

Newsletter

www.campdenbri.co.uk



Pathogen survival in long-life chilled foods

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New member subscription-funded research is uncovering significant data regarding pathogen survival in long-life chilled foods. Historically, chilled foods have been processed at 90°C/10mins (long life) or 70°C/2mins (short life) to achieve microbiological safety. This has targeted the inactivation of 2 specific food pathogens: *C. botulinum* and *L.monocytogenes* respectively. There is limited advice available on the effects of these processes on other organisms and subsequent product safety or shelf-life of long-life chilled foods. A literature review revealed a number of spore-forming *Bacillus* and *Clostridium* species that could survive 90°C/10mins treatment and grow in long-life foods. In particular, several *Bacillus* species, including *B. cereus*, could survive and grow at chill temperatures after such processes.

Experimental work showed that some heat treatments, considered to be equivalent to 90°C/10mins for *C. botulinum*, did not give the same level of reduction of *Bacillus* spores.

Further work

Further work is now being done to look at the interactions of other factors such as pH and *A_w* with these 'equivalent' heating temperatures on the potential for growth of heated 'non-target' organisms (i.e. non *C. botulinum*) in chilled foods. Manufacturers of these foods should consider challenge testing or predictive modelling to evaluate the risks from these organisms in their food formulations.

In good company

Using our close links to the food and drink supply chain across the world, we work hard to ensure the industrial relevance of everything we do. From agrochemical, ingredient, equipment and packaging suppliers to food manufacturers, retailers, distributors and food service companies, we now have over 2,400 member companies in around 75 countries. But are you aware of the full range of exclusive benefits available to you through your Campden BRI membership? Are you using your Member Service Account (MSA)? Each year we credit your MSA with 20% of your membership fee which you can use to pay for any other Campden BRI services.

Do you know that you can contact our experts for free unlimited short enquiries when you need advice and support? You also receive generous discounts on our project work, services, on-line databases, training and publications.

All full members of Campden BRI are eligible to participate in our free member interest groups (MIGs), which provide opportunities to network with other members and discuss key industry issues. Members of our MIGs also steer our research programme and are first to hear the results of these projects.

These are just a few of the benefits available through your Campden BRI membership. For more details or to find out about the other exclusive benefits available to you please visit www.campdenbri.co.uk/memberzone.php or contact our membership team by emailing membership@campdenbri.co.uk.

Steven Walker

Compliance

www.campdenbri.co.uk/sectors/compliance.php



Complying with microbiological criteria

Blog by Phil Voysey

www.campdenbri.co.uk/blog

Project web page

Food safety plans: a holistic approach to risk management

www.campdenbri.co.uk/food-safety

Threat assessment critical control point (TACCP)

Podcast by Richard Leathers

www.campdenbri.co.uk/taccp

Disinfectant testing video

www.campdenbri.co.uk/disinfectant

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SOPHY workshop

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SOPHY is an EU-funded project that has developed a **web-based software tool** for prediction of product **safety, quality, and shelf life** of ready-to-eat products.

We are running a workshop on **26 September** and will update delegates on the progress of the project, give a practical demonstration of the software features and allow users to test and provide feedback on the software.

The software is designed to help optimise raw material selection, product formulation and processing steps virtually, and estimate the effect of individual production steps on safety and shelf life while considering quality effects.



Food reformulation: reducing fat, salt and sugar in food

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Reformulating products to reduce fat, salt and sugar is becoming of increasing importance to food manufacturers and

caterers. The EU Salux project, which we have been contributing to, has been funded under the Health Programme framework to help the food industry, particularly small and medium-sized enterprises, address issues arising from food reformulation. The Salux Clearing House makes information on reformulation available to the public, and includes project reports and other relevant publications. Contributions to the Clearing House are welcome and are reviewed before inclusion to ensure that the information is accurate.

Preventing haze in drinks

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Member-funded research is assessing and developing methods for measuring and characterising hazes in beers with novel ingredients and other novel alcoholic beverages such as beer mixes, cider/fruit mixes and spirits with novel additives. Haze formation is a quality problem that can affect a wide range of drinks. Non-microbiological particles that can cause haze include starch, beta-glucan, proteins, lipids and crystalline substances. Catharine O'Shaughnessy explains:

"Most research in this area has focused on beer, for which some predictive models have been developed. However, with the emergence of many novel alcoholic drink types on the market, there is a need to also identify the factors influencing haze development in these new products. This would allow manufacturers to optimise beverage composition and processing as well as predict colloidal stability. Previously, we carried out a major study investigating haze development in beer. In this study we will establish whether the influential parameters contributing to this beer haze are also of importance in other alcoholic drinks. A number of other factors identified in the previous work, such as pH, ethanol, sugars, polyphenols and oxygen, will also be assessed for their impact. Natural haze development as well as forcing tests will be performed and any correlations between haze and the physicochemical parameters will be established. This will allow some new insights into haze formation in non-beer alcoholic beverage categories."

The product categories under review are: fruit cider, beer mixes, flavoured beer and formulated spirit. The initial investigations have concentrated on red fruit ciders, an expanding category. At present 18 different red fruit ciders have been investigated.

New nutrition, diet and health group formed

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Nutrition, diet and health have taken centre stage as one of the most important issues in food production and consumption. Some examples of the key issues are:

- Responsibility deal pledges including reducing saturated fat, salt and sugar levels in manufactured foodstuffs
- Development of functional foods, which provide the consumer with specific health benefits
- Creating products for people with specific dietary needs (e.g. the avoidance of particular allergens)

At this year's Campden BRI Day, we asked the many visitors who stopped by at the product development exhibits what they thought the food and drinks trends for 2015 would be. Among the many varied ideas, there were a great many suggestions related to the broad topic of products that contribute to a healthy diet. As a result of this feedback, we have pulled together all of our activities to form a new nutrition, diet and health group. As you will see at www.campdenbri.co.uk/services/food-diet-nutrition.php our activities cover product development, nutritional analysis, legislation advice, consumer and sensory studies, microbiological implications, and raw material development and suitability.



FIC, FIR and food sold loose

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The long-awaited domestic Food Information Regulation (FIR) has finally been published; this is not to be confused with the EU Food Information to Consumers Regulation (FIC). Although very closely related, the two are quite different: the European FIC describes how to label food and sets a common standard across all EU Member States, whereas the domestic FIR enables the execution and enforcement of the FIC in the UK. The FIR, however, does more than just that, as it contains some national labelling provisions that are not specifically found in the FIC:

- The presence of allergens in foods sold loose may be indicated by any means the food business operator chooses, including orally. Businesses that adopt the oral approach must ensure that there is a visible notice at the place where the purchaser chooses the food that allergen information is available from a member of staff.
- The FIR also requires the name of the food and, where appropriate, the meat percentage to be given on foods sold loose. This continues existing practice and so should not present any difficulty.
- Some aspects of the old labelling law have been given a stay of execution in what are known as 'sunset clauses'. This means that they can remain in place for a period of time. So if you are labelling alcohol, cream or cheese, be aware that some of the old labelling rules are retained until 13 December 2018.

Complying with hygienic design and cleaning

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In order to ensure that food is safe and of high quality for the consumer, food processing and food service areas have to be hygienically designed and properly cleaned and maintained. As the acknowledged leading experts in food hygiene, we can help you design your factory or food service area, and offer advice on the design of equipment within it, and how to arrange it!



But, as Lawrence Staniforth explains, food factory hygiene is not just about factory structure:

"It is also about cleaning and disinfection, optimising air movements and training of personnel; all contribute to the ultimate goal - of maintaining a clean manufacturing environment and minimising the risks of food contamination. And we can evaluate scenarios involving real microorganisms in our Microbiology Process Hall. We have the right combination of scientific expertise and food and drink factory experience, which means we can give practical and pragmatic advice."

Our technical advice services are all supported by our portfolio of food hygiene guidelines, which detail good hygiene practices and factory design, and a wide range of hygiene training courses. And we also help in other ways - as an independent cleaning chemical and disinfectant testing centre, and in undertaking factory sampling and audits.

Compliance means following both legislation and contractual obligations with clients

Out and about

What's brewing at 'Brau'?

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www.brau-beviale.de

This year we will be exhibiting at Europe's biggest trade show for the brewing industry at Brau in Nuremberg (11-13 November 2014, Hall 1, Stand 1-333). Our team will include:

- **Gordon Jackson**, who will be available to discuss how to construct a risk-led due diligence analysis programme.
- **Barney Hoare**, our Regulatory Advisor, who will be distributing a free EU labelling guide for beer and is available for individual clinics to discuss your labels.
- **Dr Chris Smart**, who will be available to discuss how we may support you in areas such as NPD, sensory, research and instrument evaluations.
- **Clare Brett**, who will be happy to run you through the many benefits of membership.

If you would like to book appointments with any of our team please contact Clare Brett.

Lab Innovations Expo

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www.campdenbri.co.uk/stec

We will be holding a seminar, *STEC and the enterics*, at Lab Innovations Expo, NEC, Birmingham on **6 November**, to look at specific aspects of STEC microbiology, as well as issues with other enteric organisms, including methods for detection and tracking contamination, and strategies for controlling STEC and enterics in the food arena.

Since the outbreak of *E. coli* O104:H4 food poisoning in 2011, shiga toxin-producing *E. coli* (STEC) strains have become a key area of concern for the food industry. The EU has now issued guidance on what steps manufacturers should take if they find STEC in foods. This seminar will discuss the issues. And don't forget our *Food Fraud seminar*, also at the Lab Innovations Expo, on 5 November.



October training events

A full list of 2014 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

- 6-10 Food safety - advanced (CIEH level 4)
- 7-8 FSSC internal auditing
- 7 HACCP - refresher
- 7 Meat technology
- 7 Nutrition and health claims
- 8 Calculating meat content
- 8-9 HACCP - validation and verification
- 9 Food factories of the future seminar
- 10 Brewhouse efficiency and beer recipe formulation workshop
- 14-16 Bread innovation
- 14-16 Brewing - an introduction
- 14 Sugar reduction: challenges and opportunities seminar
- 15-16 An introduction to food law
- 15-16 HACCP - intermediate (level 3)
- 17 HACCP for craft brewers
- 21-23 Food technology for non food technologists
- 22-24 Practical microbiology - advanced
- 23 Beer labelling requirements
- 23 Cooking process validation
- 28-29 Hot topics in food microbiology conference
- 29 Documentation and design of quality systems

www.campdenbri.co.uk/training.php

New guidelines published

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We have recently published two new guidelines: **Guideline 72** on TACCP (Threat Analysis Critical Control Point) and **Guideline 73** which addresses the safety of dry products such as nuts and seeds.

A core element in the defence of food and drink against attack is a systematic evaluation of vulnerable elements of the supply chain, carried out by an experienced and trusted team.

TACCP: A Practical Guide (Guideline 72) defines the TACCP process with the help of detailed flow charts. It goes on to cover the complexity of the food supply web, considering malicious, ideologically motivated threats to food and food supply, illustrated by case studies.

Guideline 73, Guidelines to the principles of assuring the microbiological safety of low moisture foods such as nuts and seeds, highlights the main sources of contamination, good manufacturing practices to minimise the risks of contamination, the principles of validation of decontamination procedures, and processes and controls to prevent recontamination. This is particularly relevant as there have been a number of food safety incidents in recent years involving pathogens such as *Salmonella*, which have been found on low moisture foods such as nuts and seeds.



Hot topics in food microbiology

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www.campdenbri.co.uk/food-micro-conference.php

Our conference on **28-29 October** covers a range of relevant topics such as *Salmonella*, *Campylobacter*, *Listeria*, *Enterococcus*, *Cronobacter*, viruses, Microbiology Risk Assessment (MRA), and Threat Assessment and Critical Control Point (TACCP). Spoilage and illness caused by microbiological issues represent a significant risk to the food and drink industry in terms of time, costs and potential damage to the brand. Keeping up to date with the latest hot topics is one way of increasing awareness and allowing preventative controls to be implemented before problems occur.

Visit Member Zone

www.campdenbri.co.uk/memberzone.php



to access privileged member information and services

Vote for research

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Members select the member-funded research we do. If you are nominated by your company as a voting representative you will receive an e-mail inviting you to vote by Friday 10 October 2014. Please take part and vote for the projects that you want.

Discounts

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Being a member of Campden BRI means that you can get many products and services at a reduced rate. This includes our own publications, training courses and conferences, as well as our wide range of services - from chemical and microbiological analysis, through processing and packaging trials, to consumer product testing. In fact, virtually everything that we do!

The discounts vary, but are typically 20-30% - and you can still use your Member Service Allowance to pay for the balance. Please speak to Angie Deaves or email the membership team if you have any queries or questions.



Improving access

We are introducing a new way to log on to www.campdenbri.co.uk

From now on, as members you will be able to have an individual username and password based on your company email address.

To find out more about the benefits of doing this, and to set up your password, visit: www.campdenbri.co.uk/register.php

Member Interest Groups (MIGs) dates for 2015

MIGs are open to all full members of Campden BRI. Take the opportunity to discuss with peers the topics that are of importance to you and help to 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 (see our website for details of locations).

Member Interest Group	Winter	Spring	Autumn
Agri-Food	27 Jan	27 May	10 Sept
Brewing and Fermented Alcoholic Beverages	29 Jan*	7 May*	17 Sept*
Cereals, Milling and Baking	5 Feb	6 May	7 Oct
Chilled and Frozen Foods	21 Jan	28 April	24 Sept
Food and Drink Science	14 Jan	29 April	9 Sept
Food Service	10 Feb*	12 May*	6 Oct*
Heat Preserved Foods	11 Feb	28 May	22 Sept
Manufacturing Technologies	20 Jan	13 May	29 Sept
Meat and Poultry	22 Jan	20 May	16 Sept
Microbiology	28 Jan	14 May	23 Sept
Packaging	3 Feb	19 May	1 Oct
Quality and Food Safety Management	15 Jan	30 April	15 Sept
Sensory and Consumer	4 Feb	21 May	30 Sept

Meetings will be held at the Chipping Campden site unless otherwise indicated.

* Venue to be confirmed

New podcast

www.campdenbri.co.uk/podcasts/migs.php

Listen to Richard Powell discuss the benefits and work of the MIGs.



Welcome to new members

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

Alibi Health Drinks - soft drinks manufacturer

Autosmart - manufacturer of chemical cleaning products

Buisman Ingredients BV - producer of caramelised sugars and caramel colours

Cairngorm Brewery Company Ltd - craft brewery

CuzCo Foods Ltd - co-packer of Peruvian grains, cereals, sauces and snacks

James T Blakeman Ltd - manufacturer of raw and cooked sausages and sausage meat products

Kepak Ballybay - producer of beef, lamb and pork burgers

Laboratoire International De Bio.Analyse (LIBA) Ltee - laboratory offering testing services in food safety, environment and animal health

LECO Instruments (UK) Ltd - provider of analytical instrumentation and consumables

Origin Wine Ltd - wine exporters

Parker Hannifin Ltd Domnick Hunter Process Filtration - Europe - producer of motion and control technologies

Perry Scott Nash (Acoura) - environmental health consultants

Phynova Group Ltd - developer of novel healthcare products from plants

Terinex Ltd - manufacturer of oven bags, rolled film, foil and bakewell products

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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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