

Newsletter

www.campdenbri.co.uk



Optimise product reheating through packaging

www.campdenbri.co.uk/research/projects.php

mike.bonin@campdenbri.co.uk +44(0)1386 842271

Optimising food reheating protocols can significantly enhance product quality. Protocols and label instructions are developed from a 'safety first' perspective, but there is often scope for optimising quality without compromising product safety. We can help you provide enough heat to ensure food safety, without overheating the product or packaging.

Generally, minimising the heating required will optimise quality, by ensuring, as far as is possible, that all parts of the product reach the required temperature at the same time. The arrangement of components in the product can help, particularly in microwave-reheated foods, while the design of the packaging is also crucial for reducing heating times.

Package design critical

Package design has significant implications for producing instructions for product reheating in both microwave and conventional ovens. In microwave ovens the energy will behave in different ways according to pack geometry as well as the nature of the product.

Packaging can be designed to optimise temperature uniformity. Reducing product thickness in any dimension to approximately 2cm or less can allow faster product heating, while reducing the depth at the geometric centre of the product can increase the rate of heating at this point, thereby reducing overheating issues in more peripheral areas of the product.

With industry, for industry

Working “with industry, for industry”, is at the heart of everything we do at Campden BRI. Engaging with you, our members, is extremely important to us: it helps us to ensure that our science, technology and knowledge activities are targeted at the issues that matter to you. We are therefore delighted to have received a record attendance at our Member Interest Groups (MIGs) again this year. When related groups like our Scientific & Technical Committee are included, this industry involvement amounts to over 1,000 days of industry engagement each year. We hope to welcome even more of you to our MIGs during 2016 (see page 7).

Last January we published Innovation for the Food and Drink Supply Chain: Scientific & Technical Needs. This was the result of an extensive member consultation and outlines the food and drink industry’s innovation requirements. We have responded to this through our activities, research and investment priorities, formulating a strategic plan for 2016-17.

The plan includes expanding our offer in viruses, nutrition and health, international regulatory support, and consumer studies. This includes the opening of a new dedicated state-of-the-art consumer centre for the Midlands. The centre will be used for quantitative and qualitative consumer testing of food and drink products, including concept evaluation, prototype development and product evaluation, and it complements the existing facilities at our Campden and Nutfield sites.

I would like to thank you for your support throughout 2015 and I wish you and your colleagues a Merry Christmas and a successful New Year.

Steven Walker, Director General

Contents

- 2 With industry, for industry
- 2 On the web
- 3 News
- 3 International regulatory advice
- 4 Hygiene team expanded
- 4 Student Launchpad - promoting a career in food
- 4 QAC testing now UKAS accredited
- 5 A day in the life... Greg Jones
- 6 Training and publications
- 7 Member zone
- 8 Welcome to new members

On the web

www.campdenbri.co.uk

[Foodborne viruses - the known unknowns](#)

Blog by Suzanne Jordan

www.campdenbri.co.uk/blogs/foodborne-viruses.php

[Superchilling can extend shelf-life and reduce waste](#)

Item by Greg Jones

www.campdenbri.co.uk/news/super-chilling.php

[Disinfectant testing video](#)

www.campdenbri.co.uk/videos/disinfectant-testing.php

[Packaging issues relevant to product reheating](#)

Blog by Michael Bonin and Greg Hooper

www.campdenbri.co.uk/blogs/packaging-product-reheating.php

[Project: Food allergens - providing guidance for compliance and resolving analytical challenges](#)

www.campdenbri.co.uk/research/food-allergens.php



Sam Millar honoured by US cereals appointment

Our Technology Director, Professor Sam Millar, has been appointed to the board of the American Association of Cereal Chemists International (AACCI). He has been a member of AACCI since 2000 and has sat on a number of awards and technical committees. Sam will be the Board Liaison for AACCI's Biotechnology Division and Check Sample Committee.

AACCI is one of the two major organisations for cereals professionals. The other is the International Association for Cereal Science and Technology (ICC), of which Sam is also a Fellow.



Hungary wins Ecotrophelia Europe

A team from the Corvinus University of Budapest in Hungary has won top prize in the Europe-wide Ecotrophelia competition. They qualified by winning the national competition in Hungary, which is run by Campden BRI Hungary. Along with national winners from 15 other countries across the continent, they presented their visionary food creation before a panel of industrial jury members at the Milan Universal Expo in October.

Their product was called VeSage - sliceable vegetable-based cold cuts of high nutritional value - and was selected as the product that best met the criteria of a novel product designed for industrial production and Europe-wide distribution.

The UK heat of the competition took place at Campden BRI on Campden BRI Day in June, in front of an audience of 500 senior industrialists.

www.ecotrophelia-uk.org



International regulatory advice

stephen.spice@campdenbri.co.uk +44(0)1737 824265

Our portfolio of services in international regulatory affairs continues to expand. Contact us if you need support for your export activities.

A key issue for food and drink manufacturers and retailers is the regulatory and compliance framework in which they operate. More and more this includes meeting the challenges of global exports and imports. This was identified in the recent consultation with our members over the needs for industry. Following this we have responded by increasing the scope of our regulatory affairs services to include international regulations. Over the past 18 months our regulatory affairs team has expanded significantly and will continue to do so in the coming few months, with the appointment of further advisers with a broad range of language skills.

Furthermore, early in 2016 we will be expanding our skill base in label specifications - an area required by manufacturers when supplying foods to retailers. This will build on our considerable experience in this area on EU compliance of English language labels.



Hygiene team expanded

mariane.hodgkinson@campdenbri.co.uk +44(0)1386 842272

Mariane Hodgkinson has joined us as a hygiene specialist. Mariane will be responsible for providing consultancy on good hygienic practice, giving advice on cross contamination, and providing technical support on cleaning and disinfection and allergen management, as well as delivering training.

Philip Richardson, Head of Food Manufacturing Technologies, commented, "We are excited to have Mariane join our hygiene team. She brings with her experience of working within both multinational food and drink companies and SMEs, which will be invaluable as we support our member companies and other clients with their hygiene related issues".

Student Launchpad - promoting a career in food

Last month, in collaboration with the Institute of Food Science and Technology, we hosted the Student Career Launchpad at our Chipping Campden site for the fifth year.

We were delighted to give 80 students from 5 universities the chance to hear from industry professionals what working in food and drink manufacturing and retail involves, and what the industry expects from graduates.

QAC testing now UKAS accredited

julian.south@campdenbri.co.uk +44(0)1386 842293

We have been awarded UKAS accreditation for the testing of benzalkonium (BAC) and didecyldimethylammonium chloride (DDAC).

These quaternary ammonium compounds (QACs) are widely used in disinfectants and sanitisers due to their effective biocidal properties. However, the maximum residue levels (MRLs) of QACs used for disinfectant purposes was reduced to 0.1mg/kg in all foods from 0.5mg/kg by the European Commission in August this year. This has prompted the need for improved analytical methods, to enable industry to demonstrate compliance with these limits.

Julian South, Head of Chemistry and Biochemistry said, "We can test for QACs in all food products using sophisticated mass spectrometry which has a detection limit of 0.01 mg/kg. As well as testing food, we can also work with companies to help them reduce QAC levels in their food products."

This is in addition to the wide range of disinfectant testing services offered by our microbiologists and hygiene experts.



A day in the life....



Greg Jones

Greg Jones, microbiologist at Campden BRI, discusses the industrial significance of his role at Campden BRI.

What in your background prepared you for your current role?

Both my degree in biotechnology, and PhD in molecular microbiology involved handling microorganisms and getting to know the fascinating range of their metabolism and reproduction. This appreciation of the extraordinary diversity of the microbial world is invaluable when solving practical problems in an area as diverse as the food industry.

How has microbiological testing of foods changed over the years?

The current microbiological methods are tried and tested and are well able to deal with the food industry as it evolves. New molecular-biology based test methods and systems have been making some headway; however, the traditional methods have a huge advantage in that they are cheaper. In many cases a company does not need the increased information that a molecular technique delivers, and so the cheaper cultural method is used instead. In cases where a faster result is required, molecular techniques offer a clear advantage, and this is the area in which they are most frequently used.

What do you consider your greatest achievement?

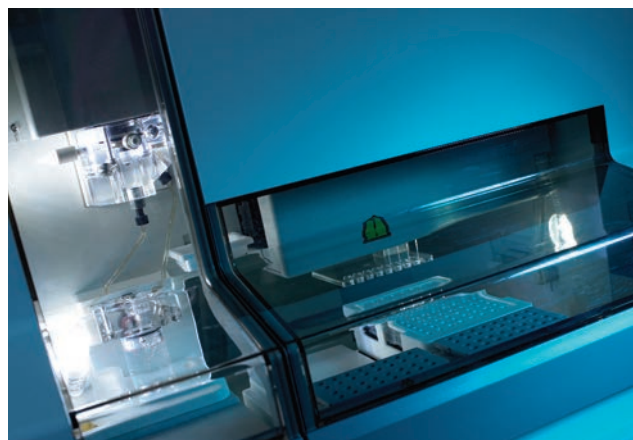
To single out any one piece of work as 'my' achievement would do a great disservice to my colleagues. The nature of the job requires exceptionally close teamwork across the organisation and a flexible approach from each team member. However, two training courses developed in conjunction with the Food Standards Agency stand out. We provided these training courses at various Local Authorities over 5 years, and by the end of the contract we had trained over 1500 Environmental Health Officers on Vacuum Packing and Sous-Vide cooking. These courses have had a positive impact on food safety in the UK.

Where do you think the next big issue will be in testing and analysis, and why?

"Big Data" will be the next issue, particularly gene sequence data. New sequencers have reduced the cost of sequencing a whole bacterial genome to roughly the same price as serotyping a pathogenic bacterium. We are currently establishing the potential of whole genome sequencing to type outbreak strains, both viral and bacterial. Some larger food companies are actively investigating the use of this technology. The issue is not data generation, but handling it - that is, examining and interpreting it.

What does a typical day look like for you?

A typical day does not exist for me: a typical month could have me discussing a client's needs then planning experiments to address the issue and helping our technical staff in the lab. I am also responsible for data analysis and reporting. As well as confidential client work, we also carry out research that is funded by our members, and I manage some of these projects, which involves day-to-day planning and reporting back to our members via our Member Interest Groups. I could also be asked to go off-site to run a training course or to visit a factory if they are having particular issues. I also need to be available to answer our clients' enquiries when they need some further input into a project or issue.



feature



Training events

A full list of scheduled courses is available on our website www.campdenbri.co.uk/training.php or by requesting a booklet from training@campdenbri.co.uk +44(0)1386 842104

January 2016

- 19-20 Threat Assessment Critical Control Point (TACCP) - intermediate level
- 20-21 Internal auditing - principles and practices
- 27-28 HACCP - intermediate (level 3)

February 2016

- 1-5 HACCP - advanced (level 4)
- 9-10 Understanding microbiology - foundation
- 22-26 FSSC 22000 Auditor/Lead Auditor course
- 23-24 Food and drink labelling
- 29-4 Mar Food safety - advanced (level 4)

Tailored training

We have international experience in developing, customising and delivering training programmes for sectors across the whole food chain for clients at worldwide locations.

Many companies use this flexible option when they need to train several staff in the same topic, thus achieving significant savings on fees, travel time and accommodation, and also ensuring that the content and format meets their specific circumstances. For larger companies, we run bespoke longer-term academies.

www.campdenbri.co.uk/training.php

New publications

pubs@campdenbri.co.uk +44(0)1386 842048

www.campdenbri.co.uk/publications/pubs.php

HACCP in agriculture: new revised guides

We have recently published revised editions of two of our popular guidelines relating to HACCP in agriculture:

The aim of *Food safety management in primary production* (Guideline 10) is to ensure that the products supplied by farmers and growers to the food industry meet the highest possible safety standards.

HACCP in produce and feed (Guideline 64) focuses on issues relating to animal feed and fresh produce production

Traceability in the food and feed chain

The second edition of Campden BRI's *Traceability in the food and feed chain* (Guideline 60) outlines the general principles and basic requirements for the design and implementation of a traceability system - with special reference to external and internal traceability.

Auditing standards updated

To complement the new edition of the Traceability Guideline mentioned above and our HACCP Guideline 42 (announced in last month's newsletter), we have also updated the associated standards. The Third edition of the *HACCP auditing standard* defines the requirements that a food operation needs to meet in order to obtain third party recognition of its HACCP system, while the *Traceability auditing standard* documents the requirements of a traceability management system that has been developed following the principles of Guideline 60.

New sous-vide guide published

Sous-vide is rapidly growing in popularity as a method for producing high quality cooked foods. It involves packaging food under vacuum and then cooking, typically at fairly mild temperatures. The combination of vacuum packaging (and the absence of oxygen) with the use of reduced temperatures for microbial inactivation poses unique issues for those using this technique. A new guideline - *The microbiological safety of sous-vide processing* (Guideline 75) - looks at the potential pitfalls.

Visit Member Zone

www.campdenbri.co.uk/memberzone.php



to access privileged member information and services

First round of MIGs 2016

harry.williams@campdenbri.co.uk +44(0)1386 842233

Member Interest Groups are open to all full members of Campden BRI. Take the opportunity to network, discuss the topics of importance to you, and guide our member funded research. If you haven't been to a MIG meeting before, or have not attended one recently, why not sign up and give it a go

Member Interest Group	Winter '16
Agri-Food	09 February
Brewing and Fermented Alcoholic Beverages	11 February ¹
Cereals, Milling and Baking	03 February
Chilled and Frozen Foods	21 January ²
Food and Drink Science	07 January
Food Service	26 January ¹
Heat Preserved Foods	28 January
Manufacturing Technologies	19 January
Meat and Poultry	21 January ²
Microbiology	12 January
Packaging	02 February
Quality and Food Safety Management	13 January ¹
Sensory and Consumer	04 February

¹ Held in London

² Joint meeting

New member-funded research - you decided

harry.williams@campdenbri.co.uk +44(0)1386 842233

Each year you, our members, decide how we should invest over £2m of your subscriptions in research that helps your company to succeed. This year you have selected the following 9 projects that complement about 40 that are on-going.

Safety

- Risk reduction strategies for chemical contaminants in primary production
- Ensuring the chemical safety of food and drink using non-targeted screening methods

Quality and value

- New technologies for food and drink manufacturing
- Emerging ingredients - considerations for use in products
- Extension of product shelf-life through super chilling

Nutrition, health and wellbeing

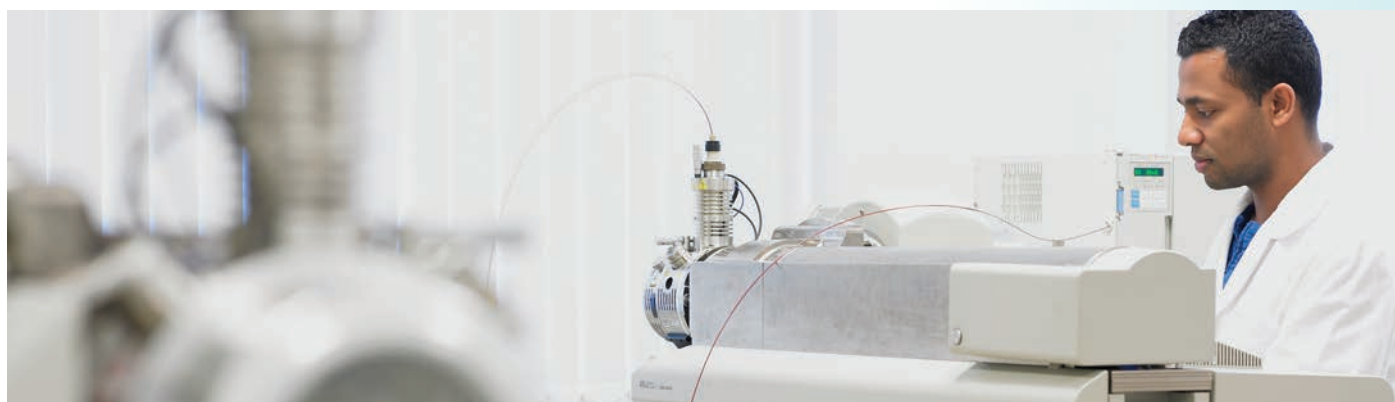
- Improving the nutritional status of crops for the agri-food chain
- Designing food and drinks for personalisation of diets for different life stages

Skills and knowledge

- Foreign bodies in food and feed raw materials - hazards and controls
- Microbiological criteria for foods

At our winter MIG round (see opposite) members will get the chance to help shape and direct these projects. Please come along and have your say - these projects are 'with members, for members'.

For details of existing projects you can see the relevant project website, and contact the project team, at www.campdenbri.co.uk/research/projects.php





Welcome to new members

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

- Adams Food Ltd - supplier of cheese and butter
- Amerplast Ltd - manufacturer of flexible packaging
- Bio-Works Technologies A.B - producer of agar and agarose based chromatography media
- Eurostar Commodities Ltd - importer of flour, semolina, maize and rice
- FBK ApS - producer of cleaning and handling articles
- Metcalfe's Skinny Ltd - developer of low calorie pop corn, rice cakes and corn cakes
- NFU Mutual - insurance organisation
- Nutmeg and Hive - developer of yoghurt based products
- Oxford Nanopore Technologies Ltd - developer of system for direct, electronic analysis of single molecules
- Pall Europe Ltd - manufacturer of filtration, separation and purification products
- Signatrol Ltd - manufacturer of data loggers
- Silverstar Foods Ltd t/a Turners Fine Foods & Turners Coast - specialist in slicing products for food service
- Solina UK Ltd - manufacturer of food ingredient mixes
- Taura Natural Ingredients N.V. - manufacturer of ultra rapid concentration pieces, pastes and flakes
- Taylerson Ltd - producer of flavoured syrups for food service and online retailing
- The Restaurant Group PLC - restaurant chain
- Warminster Maltings Ltd - maltster

Clare Brett +44(0)1386 842125 membership@campdenbri.co.uk

Please notify the Membership Department of any name or address changes to allow us to keep our records up to date.

Social media



Facebook - find out more about our history and our lighter side www.facebook.com/campdenbripage

Twitter - regular tweets to keep up to date with our latest news and activities <https://twitter.com/campdenbri>

YouTube - a range of videos providing an insight into the science and technology underpinning food and drink production www.youtube.com/campdenbri

LinkedIn - company updates providing our latest news www.linkedin.com/company/campden-bri

iTunes - subscribe to our podcasts

Campden BRI

Station Road, Chipping Campden,
Gloucestershire, GL55 6LD, UK.
+44(0)1386 842000 Fax: +44(0)1386 842100
information@campdenbri.co.uk

Nutfield site, Campden BRI,
Centenary Hall, Coopers Hill Road,
Nutfield, Surrey, RH1 4HY, UK
+44(0)1737 822272 Fax: +44(0)1737 822747
information@campdenbri.co.uk