

Newsletter

www.campdenbri.co.uk



Reduced heating of bulk meat products

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Heating of large meats is an energy intensive process. There is potential for reducing the cooking time and, consequently, energy consumption. Ongoing member subscription-funded research has indicated that this is achievable.

The cooking of large moulded hams to a core temperature of 70°C can take several hours. A minimum process of 2 minutes at 70°C or equivalent is required to give a 6-log reduction in vegetative pathogens. Heat transfer to the core is relatively slow and heat transfer continues even when the heating step is stopped. Generally, it takes more than 30 minutes for the product to start cooling. This period could potentially be used as part of the heating step. Controlling this could save time and energy, and potentially increase yield and quality of the final product. Initial trials showed that the heating time of large conductive meats can be reduced under controlled conditions. A lower temperature at the end of heating can still result in a sufficient thermal process.

Reducing heating time will result in reduction in energy usage, and shorter cycle times, which will have a positive impact on manufacturing efficiency. As the final temperature of the meat is reduced, less energy will need to be removed from the product during chilling.

Your partner in knowledge management

Much of what our sector does requires knowledge - and management of knowledge is at the heart of what we do. One conspicuous example of this is Campden BRI Day which, each year, gives members a great opportunity to network with each other and find out about our latest research, and talk one-to-one with our technical specialists.

It is also an opportunity to hear from an industry leader through the Annual Campden Lecture. We are absolutely delighted to announce that this year it will be delivered by Mehmood Khan - Executive Vice President and Chief Scientific Officer, Global Research and Development at PepsiCo. The day always attracts well over 400 industry leaders - hence its pivotal role in knowledge sharing. Campden BRI Day 2014 is on Wednesday 11 June.

This is, of course, just one of our knowledge activities. We organise many seminars, have an extensive training programme, publish best practice, and engage through podcasts, videos and many other means. We are also in the midst of our winter round of Member Interest Groups (MIGs). All full members of Campden BRI are eligible to participate in MIGs, which also provide extensive networking opportunities as well as early access to our research results, extensive updates on third party events, practical demonstrations and the opportunity for discussion and to help steer our member funded research projects. If you are interested in finding out more about the MIGs please contact our MIG Manager, Richard Powell richard.powell@campdenbri.co.uk.

Steven Walker

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Highlights

www.campdenbri.co.uk



Incorporating consumer responses to food and beverage product development

Blog by Peter Burgess

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

Brewing NPD by reverse engineering

Blog by Debbie Parker and Ed Wray

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

Replacing fats with oils

podcast by Charles Speirs

www.campdenbri.co.uk/podcasts.php

Food reheating instructions

Free white paper - to receive a copy, send an e-mail to auto@campdenbri.co.uk with the subject line: send reheating



Ecotrophelia

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Together with IFST, we are urging UK food science and technology students to enter Ecotrophelia 2014, the prestigious European food innovation competition which promotes innovation, creativity and sustainability to students pursuing a future career in the food and drink sector.

Following a successful 2013 when a team of students from Harper Adams University struck gold in the UK finals held at Campden BRI with their 'More Than Meat' offal pie, and went on to represent the UK at the Ecotrophelia Europe finals in Cologne, it is hoped that many more students will feel encouraged to take part.



Bertrand Emond, Head of Membership and Training, said: *"Ecotrophelia gives food students a unique opportunity to learn the ins and outs of the new product development process, from the brainstorming ideas stage through to creating a finished product ready for the supermarket shelf. This kind of experience is absolutely invaluable; a chance to participate in a 'real-life' food innovation and development process and gain practical key skills that they just wouldn't get out of a text book and which they can then apply in their future career. It also gives them fantastic exposure to many major industry leaders."*



Contestants and judges - Ecotrophelia 2013

Lab innovations exhibition

Once again we will be heavily involved in events at the Lab Innovations exhibition, which takes place on 5-6 November, at the NEC, Birmingham. Campden BRI members are eligible for an exclusive £200 discount off the cost of an exhibition stand, and there is also the opportunity for additional 'early booking' discount. For more information or to book, please contact Chris Jones, Sales Manager, Easy Fairs, +44(0)20 8843 8822.



Protecting your business from threats - TACCP

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A core element of the defence of food supply is a systematic evaluation of vulnerable elements of the supply chain. This has been called 'Threat Assessment and Critical Control Points (TACCP)'. Richard Leathers explains what TACCP is all about:

"TACCP is a method, partly similar in tools and techniques to those used with HACCP, that assesses hazards and risks to the business, process or product from attack for malicious purposes, fraud, or gain for individuals or groups at the expense of the targeted organisation. The threat or attack may come from either internal or external sources. These threats can then be evaluated, documented, reduced and mitigated."

TACCP provides some approaches to the developing problem of malicious attack and compromise of integrity for the food and drink industry. Its implementation and application should be both practical and proportionate, and should help businesses deter potential attackers. As well as malicious contamination and sabotage, it can also be used to combat food fraud."

Although there are some similarities with HACCP, the TACCP team may need to include different or additional disciplines from the one used for conducting a HACCP study, such as security and material sourcing/purchasing, Information Technology and Human Resources. Because the TACCP Flow Diagram will be written to capture the entire process, not just that which takes place at the manufacturer's site, it will almost certainly therefore be more detailed and involved than in conventional HACCP."

More familiar will be aspects such as team selection, process flow diagram, listing potential hazards, hazard analysis, assessing control measures, selecting appropriate corrective actions, verification and documentation/records, which are common to both, although the approaches to implementation may differ."

Part of the validation process may involve an assessment of systems implemented, by an independent third party. In addition, guidance and advice can be sought on best practice and the tools, techniques, considerations and mechanisms needed to effectively conduct a TACCP study. We can assist you in each of these areas. Please get in touch if you want to find out more.

Reducing salt levels in meat and cheese

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Novel delivery mechanisms are among the avenues that are being investigated to reduce the total content of salt in products, while still retaining product quality. Ways of reducing salt levels in meat and cheese is one of the topics reported in our latest New Technologies Bulletin*.

In recent years there has been progress in reducing salt levels in meat and poultry products. However, the meat industry has not yet met the salt reduction targets for 2012 in some product categories due to difficulties in product reformulation, and further salt reduction targets are on the horizon. Salt reduction has resulted in adverse changes in flavour, texture, processing and shelf life. However, the negative outcomes can be partially overcome by using salt replacers and mixtures, changing the physical form, adding flavour enhancers and thickeners, and processing with novel technologies.

Cheese manufacturers under pressure

Cheese is widely consumed in the UK, and therefore has the potential to contribute significantly to sodium intakes. As such, cheese manufacturers are under pressure to produce low salt cheeses. Progress continues to be made in the production of low sodium cheeses, including greater levels of reduction, as well as improvements in quality. However, different approaches are likely to be required depending on cheese type, and the level of reduction targeted. It may be possible to reduce the sodium content of cheese by up to 30% with no adverse effects on the quality of the cheese; however, further reductions require modifications to the process and/or the use of alternative ingredients.

* For a copy of New Technologies Bulletin 46, send an e-mail to auto@campdenbri.co.uk with the subject line: **send ntb46**



Practical application of technical excellence for the food and drink chain



Countdown to FIC just 10 months to go.....

The most far-reaching of the changes resulting from the new Food Information to Consumers Regulation are those relating to nutrition labelling. 'Back of pack' nutrition labelling of pre-packed foods will be compulsory. The labelling of energy (in both kJ and kcal), fat, saturates, carbohydrates, sugars, protein and salt will all be mandatory; it will also be required to declare levels of any nutrients mentioned in claims. Certain other nutrients can be listed, but this is a defined and restricted list.

Voluntary 'front of pack' information will continue for energy, fat, saturates, sugar and salt, along with **RIs (Reference Intake values) per portion**, but the use of 'traffic light' schemes will be restricted.

Although the new nutrition labelling requirements do not become obligatory until 13 December 2016 (two years later than most of the other requirements), between 13 December 2014 and 13 December 2016 where nutrition declaration is provided on a voluntary basis it must comply with the mandatory provisions.

If you need assistance, our team of labelling experts are available to answer your queries or check your labels. We will also be running extra regular training sessions and workshops during this busy period of change, and can run these in-house if you need more intensive or focussed support.

regulatoryadvice@campdenbri.co.uk



Just published....

Research programme 2014

This lists all research and development projects currently being undertaken or already completed, other than small service contracts and confidential consortia or company-funded work. Each project has a concise description together with information on funding source, collaborators and project manager contact details. An index and project timeline are included. Project managers will be pleased to provide members with further information about projects.

To receive an electronic copy of this document, send an e-mail to auto@campdenbri.co.uk, with the subject line: **send RP2014**



On the podium

Charles Speirs and Gary Tucker are both 'on the podium' at **Bakery Innovation Europe in Munich** on 19-20 February. Gary will be talking at the 'Innovation with oats' event, while Charles will be describing his innovative approaches to fat reduction. See <http://www.fi-bakery.com/>



Steve Spice, our new Head of Regulatory Affairs, is talking at the **Food Manufacture webinar** on 'EU's new food labelling rules' on 20 February.



featured interview

Ensuring safe cereal ingredients

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One of the research projects recently selected by our members concerns the quality and safety of cereal ingredients and products. We asked project manager Mervin Poole about the project:

"This project will develop and maintain analytical methods which underpin the quality and safety of cereal based ingredients – the sort of ingredients that are used in a wide range of foodstuffs and raw materials, including baked goods (breads, cakes, pastries, biscuits, crisps, chips, and tortillas), doughnuts, semolina, bran, batters and coatings, pasta, soups and others."



How are the methods developed and what do they cover?

"The methods are developed and agreed with member industry representatives through the Cereals and Cereal Applications Testing Working Group (CCAT). This gives the methods industrial relevance and ensures that they are of value. We have been testing methods for CCAT and its previous incarnations on a rolling basis for at least 20 years. The type of methods we look at are physical and chemical properties of flour and dough – such as rheological properties, enzyme activity, protein content and starch damage."

How have things changed over this time?

"During the last ten years in particular, the work has evolved from wheat and flour testing methods to include baked goods. The focus has been on assuring quality and safety of ingredients in the cereal chain. The relationship with food companies across the supply chain has expanded and evolved as a result of previous projects and is continuing to address measurement issues important to the food industry."

How are the findings of the research disseminated?

"We have been updating our Manual of Methods for Wheat and Flour Testing (Campden BRI Guideline No. 3) since the mid 1990s. Existing methods are modified in light of new data, and new methods are regularly added. During the current project we will also be looking at new ways of disseminating the methods, including a project website."



March training events

A full list of 2014 scheduled courses is available on our website www.campdenbri.co.uk/training.php or request a booklet from training@campdenbri.co.uk +44(0)1386 842104

- 4-5 Supplier quality assurance - foundation
- 5-6 Aseptic processing
- 10-14 FSSC Auditor/Lead Auditor training course (ISO 22000)
- 11 HACCP - refresher
- 12-13 PreRequisite Management - Intermediate
- 12-14 Practical microbiology - specialist
- 18-20 Food processing hygiene management (module 1)
- 19-20 HACCP - intermediate (workshop)
- 19-20 Intermediate Level HACCP for Brewers
- 21 Brewhouse efficiency and beer recipe formulation workshop
- 24-28 HACCP - advanced
- 25-27 Thermal process validation
- 25-27 When things go wrong - advanced
- 28 Thermal processing - quality optimisation
- 31-3 April Safe production of heat preserved foods - the essentials (formerly principles of canning)

Microbiology courses revamped

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Following detailed discussions with industry representatives, we have revised many of our microbiology courses to make their relevance more obvious to those involved in food and drink manufacturing and processing. They are still 'graded' from basic and introductory courses through to advanced, but now focus on aspects of safety and practical application. Details on the full range of our microbiology courses are available at www.campdenbri.co.uk/microbiology-courses.php

Preventing factory contamination

www.campdenbri.co.uk/contamination-control-seminar.php
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Microbial cross-contamination in the factory environment has been a contributing factor in several well documented outbreaks of foodborne illness. We are holding a seminar on **4 March** to explore some of the key issues - from the organisms of most concern (such as *Salmonella*, *Cronobacter*, *Listeria* and *Escherichia coli*), through the mechanisms of transfer and prevention (e.g. antimicrobial surfaces), to practical aspects of risk assessment and implementation of Prerequisite Programmes.

Fresh produce microbiology seminar

www.campdenbri.co.uk/micro-produce-seminar.php
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Consumption of fresh produce is encouraged as part of a healthy diet. However, in recent years increases in the number of cases of pathogen contamination of salad vegetables indicate the existence of a food safety problem of growing importance. Key pathogens isolated from fresh produce include *Salmonella*, pathogenic *E.coli* and *Listeria monocytogenes*. Ironically, therefore, the preference for fresh and minimally processed foods may be contributing to increases in foodborne illnesses.

Microbiology of fresh produce: hazards, risks and controls on **20 March** will highlight and explain the current issues associated with microbiological hazards in fresh produce, discuss some of the latest research being conducted, and offer potential solutions. Legislative developments and how they might affect the sector will also be discussed.



www.campdenbri.co.uk/training.php

The latest news and information for our members



Visit Member Zone to access privileged member information and services

www.campdenbri.co.uk/memberzone.php



New Independent Scientific Advisor

Mark Fowler has been appointed by our Council as the next Campden BRI Independent Scientific Advisor (ISA). Mark will work with John Cottrell, our other ISA, to check that we are spending our members' membership fees wisely and that we are engaging our members, in such matters as research project steering and dissemination.

Mark is already very familiar to us. He was a member of Council until he retired from Nestlé in 2012, and chaired our Scientific and Technical Committee during 2007-2010. Mark replaces Tom Miller, whose four year term as an ISA ended in December 2013.

Membership webinar

Are you taking advantage of Campden BRI free member support for all your short legislative, technical and processing enquiries? Do you know that 20% of your annual membership fee is credited to your Member Service Allowance account and is available for you to spend on any of our products or services?

To find out more about these and the full range of benefits available exclusively to Campden BRI members - please join us for a free 20 minute webinar at 2pm GMT on Thursday 13 March. All you need is a PC and a telephone.

To ensure you're not missing out book your place now by emailing Clare Brett, Membership Development Officer clare.brett@campdenbri.co.uk



Campden BRI Day speaker announced

Campden BRI Day 2014 will take place on **Wednesday 11 June**, and we are delighted to announce that the Annual Campden Lecture will be delivered by **Dr. Mehmood Khan**, Executive Vice President and Chief Scientific Officer of PepsiCo Global Research and Development. His unique crossover role means that he leads company wide research and development and a global team of experts in specific disciplines. Prior to joining PepsiCo, he was President of Takeda Global Research and Development Center.

To register for Campden BRI Day, please contact Annalie Brown +44(0)1386 842270 annalie.brown@campdenbri.co.uk



New Chair of Scientific and Technical Committee

Colin Kelly, Director of Research, Development & Engineering at Warburtons Ltd, is the new Chair of our Scientific and Technical Committee (STC). Before joining Warburtons, Colin had a number of overseas roles with HJ Heinz, and he has been Vice-Chair of STC for the past 3 years.

STC guides our research portfolio, importantly working with us to achieve the right balance of research across the many disciplines that make up the food industry.

Research summary sheets

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

Members are able to access summaries of existing and past projects on our website (for which you will need your member username and password).



Welcome to new members

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

Advanced Microwave Technologies Ltd - manufacturer of specialist microwave-based thermal treatment equipment

Coles Supermarkets Pty - Australian retailer

FeRFA - The Resin Flooring Association - trade association

Fyffes Group Ltd - importer and distributor of tropical produce

GE Intelligent Platforms - provider of software control and computing solutions

IREKS GmbH - supplier of baking and brewing industry ingredients

MacEwen Falconer & Co Ltd - importer and distributor of packed food products

PDM Produce (UK) Ltd - producer of whole head and baby leaf salads

Premiere Poultry Ltd - processor of raw chickens

Regal Food Products Group plc - manufacturer and distributor of bakery products

The Society of Food Hygiene and Technology - professional institute

WSH Hub Pte Ltd - consultancy operating from Singapore

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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

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