

Newsletter

www.campdenbri.co.uk



Risk models for due diligence

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Risk assessment is widely used by the food industry to demonstrate that appropriate due diligence has been taken in the production of food and drink. Although well developed for microbiological hazards, the concept of risk is less well understood in relation to other hazards such as chemical hazards or allergen management. A new member-funded research project will fill this gap, helping companies make rational cost-effective decisions regarding risk management.

Requirements to include checks

In addition to requirements to perform risk assessment defined by industry and legislative standards, risk assessment can be a useful tool to help companies develop testing schedules as part of their quality assurance (QA) schemes. The requirement to include checks for raw material and product authenticity has become important, but analytical testing of products or raw materials is an expensive part of a company's QA scheme. A systematic approach using a risk model could be used to estimate the amount of testing required based on knowledge from food safety management, TACCP, horizon scanning or gap analysis exercises.

Guidance documentation from this project will allow companies to develop testing schemes based on HACCP and related approaches, as well as legislative requirements.

Protecting consumers and the supply chain

Supply chain resilience was identified as a driver of innovation in our industry consultation on the scientific and technical needs of the food and drink supply chain, which we published earlier this year. An important aspect of this is protecting the integrity of supply chain operations - to protect businesses, and through them, consumers.

Through our research and services we are addressing the issues surrounding resilience to help companies ensure that they can deliver quality products that are both authentic and compliant. Whilst assurance systems are key to this, as outlined last month, monitoring is also crucial. With this in mind, we have invested over £1.5 million in new, state-of-the-art analytical equipment over the last 12 months, including for example a ToF Mass Spectrometer for authenticity testing.

During June and July we are focusing on the importance of resilience to ensure that your supply chain is protected. Later this month we will release a podcast discussing some of the analytical innovations that will benefit authenticity monitoring, including issues such as meat and fish speciation, geographical origin, elemental analysis, volatiles analysis and rapid DNA techniques.

Steven Walker
Director General

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Latest on the website

www.campdenbri.co.uk

Threat Assessment Critical Control Point (TACCP)
Podcast by Richard Leathers
www.campdenbri.co.uk/podcasts.php

Project: Food authenticity - development of 'next generation' analytical technologies to protect the food industry from fraud
www.campdenbri.co.uk/research/food-authenticity.php

Microbiology process hall
Blog by Joy Gaze
www.campdenbri.co.uk/blog

Nutrition, health and well-being: the consumer perspective
Blog by Sarah Thomas
www.campdenbri.co.uk/blog



Korean collaboration

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On 23 April we welcomed representatives from Chung-Ang University, Republic of Korea to our Chipping Campden site. Professor Ki-Hwan Park and Dr. Gi-Yae Yun, both from the School of Food Science and Technology, met with Professor Martin Hall to discuss further opportunities to work together. We have been working with Chung-Ang University over the past three years, but during his visit, Professor Park signed a memorandum of understanding with Martin Hall which formalised a new five-year agreement to work on joint educational, training and research projects. The first of the collaborations to launch will be an internship programme for Korean undergraduate students. Food science and food technology students will spend six months at Campden BRI as part of their placement year.



Cerevisia 2015 - the taste of Italian beer

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Ed Wray recently led a tasting panel in an Italian beer competition. In Italy the number of breweries is now over 900, with the 'craft' sector showing strong growth. To celebrate the diversity and quality of Italian beer, a competition run under the name of 'Cerevisia' and open to all breweries was initiated in 2013 by the Centre of Excellence for Research on Beer, University of Perugia.

A panel of 12 trained tasters sampled each of the beers, scoring them on a range of parameters - appearance, aroma and taste - with the final points for overall balance. To ensure objectivity, all the samples were anonymous and tasted in a random order. The tasters will only find out which beers were the winners when the results are announced at the awards ceremony.

BRC 7 - we can help!

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The seventh edition of the BRC Global Standard for Food was published in January 2015, and will be used as the basis for certification to the Standard from the beginning of July. The whole document has been reviewed; it has introduced a range of changes, with 24 completely new clauses and several highly significant changes in requirements. At Campden BRI we have received many enquiries about the changes and what they actually mean in practical terms. If you have specific questions about the standard, or need help with its implementation, give us a call.

For a free white paper on the changes, send an e-mail to auto@campdenbri.co.uk with the subject line: **send BRC7**

Helping the seafood sector

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We provide a range of technical support for the fish and sea food sector to help them in the supply of safe, high quality fish and sea food products. To ensure that quality is maintained, we can image and measure the structure and appearance of products, and have a team of highly experienced food tasters who can evaluate flavour, odour and texture characteristics. Authenticity of products is another major area where we can help the industry.

Safety, of course, is vitally important to this sector. Amongst the tools to ensure safety are shelf life trials, challenge tests against *Listeria*, *Clostridium botulinum* and other pathogens, *Vibrio* detection and confirmation testing, and the detection of histamine-producing bacteria. We can also look at the effects of super chilling on product safety, and advise on the risks of norovirus.

And if you are looking to develop new products, we can help there too, with pilot-plant scale-up facilities, as well as nutritional analysis and legal advice.





New rapid winescan

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We have recently invested in new state-of-the-art spectroscopic equipment (an FTIR Winescan) for wines, grape juice and fermenting must analysis. As well as Free and Total sulphur dioxide content determination, it can be used to analyse density, pH, various sugar characteristics (including total Brix), acidity values, ethanol content, and much more. Contact us to have your wine samples analysed or to discuss how we can help.

Hedonic tests - up to standard!

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Working to a recognised standard gives clients confidence that their results were obtained in an unbiased way and with impartiality, ensuring best practice to a consistent quality. A recent consumer test standard that we work to - ISO 11136 - covers *General guidance for conducting hedonic tests with consumers in a controlled area*. In essence this covers the use of consumers to evaluate products for how much they like them. This type of test helps companies to:

- compare a product with competitor products
- optimize a product for liking by a large number of consumers
- define a range of products to correspond to a particular consumer target population
- define a best-before date
- assess the impact of a formulation change on liking of the product
- study the effect of variables such as packaging.

This can be done with or without a product's extrinsic characteristics, such as brand, price, or advertising.

Greenfoods project update

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Among the recent activities of the EU Greenfoods project, in which Campden BRI is playing a leading role, was a 3-day Energy Training workshop. The aim of the project is to promote energy efficiency in the European food and beverage industry.

The workshop covered:

- energy audits, including: the importance of thermal imaging to identify energy waste and recovery potentials; understanding client's current energy management practices; and a preliminary understanding of energy intensive food processes
- different types of food processes and whether these operations should be undertaken in batch, continuous or semi-batch modes. Renewable energy technologies were also discussed, especially with regards to low grade heat utilisation, which is widespread in this sector.
- boiler operational characteristics and applications, as well as cooling and refrigeration requirements in the food and drink industry, where cooling energy consumption could account for up to 70% of the total site energy usage.

A further event on energy efficiency in the food and drink industry was held on Campden BRI Day. One of the main objectives of the project is to establish a Virtual Energy Competence Centre (VECC) with long-term viability. For an update of VECC or to discuss how you might benefit from the project, please contact us.



Promoting innovation

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

The theme for the day was 'Driving innovation', featuring:

- Innovation for product safety
- Innovation for quality and value
- Innovation for nutrition and well-being.

The themes were based on the 'Innovation needs' document that we published earlier in the year (see www.campdenbri.co.uk/industry-needs.php)

Open areas - your toolbox for innovation

Visitors also took the opportunity to tour our open areas - pilot bakery, food hall pilot plant and consumer and sensory science - with the chance to explore the senses.

Visit our Campden BRI Day page for a virtual tour of the exhibit posters.



Campden BRI Day 2015

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

37th Annual Campden Lecture



www.campdenbri.co.uk/podcast/37th-annual-campden-lecture.php

The annual lecture, given this year by Charles Wilson, Chief Executive of Booker, was a highlight of the day. His theme was 'Growth outside the supermarkets'.

The lecture is available as a podcast at www.campdenbri.co.uk/podcasts.php, and the transcript can be obtained by sending an e-mail to auto@campdenbri.co.uk with the subject line: **send lecture 2015**



Marks & Spencer Millennium prize

Recognises an early career scientist, technologist or engineer who has potential to positively impact on the food, drink and allied industries. This year's winner was [Lorraine Green](#) for her work in [vulnerability assessment of ingredient integrity from source to shelf](#).

Explore - Discover - Talk



Training events

September 2015

- 2-3 Threat Assessment Critical Control Point (TACCP) - Intermediate Level
- 7-10 Sensory Evaluation Workshop
- 8-9 HACCP - Intermediate (level 3)
- 10-11 Certified Food Scientist (CFS) Preparatory Course
- 14-18 Food Safety - Advanced (CIEH level 4)
- 14-18 HACCP - Advanced (level 4)
- 15-18 Principles of Baking
- 16-17 HACCP for Feed - Intermediate (Level 3)
- 16 Threat Assessment Critical Control Point (TACCP) - Foundation Level
- 17 Root Cause Analysis
- 21-25 FSSC 22000 Auditor/Lead Auditor Course
- 22-23 Internal auditing - principles and practices
- 25 Hygienic food processing: on paper and in practice
- 29 HACCP - foundation (level 2)
- 30-2 Oct Practical Microbiology - Foundation

A full list of 2015 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

Hygienic food processing seminar

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

Equipment suppliers may not always fully appreciate the operational challenges facing food manufacturers, such as quality management systems, HACCP, hygiene procedures and retailer requirements. Similarly, food manufacturers may not always realise the constraints faced by suppliers, e.g. cost pressures, operator safety concerns (which may conflict with food hygiene requirements) and materials of construction constraints. *Food production machinery: food safety requirements, challenges and applications* on 25 September will bridge the gap between the two, by establishing a common understanding of the issues faced by both sectors. This will be achieved by presentations and interactive discussions around three themes:

- Legislation, compliance and quality management systems
- Fundamentals of hygienic design and the need for clear specification of design
- Case studies of how to make it work in practice.



Reducing sugar and salt training courses

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www.campdenbri.co.uk/training/sodium-reduction

www.campdenbri.co.uk/training/sugar-reduction-in-foods

As part of our portfolio of courses relating to product development, we are running courses on sodium and sugar reduction on 6 and 7 October respectively. *Sodium reduction in foods* will cover the background to sodium reduction, including sources of sodium in the diet. The functions of sodium in different applications will be discussed, and the many approaches to sodium reduction, including ingredients and processing, will be explored. There will be an opportunity to sample low sodium products and sessions will look in detail at reducing sodium in baked goods.

Sugar reduction in foods will look at the background to sugar reduction, including reasons for the need to reduce sugar, government targets and the role that sugar plays in products. Approaches to reduce sugar in food via the incorporation of alternative ingredients will be covered, as will relevant legislation, including information on health and nutrition claims.

Visit Member Zone

www.campdenbri.co.uk/memberzone.php



to access privileged member information and services

Member Interest Groups - autumn dates for 2015

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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).

Agri-Food	10 September
Brewing and Fermented Alcoholic Beverages	17 September *
Cereals, Milling and Baking	7 October
Chilled and Frozen Food	24 September
Food and Drink Science	9 September
Food Service	6 October
Heat Preserved Foods	22 September
Manufacturing Technologies	29 September
Meat and Poultry	16 September
Microbiology	23 September
Packaging	1 October
Quality and Food Safety Management	15 September
Sensory and Consumer	30 September

* meeting to be held in London
All meetings will be held at the Chipping Campden site unless otherwise indicated

Welcome to new members

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

- Aujan Industries LLC - beverage manufacturer
- Azzurri Group - Italian food service restaurant chain
- BPI Films - shrink and laminated films for food packaging
- Brookfield Drinks Ltd - marketing of alcoholic and non alcoholic drinks
- Country Food Trust - creators of meat products for food banks
- Echo Partners - consultancy for food and beverage importers
- Gail's Artisan Bakeries - artisan bakery
- Giebels Meat Products - processor of meat products
- JBS Global Ltd - importer of beef/lamb/pork, canned corned beef and stewed steak
- JLM Global Foods Ltd - manufacturer of popped snacks
- Kimberley Clark Professional - provider of hygiene, safety and productivity solutions
- MTC Ltd - manufacturing technology centre
- NISA Retail Ltd - member-owned independent food retailers
- Nufit Foods Ltd - formulation company
- Nythe Farm Kitchen - suppliers of cooked meat and poultry products
- Organic Farm Foods - producer of organic fruit
- Sigma Aldrich Company - producers of laboratory materials
- The Healthy Food Development Ltd - specialists in the development of healthy ingredients
- Validair Monitoring Solutions - specialists in continuous monitoring and critical alarm systems

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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.





Ecotrophelia judges and contestants



Ecotrophelia winners

www.ecotrophelia-uk.org
#EcotropheliaUK

The UK heat of this Europe-wide competition was organised by Campden BRI in conjunction with the Institute of Food Science & Technology (IFST). The competition challenges students interested in a career in the food industry to design an eco-friendly, innovative food or beverage product with commercial potential. This year, a record eleven UK universities were represented in the final.

After listening to the team pitches and tasting the products, 'the dragons' awarded the gold prize to the Medina team on placement at PepsiCo for their Medina Bites: cocoa, coconut, raisin and seed bites, rolled in freeze-dried fruit and desiccated coconut enriched with algae protein.

The Medina team will compete against the gold-winning national teams from across Europe at the Universal Exhibition in Milan in October.



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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