory science team at Campden BRI will be providing its expertise in a BBSRC-funded project into quality determinants in peas. The project, which is led by the John Innes Centre and also involves several producers and retailers, will identify compounds that are positively or negatively associated with quality and will provide information on how these change in seeds as they mature and under different growing conditions. Our role will be to provide sensory descriptive analysis of different crops.



Linking quality characters to biochemical and genetic information will facilitate the rapid identification of superior lines. This will lead to greater efficiency in breeding programmes and will also provide the opportunity to develop more robust methods for assessing maturity rapidly in the field.

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## Processing in a modified atmosphere

Modified atmosphere processing is a technique that offers significant potential to the food industry. As part of our evaluation of its advantages we have been using a glove box capable of maintaining an atmosphere of less than 1% oxygen. As well as allowing dicing, chopping, pureeing or juicing of fruit and vegetables without the problems of enzymatic browning, it can also be used for meat and fish processing. The processed products can also be packaged within the box.

The equipment was initially acquired for use in an EU-funded project to find alternatives to sulphites for food preservation; a short video of it in operation can be found on our website at <http://www.campden.co.uk/videos.htm>. This work builds on our long standing expertise in evaluating new methods of food processing and preservation.

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## Do you use your library?

Members are reminded that, if they are unable to visit the library, there is a postal book loans service available for UK members and a journal article photocopying service (subject to copyright law) available for both UK and overseas members.

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## Campden BRI Day 2011

Thursday 9 June

This is an excellent opportunity to view exhibits of how our work can benefit you and to discuss it with staff from across all disciplines.



As well as extensive networking, you can hear Miles Templeman, Director-General of the Institute of Directors, addressing the theme of

'Current challenges for business' in the 33rd Annual Campden Lecture.

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## Operational support for the bakery industry

In all areas of the food industry, problems can arise from time to time with production or product quality. The type of support we can offer is exemplified by our services to the bakery sector; as Gary Tucker explains:

*"Staff with baking industry knowledge will visit a factory to assess the problems and discuss solutions with the client. A solution is often provided during the visit. If necessary we carry out further investigations back at Campden BRI. This could involve :*

- *Texture profiling of products to determine parameters such as firmness, springiness and resilience*
- *C-Cell imaging of internal structure*
- *Examining the rheological behaviour of dough*
- *Evaluating the extent of starch gelatinisation, which is important in staling processes*
- *Measuring water activity and moisture content*

### Impact on final product

Yeast leavened products tend to be unique in the food industry because they are effectively living products that will change their volume during processing. There are significant interactions between ingredients and processing factors, and it is common that a small change in one factor; for example a line stoppage or different proofing temperature, will have an impact on the final baked product. Gary describes a typical example:

*"A client identified changes in appearance of a yeast leavened product. A visit was arranged to the production site to observe how the product was being provided.*

*Discussions were held about what had changed in the ingredients, their storage, the production process from mixing through to baking and cooling, and end product packaging. Possible reasons for the changes were suggested based on discussions during the visit.*

*Recommendations for product comparison tests were identified in the emailed report findings, which were then carried out at Campden BRI using products supplied by the client. These tests on texture showed clear differences that confirmed the causes of the problems identified, allowing a solution to be found."*

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## New allergen management module

As part of our developing programme of training for suppliers of Sainsbury's, we have added a new workshop module to the Technical Management Academy - on allergen management. The Academy provides a stimulating professional development programme which aims to increase food quality and safety knowledge, facilitate the understanding of Sainsbury's technical requirements and systems and their effective implementation, and increase the awareness of food quality and safety.

Allergen management in food companies is a critical area requiring pro-active attention. This new module covers all aspects of the production process from the sourcing of raw materials, through production, assessment of the risks of cross contamination and the storage and testing of final products.

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## welcome... to new members

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

**Arctica Ltd** - specialist in architectural design and management

**BHS Ltd** - retail operation with restaurants and coffee lounges

**Biotex Ltd** - distributor for a biocide hand rub

**Bonnerz** - Caribbean deli and takeaway

**CH Latham The Baker Ltd** - a traditional baker

**Edward Marriage** - food and drink production company

**Eurostock Foods Hindley Ltd** - producers of frozen mince, beef, lamb and pork

**Guenther Bakeries UK Ltd** - bakery producing a range of hamburger buns and breakfast muffins

**Mars Food (China) Co Ltd** - manufacturer of chocolate, sugar and pet food

**Saudi Goody Products Marketing Co** - packaged food and beverage company

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

## Clare's tips

Clare Brett is our Membership Development Officer. In a regular feature, she will be passing on tips on how you can get the best out of your membership package.



### This month's topic is **Membership main contacts**

Do you know who your company main contact is? For every membership we have a nominated "Main Contact", who is the recipient of our initial joining instructions, including "username" and "password" for website access, and Membership Certificate.

The Main Contact is the person who we contact to clarify any membership issues, such as address or name changes and alterations to the membership coverage.

If you are uncertain who your company's main contact is, please give me a call.

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