

Hygiene inspection of the brewery

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Maintaining good hygiene standards in a complex production environment manufacturing multiple products, can be challenging.

The brewing industry is currently undergoing transformation - the ever-rising consumer demand for beverages which are low in alcohol or non-alcoholic, contain new flavours, or show innovation or novelty, has increased the demands on brewers.

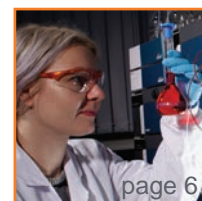
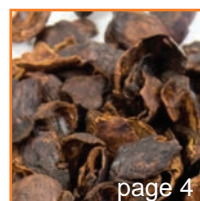
The move towards unpasteurised products and the use of novel raw materials lead to potential risks of pathogens and spoilage organisms contaminating the beverages. Additionally, successful craft breweries that expand quickly can end up trying to meet demand by manufacturing in confined spaces. In all these situations, good hygiene is paramount to avoid quality defects.

At Campden BRI we offer support in assessing the risk of cross-contamination by conducting independent hygiene audits and inspections, so that critical areas which require attention or upgrading can be highlighted. We also help by reviewing HACCP plans and implementing environmental monitoring schedules and training brewery staff in how to conduct environmental monitoring including sampling and data analysis. ■

Get in touch to find out how we can help improve your brewery hygiene



Newsletter



Campden BRI
100 years
With industry for industry



See us on the podium

Norovirus - an essential date for your diary

30-31 October 2019 • National Exhibition Centre, Birmingham

Our head of microbiology, Roy Betts, will be attending Lab Innovations to deliver a presentation on the number one cause of infectious intestinal disease in the UK: Norovirus. With 3 million cases of Norovirus infection each year in the UK, it is important to keep up to date with the latest knowledge surrounding this pathogen to maximise your control over it. Roy will be giving attendees an insight into the under-studied pathogen as part of this major laboratory industry exhibition.

Lab Innovations brings together laboratory manufacturers, suppliers and professionals who showcase their latest products, services, expertise and innovative new technologies.

You can register free for this two-day event to hear Roy cover this highly important group of pathogens including where they come from, what they do to us and how we can control them. ■

Contact roy.betts@campdenbri.co.uk or search for 'labinnovations' to find out more online

Contact us

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For other sites, see
www.campdenbri.co.uk/campdenbri/contact.php

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New members

We are delighted to welcome the following new members:

Foods Connected - providers of cloud based software tools for the food industry

Knighton Foods Limited - supplier of powdered ingredients

Lontra Limited - designer and manufacturer of energy efficient air compressors for conveying powdered food ingredients

Moving Mountains Foods Ltd - importing and distributing plant based burgers

Natural Vitality - chick pea and pea hummus

Oxford Agricultural Trials Ltd - evaluation of agrochemicals, crop varieties, fertilisers and organic products for the crop protection industry

Preema International Ltd - janitorial supplies company with The Sassy Food Co... also providing cake sprinkles and decorations

The Mae Deli Ltd - supplies vegan energy balls, protein balls, oat bars and vegan frozen ready meals

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

Brewing regulatory updates

Join many of our members who are benefitting from our monthly brewing, malt and cereals regulatory updates. They provide information on the latest global changes affecting the brewing industry including regulations on packaging, pesticides, advertising, allergens, cereals, claims, product recalls and food safety news.

Free to members

To sign up, visit campdenbri.co.uk/optin.php and pick the brewing regulatory updates you're interested in and any others you wish you to receive. You can log in at any time to review your preferences. ■



Brewing proficiency scheme marks 25 years

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The Brewing Analytes Proficiency Scheme (BAPS), a partnership between LGC Standards and Campden BRI, has been running for 25 years and now has over 350 participants. BAPS includes chemical analysis, microbial analysis and also sensory analysis of beer. Participation in a proficiency testing scheme can provide confidence that analysis results are meaningful and accurate. It helps to ensure consistency in the quality of the foods or drinks produced.

We're currently working with LGC to put together a white paper highlighting how BAPS has benefited the brewing industry over the past 25 years. It will be out shortly, but if you'd like further information in the meantime, please get in touch. ■

Global Halal harmonisation

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Harmonisation of Halal is a long-debated topic. In 2010, the Standard and Metrology Institute for Islamic Countries (SMIIC) was set up to make advances in terms of Halal harmonisation.

Currently, each product or ingredient must be certified Halal for a specific market (e.g. Malaysia or Kuwait). At the moment there is no regulatory way to ensure compliance with global Halal, as no unified standard exists. The issue at heart is that Islamic jurisprudence disagrees on interpretations of Halal which is especially evident in the permissibility of alcohol in food, additives extracted from insects and stunning procedures for animals. For this reason, it is difficult to draft a unified global Halal standard which would be approved by each member of the Organisation of Islamic Cooperation (OIC).

But why is the development of a harmonised standard for Halal so important?

Currently, any manufacturer exporting Halal foods to a variety of countries must obtain certification for each target market. This translates into increased certification fees and barriers to trade which would not exist if a unified standard was in place. Efforts have been made in this direction but there is not yet a clear vision of a future where different members of the OIC come together and agree on one Halal standard applicable to all. ■



Repurposing 'waste' for ingredients

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Reusing and recycling food materials

'Getting more from less' was a major 'need' articulated by our members when we asked them what they needed from science and technology. We're all aware of the issues of food waste at the retail, food service and consumer stages where it is most visible, but it's just as critical in manufacturing and processing. The emphasis on reducing the use of resources demands using as much of the food material as possible - alongside the more obvious reduction of waste arising from pests, disease and spoilage, and minimising inputs such as water and energy.

Deriving ingredients from waste offers intriguing possibilities for those prepared to explore them. Many materials contain fibre, nutrients or chemicals (e.g. sugars, amino acids) that could be extracted and used in food or feed, or as feedstocks for microbial fermentations. Non-food uses provide options as well. Apart from established routes - like bio-digestion for energy - there is the potential to extract fractions for use in applications such as packaging and pharmaceuticals.

The challenges of reducing waste

Using 'waste' materials - whether it be potato peelings, spent grain, avocado stones or the flesh of coffee cherries - demands creative and innovative thinking. Different solutions must usually be found for different materials. And this creates technical hurdles - from ingredient characterisation, product development or reformulation, process modification and optimisation to safety assessment and shelf-life trials, consumer and sensory tests, and labelling and regulatory support.



For example, a previously discarded material which is rich in nutrients or fibre might have no history of consumption and be deemed a novel food - requiring a dossier of information addressing its suitability for use as or in products. However, the incentives and the prize make it worth the effort. Even a relatively small increase in the proportion of a material used can, for a high-volume product with extended product runs, result in significant savings over time. Just consider the volume of autolysed yeast used to make a well-known spread - which highlights the twin benefits of a value-added ingredient and reduced costs of biomass disposal.

Defra has recently set a target of halving food waste by 2030 - as part of a waste reduction pledge. It is estimated that 1.8m of the 10.2m tonnes annually (worth £20bn) comes from food manufacture, with a much larger proportion coming from households. Over 100 companies have already signed the pledge and are starting to consider, through their business plans, how to achieve this.

Project - ingredients from spent grain

There are direct financial incentives to those willing to explore waste repurposing. Apart from the reduced cost of disposal, funding is available through Innovate UK to explore new applications. At Campden BRI, we are currently working with a consortium project focused on using spent grain from brewing to create a high-fibre food ingredient. The project focuses on all aspects of the food chain from the raw material through to consumer science to find a way to repurpose the otherwise discarded resource.

Recently we asked you to take part in a survey to help gain an understanding of your company's food waste production and how it may already use its food waste. We are always happy to discuss and help you identify potential opportunities for reclaiming ingredients from waste, carry out practical trials in our test kitchens and pilot process plant, or assess the suitability of potential materials (e.g. functionality, safety, regulatory considerations and consumer considerations). ■

Contact our food development technologist Dan Hall to find out more.



Pilot scale facilities

to help your NPD

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Over recent months clients have used our food and drink pilot plant facilities to help develop new products, analyse existing processes, and evaluate ideas. Examples include:

Sample and ingredient preparation

Facilities include equipment for peeling and blanching fruits and vegetables, meat processing and preparation (including sausage fillers and meat slicers), and mixers, blenders and homogenisers for products such as soups and sauce.

Thermal technologies, chilling and freezing

With 100 years of experience in heat processing foods, our facilities include thermal processing equipment including retorts and pasteurisation tanks, steam-jacketed pans, batch pressure cooking, a super-heated steam rig and cooling vessels, hot air and freeze driers, and air blast chillers and freezers, as well as a microbiology process hall.

Baking and milling

Our bakery plant includes mixers, ovens, moulders and dough presses, alongside milling apparatus that allows the removal of hulls from cereals.

Emerging technologies

Our plant includes high-pressure processing, continuous flow microwave, UV-C light, power ultrasound, and cold plasma.

Packaging technologies

We pack into a range of materials and can analyse package strength and integrity.

Brewing facilities

Pilot malting and brewing industry kit for dealcoholisation. ■

Member zone

to access privileged member information and services

Training aspects of food safety culture

Free white paper for members

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As part of our work supporting companies with their food safety and quality culture excellence programmes, it is clear that many companies struggle with “training”. To ensure that food safety training is as effective as possible and is optimised for the transfer of skills and knowledge, an organisation needs to ensure that a number of basic elements are in place.



This GFSI Food Safety Culture Position Paper, which we helped develop, defines food safety cultures as: “shared values, beliefs and norms that affect mindset and behaviour toward food safety in, across and throughout an organisation”. Food safety is a shared responsibility and all employees have a role to play. Employees, irrespective of their position within a company, need to understand how their actions can have an impact (positive or negative) on food safety. Download the white paper at campdenbri.co.uk/white-papers.php ■

Now available - 2020 MIG dates

The dates for the 2020 Member Interest Groups are now available. All meetings will be held at our Chipping Campden site unless otherwise indicated. To find out how to join a member interest group search ‘migs’ at campdenbri.co.uk

Member Interest Group	Autumn '19	Winter '20	Spring '20	Autumn '20
Agri-Food	25 September	11 February*	28 May	24 September
Cereals, Milling and Baking	8 October	6 February	13 May	6 October
Fermented and Alcoholic Drinks	17 September*	21 January*	14 May*	15 September*
Food and Drink Science	10 September	5 February	28 April	8 September
Food Service	19 September	23 January*	7 May*	16 September
Meat and Poultry	24 September	28 January	20 May	22 September
Microbiology	11 September*	15 January	29 May	9 September
Nutrition and Health	2 October	29 January	12 May	30 September
Packaging	3 October	14 January	21 May*	1 October
Processing, Operations and Preservation	26 September	30 January	19 May	23 September
Quality and Food Safety Management	12 September	16 January	30 April	10 September
Sensory and Consumer	1 October	4 February	6 May	29 September

* to be held offsite - venue to be confirmed

www.campdenbri.co.uk/memberzone.php

Meet a MIG - Food and Drink Science

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Fourth in our Meet a MIG series comes the Food and Drink Science Member Interest Group (MIG) - a forum for discussion, information exchange and research direction relating to all aspects (except microbiology) of the science of food and drink and its associated packaging. The MIG covers topics including the influence of processing and storage on food and drink properties, raw materials, the application of modern biotechnology, chemical analysis, and the development of EU legislation on chemical registration and authorisation.

Like all MIGs, Food and Drink Science steers member-funded research projects, currently including:

- food safety and traceability using protein profiling
- functionality of novel ingredients from natural sources
- mitigating food fraud, and
- next generation methods for food safety

Meetings also involve discussion of hot topics relevant to the group, ranging from sustainable packaging to veganism, sugar reduction to landfill levies, and acrylamide to palm oil. ■

It's all good food (and drink) for thought - so if we've whetted your appetite, just email migs@campdenbri.co.uk and we'll add you to the group. The next Food and Drink Science MIG meeting is at Campden BRI on 10 September.

Revised risk evaluation guideline

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We have recently released an updated edition of Guideline 65 - 'Risk evaluation and management of raw materials (Second edition)'. It provides specific guidance on the application of risk evaluation techniques to identify, evaluate and control the hazards associated with raw materials in the food and feed manufacturing environment. The new guideline demonstrates the techniques used to help food businesses prioritise their risks and assess how much control is required to protect against those risks. ■

Guideline 65 is available to both members and non-members. To buy a copy, visit campdenbri.co.uk/publications/pubs.php and search 'G65'.

Experts on video

Thermal process validation - for safety and quality

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Many food and drink products are heated to reduce or eliminate the presence of microorganisms, but if the thermal process is not applied correctly the product may pose a significant danger to public health. Therefore, we must validate thermal processes to ensure they lead to products that are safe to consume.

Our thermal processing specialist David Whittaker has produced two whiteboard video presentations to help you understand how thermal processes are validated and how you can optimise yours.

In his first video, David gives a run down on the methods we use to gain the evidence which allows us to determine whether a thermal process will deliver a safe product. This includes the variables we consider that help create the 'worst-case scenario' when performing the practical tests that validate a process.

His second video details how we interpret and use the results from a validation study to optimise a thermal process. Our work at Campden BRI has found that optimisation better preserves a product's nutritional and sensory attributes - which are critical factors for quality and consumer acceptance. ■

To watch the videos, search 'talking head' at campdenbri.co.uk. Contact us to find out how we can validate and optimise your thermal processes.



Training and events

A full list of scheduled courses is available on our website www.campdenbri.co.uk/training.php or you can contact us to request a brochure or discuss tailored training options: training@campdenbri.co.uk +44(0)1386 842104

Seminars

Listeria monocytogenes - a force to be reckoned with

campdenbri.co.uk/listeria-monocytogenes-seminar.php

Seminar: Thursday 5 September 2019

This seminar has been organised in response to renewed focus on the threat of *Listeria monocytogenes* on food safety following the recent *Listeria* in sandwiches outbreak in the UK. Speakers, including those who were involved with the outbreak, will cover key topics including how whole genome sequencing was used to trace *Listeria* to sandwiches, how to deal with *Listeria* biofilms in the food factory and *L. monocytogenes* in frozen sweetcorn and other frozen fruit and vegetables.

Are baked goods safe? - food safety challenges in the bakery

campdenbri.co.uk/bakery-safety-challenges.php

Seminar: Friday 20 September 2019

Many manufactured baked goods that are produced 'sterile' can subsequently be blighted by post process contamination. In this seminar, top industry experts will take you through the main issues (such as microbes, allergens and mycotoxins) for baked goods and how to overcome them, including hygienic design for bakeries. ■



Skills and knowledge

Bespoke bakery training

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Maintaining the industry skills base was highlighted as a major challenge in our review of industry needs. To meet growing demand, skilled workers are needed to replace retirees in an ageing workforce. To fill this gap, the £3 billion baking sector needs to tackle the challenges of training.

While off-the-shelf training is great for providing your teams with skills and knowledge, bespoke training can provide better focus on your company's specific needs and challenges. Bespoke bakery training helps:

- provide flexible training that fits around your company's schedule
- eliminate bad habits picked up from on-the-job training
- provide standardised examples (e.g. how a finished baked item should look, feel and taste)
- keep staff up to date with the latest technologies, ingredients and processes

It can also provide a great team building experience and opportunities to brainstorm and troubleshoot technical problems. Get in touch to find out more about our tailored bakery courses. ■

www.campdenbri.co.uk/training.php