

Newsletter

www.campdenbri.co.uk



Beer and saving the planet

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www.campdenbri.co.uk/research/energy-water-use-brewing.php

Brewing, just like many other food and beverage processes, is intensive in terms of energy and water resources. We have a good history of benchmarking good practice in energy and water usage, having organised an international energy and water benchmark for several years. Member-funded research is now taking this further. We are looking at individual stages in the brewing process to enable brewers to further improve best practice and technologies.

Worts and all

The step of boiling the brewers' wort is the most intensive in terms of using thermal energy. A questionnaire sent to brewers will enable them to ascertain whether their own performance is good, bad or average. Which heating technologies are most appropriate? Is the brewer in the right ballpark given the scale of their process and evaporation requirements? Is the cleaning schedule right and are raw materials being extracted efficiently?

Cleaning of the brewing equipment is a major user of both energy and water resource. At the end of the fermentation process the vessel is extremely soiled with yeast and protein residues, and must be cleaned and disinfected before the next fermentation. The brewers' questionnaire considers detergent and disinfectant types, the mechanical processes involved and automation aspects, so that brewers can understand their process performance. The detailed benchmarking report will be available for participants in Spring 2015.

Necessity driving innovation

As a business, it's crucial that we understand what you - our customer - needs. Every three years we undertake a major industry consultation to identify what the food and drink sector needs from science and technology. But we do this not just for our own benefit - to help shape the research, services and other support we provide - but also to help the supply chain at large.

For example, we work closely with a range of Government departments and agencies, and also with funding bodies, to help identify the problems that research programmes should tackle, and the issues driving them. This could be 'sustainability' driving the need for reduced energy input and waste, or 'diet, health and nutrition' driving product reformulation, to mention two obvious examples. With over 2,400 members in 75 countries we are ideally placed to gauge what it is that the global supply chain needs and work with partners to deliver it.

Through our Member Interest Groups we have already collated a wealth of information on the kinds of problems where science and technology can be applied to help industry innovate and make the sector more competitive. Through August we will also be canvassing the views of members through on-line activities.

We are keen to gather as much insight as possible, so do please let us know what it is that you think you will need from science and technology over the next 3-5 years. The findings will be published in January.

Steven Walker

Contents

- 2 Necessity driving innovation
- 2 Highlights
- 3 News
- 3 Feature: Nutrition labelling and the FIC
- 4 HACCP for composting and anaerobic digestion
- 4 Acrylamide toolbox
- 5 Practical application: New chemistry lab
- 5 Ergot sclerotia contamination of cereals
- 5 Campden BRI lands HMRC contract again
- 6 Training and events
- 7 Member zone - latest research reports and MIG dates
- 8 New members

Highlights

www.campdenbri.co.uk



Product development and the Responsibility Deal

Blog by Rachel Gwinn

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

Food allergens

Project web page - providing guidance for compliance and resolving analytical challenges

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

Mitigating acrylamide formation in food

Podcast by Anton Aldrick

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

New guidelines published

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

Guideline 72 TACCP (Threat Assessment and Critical Control Point) - A practical guide

Guideline 73 Guidelines to the principles of assuring the microbiological safety of low moisture foods such as nuts and seeds



Campden BRI chosen as partner of choice by Kuwait Research Institute

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Our Science Director, Martin Hall, led a review of the food and nutrition deliverables from Kuwait's 7th Strategic Plan with help from Dr. Susan Duthie from the Rowett Institute of Nutrition and Health - a leading authority in diet and health. He used these findings to shape the 8th Strategic Plan to ensure that Kuwait was able to deliver on its food and nutrition commitments in light of future challenges posed, including an increasing population, diet related health concerns and food security.

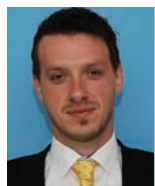
The review of the national food and nutrition strategy for the Kuwait Institute for Scientific Research (KISR) will help improve the health of the Kuwait population through healthy eating, lifestyle and safe food.

Food and Nutrition is one of the key priorities for Kuwait and KISR plays a key role in supporting the Kuwait Municipality in meeting this national challenge. We have a long established collaborative relationship with KISR, and were, therefore, their natural partner of choice to assist them. This plan forms one of the central pillars of Kuwait's national strategy and guides KISR's leadership over the next five years.



New Brewing Division sensory manager appointed

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Thibault Delafontaine has been appointed as Sensory Group Manager at our Brewing Division, where he will lead a team of sensory scientists working on both client projects and research.

Thibault will be responsible for sensory services including aroma recognition, flavour assessment, flavour tracking and taints across a range of alcoholic beverages including beer, wines, ciders and spirits. Thibault brings with him sensory experience across a wide range of food and drink products.

Nutrition labelling and the FIC

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One of the most significant changes to be found in the Food Information to Consumers Regulation (FIC) is that declaring nutrition becomes mandatory. Previously it was only needed if a claim was being made. It is not, however, quite that simple, as a distinction needs to be made between what are

commonly known as 'front of pack' and 'back of pack' nutrition declarations, and there is quite a large number of exceptions to the general rule to be taken into account!

Our Food Law Advisors are on hand to answer any labelling queries you might have, but some simple tips might point you in the right direction:

- Front of pack nutrition labelling is voluntary, you do not have to do it but if you choose to (and many would see it as good practice and useful to consumers) there are some rules now on how you may go about it;
- Back of pack nutrition labelling will become mandatory, but there is a long list of exemptions to mandatory nutrition labelling, which mean that it is not an absolute requirement on everything!
- These exemptions do not relate just to products; they also state a largest surface area threshold for any food stuff of 25cm², beneath which nutrition labelling is not required. Nor is declaring nutrition a mandatory requirement if you are a manufacturer and supply "small quantities" of products directly to local retail establishments.
- Finally, there is an extended transition period for mandatory nutrition labelling to be aware of. If you are not labelling already, you have until December 2016 to make this particular change.

And when you know what you need to declare, make sure you come to us for the analysis.



HACCP for composting and anaerobic digestion

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Composting and anaerobic digestion are an integral part of primary production and waste management, for example in the production of crop growth substrates and soil conditioners, and in energy production. The raw materials are obtained from agricultural, domestic and food business sources. Food safety and health requirements have to be ensured in these production operations. Legislation lays down minimum requirements, for example in food hygiene and the use of animal by-products, and operators take measures and adopt practices to ensure a high level of safety.

Recognised safety management systems based on a HACCP approach are a requirement of legislation or recommended in voluntary codes of practice. We have undertaken tailored training and assisted in the verification of HACCP systems in this sector. The common sense approach to assuring safety, embodied in the Codex principles of HACCP, is explained in the training with the use of specific case studies based on typical processes. If you need advice on composting and waste management, get in touch.

Whether it's raw material specifications, the need to demonstrate process efficacy or assuring traceability, we can help at any stage of the food and drink supply chain

Acrylamide toolbox

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Acrylamide is a potential carcinogen formed at high (e.g. baking and frying) temperatures, typically in products with high starch content and specific precursor amino acids - principally asparagine. Although the degree of hazard posed by acrylamide has not been quantified (and we have been consuming food containing it for many hundreds of years), the food industry and regulatory authorities consider it prudent to reduce its formation wherever possible. There are a number of ways in which this is done - such as choosing starting materials with lower levels of precursor chemicals, and modifying processing conditions, particularly by reducing the temperature of the process.

Listen to Anton Alldrick discuss the components of the acrylamide toolbox, developed by FoodDrinkEurope, in a podcast on our website at www.campdenbri.co.uk/podcasts.php

As well as being able to help you reduce acrylamide formation, we also hold accreditation for its analysis.





Practical application

New chemistry lab

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We are pleased to announce the completion of a new chemistry laboratory at our Chipping Campden site, which will be home to the Food Composition team, who are involved in such things as nutrition label checking, compliance with HMRC tariff codes and trace metals analysis.

The chemistry team was involved in the design of the laboratory, assisted by a Lean Six Sigma tool. The lab incorporates extra wide benches to accommodate new equipment and more data outlets. A viewing window has been installed so visitors can view the laboratory from the corridor outside without the need for lab coats and safety glasses.

The first piece of new equipment to arrive for evaluation was an automated fat hydrolysis system, which was installed in early July. We look forward to experiencing the benefits that the new laboratory will bring in better servicing our clients.

Ergot sclerotia contamination of cereals

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www.campdenbri.co.uk/research/quality-safety-cereal-ingredients.php

In response to proposed EU legislation, our Cereals and Cereal Applications Testing (CCAT) group has produced a method for the assessment of ergot sclerotia in cereals and grain intake. Sclerotia are the fruiting bodies of fungi of the genus *Claviceps* and are a problem, particularly in their primary host rye, because they contain significant levels of toxic ergot alkaloids.

The method, developed as part of a member subscription funded project, estimates the number of fruiting bodies in a consignment of grain. As part of the validation of the method, a ring-test, using known quantities of sclerotia in a range of cereals, was undertaken, involving 19 milling sites, and this showed the method to be robust and suitable for purpose. The method has been included by nabim in its code of practice.

Although the legislation has not yet been agreed by the EU, the method will be applicable to the levels likely to be significant - up to 0.05% in wheat and up to 0.25% in rye. The imposition of maximum levels will impact on all millers and will encourage best practice when examining grain samples at intake for sclerotia.

Campden BRI lands HMRC contract - again

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We have been awarded a four year contract by HM Revenue and Customs (HMRC) to carry out analysis of goods imported into the UK from outside the EU. The work is to ensure that goods are correctly classified for tax purposes. This extends our status as the sole UK customs laboratory, which we have held for the past 11 years.

The contract includes the analysis of both food and non-food products and requires a broad range of expertise and specialist equipment to detect nuances in the make up of a product. Some of the questions we will be asked to investigate include: Has this food product labelled fresh been frozen? Is this rice really brown? The answers affect how a product is classified, which is crucial for the HMRC to apply the correct tax.

Some of the common items sent for analysis include tea, wood, tropical fruits, cakes and vodka; more unusual items received previously include wetsuits and medical devices. This runs alongside a separate contract awarded by the Rural Payments Agency to test the authenticity of olive oil imported in to the UK.

In addition, we also provide classification advice and training for clients.



September 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

- 1-4 Sensory evaluation workshop
- 2-3 HACCP for feed - intermediate (Level 3)
- 4 HACCP - foundation (level 2)
- 4-5 Understanding microbiology - foundation
- 9-10 Food and drink labelling
- 9-10 HACCP - intermediate (level 3)
- 10-12 Practical microbiology - foundation
- 11 Root cause analysis
- 15-19 HACCP - advanced (level 4)
- 17-18 HACCP - intermediate for brewers (workshop)
- 17-18 Internal auditing - principles and practices
- 19 An insight into species detection workshop
- 23 HACCP auditing - foundation
- 23 Threat Assessment and Critical Control Point (TACCP)
- 24-26 When things go wrong - advanced
- 29-3 Oct FSSC 22000 Auditor/Lead Auditor course
- 30-3 Oct Principles of baking

www.campdenbri.co.uk/training.php

Food fraud seminar

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www.campdenbri.co.uk/food-fraud-seminar.php

Following the major issues that parts of the food industry dealt with as a result of horse meat adulteration, the Elliot Report on government agencies' handling of events has provided food for thought with a series of recommendations for the agencies and industry. A fundamental requirement will be the protection of the consumer from food crime. We are holding a seminar - *Food fraud: advances in combating food and beverage crime - on 5 November*, which will focus on the latest developments in food authentication, particularly with respect to seafood, spirits, and plants. The seminar will take place at the Lab Innovations EXPO at the NEC in Birmingham, and will be located in the conference suite.

Sugar reduction: challenges and opportunities

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www.campdenbri.co.uk/sugar-reduction-seminar.php

Diet and health are of strategic importance to the food and drink industries - new Responsibility Deal pledges for overall calorie reduction were added just last year. As part of this, sugar and its artificial variants are targeted as an area of concern in the diet and health initiatives.

Our seminar on 14 October will provide an insight into the range of sugar reduction strategies available and allow delegates to discuss common challenges when reformulating products for sugar reduction or creating new, reduced sugar products.

Training in Dubai

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As part of the Dubai Food Safety Conference on 8 November, we will be providing food and drink safety training sessions for attendees in three important areas: setting realistic shelf-lives for perishable products, internal auditing, and risk-based food safety management.

The sessions are being led by senior Campden BRI scientists and technologists, and emphasises our growing role in providing expert knowledge tailored to the needs of companies throughout the world.

Visit Member Zone

www.campdenbri.co.uk/memberzone.php



to access privileged member information and services

Research information on-line

www.campdenbri.co.uk/research/projects.php
or search for "research projects" in our search box.

Here you will find extensive information about ongoing research projects plus links to our research programme, research summaries and R&D reports.

Queries and questions to information@campdenbri.co.uk

Latest research reports

More R&D reports have been published, giving extensive details of the results of member-funded research, exclusively for members.

Microbiology of crops: hazards, risks and controls (RD370)

Better package seals for reducing product waste (RD371)

Antimicrobial surfaces: development of a test method to assess their efficacy in practice (RD372)

Determining water absorption for improved fibre enriched baked goods (RD373)

Effect of salt, acid and chill temperature on the growth response of *Listeria monocytogenes*: the filamentation effect (RD374)

Impact of product reformulation on microbiological stability of dilutable drinks: effect of sugar, sweeteners, pH, and preservatives (RD375)

Impact of product reformulation on microbiological stability of dilutable drinks: further studies on the effect of sugar, sweeteners, pH, and preservatives (RD376)

Members can receive free electronic copies of these documents by sending an e-mail to auto@campdenbri.co.uk with the subject line: **send RDxxx** where xxx is the number of the report. By sending an e-mail with the command **send index** you will receive a full list of the reports and other publications available.

Member Interest Groups (MIGs) dates for 2014

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Come along to the autumn meetings of one or more of our Member Interest Groups - to keep up with the latest developments and network with peers.

Member Interest Group	Autumn 2014
Agri-Food	25 Sept
Brewing and Fermented Alcoholic Beverages *	18 Sept
Cereals, Milling and Baking	8 Oct
Chilled and Frozen Foods	11 Sept
Food and Drink Science	10 Sept
Food Service	7 Oct
Heat Preserved Foods	30 Sept
Manufacturing Technologies	23 Sept
Meat and Poultry	17 Sept
Microbiology	24 Sept
Packaging	2 Oct
Quality and Food Safety Management	16 Sept
Sensory and Consumer	1 Oct

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

* Venue to be confirmed





Welcome to new members

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

Bubblelicious Tea Ltd - wholesaler of bubble teas

Charles Jackson & Co Ltd - provider of cereal crop storage, processing and marketing solutions

Eversite Ltd - provider of compliance monitoring systems

Fine Bubble Industries Association (FBIA) - Japanese institute

Frank Dale Foods Ltd - manufacturer of frozen quiches, canapés and mini cakes

Glenisk - organic yoghurt and milk manufacturer

International Taste Solutions Ltd - flavour and functional ingredient systems for baking, breakfast cereal and snack sectors

Purity Soft Drinks Ltd - soft drink manufacturer

RDM Test Equipment Ltd - manufacturer of testing equipment for packaging materials and processes

The Cotswold Distilling Company Ltd - whisky and gin distillers

VELP Scientifica - provider of analytical instruments and solutions

Wonderfoods - manufacturer of salads and prepared vegetables

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.

Visits and venues

Come and see us. Use our extensive meeting facilities for your own events at very preferential rates, use one of our experts as part of your meeting, or ask for a personalised tour of either the Chipping Campden or Nutfield site.

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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