

Newsletter

www.campdenbri.co.uk



A holistic approach to food and drink risk management

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New member-funded research will produce guidance showing the food and drink industries how risk management can be improved by evaluating the entirety of the production, manufacturing and distribution chain.

The food and drink industry from farm to consumer continues to face many challenges. The hazards and risks are not static and factors such as changes in legislation, products, processes and new knowledge all have an influence. Similarly food and drink safety management systems continue to evolve and adapt to meet the new challenges. These systems need to be efficient and effective in managing food and drink safety, and existing good practice has to incorporate new knowledge and thinking on the establishment, implementation and maintenance of safety systems. However, it is increasingly recognised that there should be a more holistic approach to food, drink and feed risk management, since the benefit of an integrated approach can be said to be greater than the sum of the components.

New approaches

This project will focus on elucidating and incorporating new approaches and practices and exemplifying how an integrated approach to food and drink risk management can be achieved. As well as new guidelines on the general principles and requirements of food safety plans and prerequisite programmes, existing HACCP guidance will also be updated.

Campden BRI Day

It's less than six weeks until Campden BRI Day 2014 on Wednesday 11 June. If you haven't attended before, please do consider coming along this year - you'll receive a warm welcome. It's a great day with opportunities to speak to our experts about our latest research, network with other members from across the industry and tour our process plant, bakeries and sensory suite.

One of the highlights of the day is the keynote speech, which this year will be delivered by Dr Mehmood Khan, Executive Vice President and Chief Scientific Officer of PepsiCo Global Research and Development. Dr Khan will discuss the profound changes and challenges occurring in the global food and beverage market place and explain how PepsiCo is transforming its portfolio to deliver on today's business and market priorities as well as the growth opportunities of tomorrow.

The day will feature over 40 interactive exhibits - providing an insight into our latest research to help your company grow and prosper. The day attracts around 500 food and drink industry leaders so do take advantage of our networking buffet lunch to make new connections and catch up with old contacts.

In addition, the winners of the UK heats of the food innovation student competition, Ecotrophelia 2014, will be announced, with the opportunity to meet the UK finalists, representing the next generation of the food and drink industry, and view their innovative concepts for new product development.

Register in advance on our website at www.campdenbri.co.uk/campdenbri-day.php.

I look forward to welcoming you.
Steven Walker

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Food and drink safety

www.campdenbri.co.uk/sectors/food-drink-safety.php



Package seal strength and integrity
Podcast by Lynneric Potter
www.campdenbri.co.uk/podcasts.php

Pasteurisation of dried ingredients video
The pasteurisation of dry ingredients requires specialised conditions, as wet systems are not appropriate.
www.campdenbri.co.uk/videos/pasteurisation-dried-ingredients.php

8th Dubai International Food Safety Conference
9-11 November 2014
www.foodsafetydubai.com

Personal and personnel hygiene in the food factory
Free white paper outlining the many issues relating to personal hygiene in food processing areas. To receive a copy send an e-mail to auto@campdenbri.co.uk with the subject line: **send hygiene**





Campden BRI out and about

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We were recently at the Gulfoods exhibition in Dubai and attended the Food Security Summit. We were able to hold a number of meetings during the event with UAE and GCC businesses and local authorities, progress conversations with existing partners and also continue conversations with UK businesses also attending the show.

We attended the Welsh Government reception and had meetings with UKTI from both the Trade and the Investment arms. We also attended the Awards dinner, where we were lucky enough to share in the good fortune of Genius, a Campden BRI member, who won awards for best new functional food and best newcomer brand. We will be back in the Gulf in November for the 8th Dubai International Food Safety Conference and Exhibition.



Precious research

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As part of our growing involvement in research related to diet and health, in such things as product development, we are participating in an EU FP7-funded health project. It is looking into the development of a preventive care system (PRECIOUS) that aims to monitor health indicators (including food intake) and encourage behavioural change through personalised feedback, and motivational techniques, such as the use of gamification (game playing scenarios) and motivational interview principles. Development of a food intake sensor will focus on the user requirements of such a tool, and education of the user to improve the nutritional profile of their diet.

More details on the project are available at www.thepreciousproject.eu

Metal packaging



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Food and drink, its processing and its packaging are increasingly viewed as an integrated whole, with consideration of them collectively as well as individually being essential in assuring consumer appeal, end product quality and safety. Not only must the package retain its integrity and have the correct physicochemical characteristics to do the job, it must also not affect the product by causing taints or loss of quality. Mike Edwards, Campden BRI microscopist, explains:

"Our specialist knowledge of metal packaging enables us to take a holistic approach to food and drink and the material that encloses it. For example, metal cans must be coated with the appropriate tin or lacquer layer; our specialised expertise in microscopy allows us to help with a number of problems including analysis of containers, and identifying the extent and cause of corrosion and delacquering. In particular, we can strip down and evaluate the seams from can ends – as this is one area where the hermetic integrity of the container could be compromised."

Avoid excess migration

Control of migration of tin and other materials from the container into the food is also very important. We can not only do the analysis for you, but also advise on how to avoid excess migration.



On the processing side, as well as pilot scale retorts to evaluate processing regimes, we can help with fill weights in cans, and leak tests can be used to detect perforations in the metal. If processing problems are encountered, they often manifest themselves in microbiological spoilage; we have a suite of microbiological tests that can help pinpoint whether there is an underprocessing or post-process contamination issue."



Ergot - a new threat from an old enemy

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In response to current requirements and pending future regulation we have developed new analytical methods for two mycotoxins.

It has been known for many years that plant based foods can be contaminated with fungal toxins (mycotoxins) which are produced by moulds/fungi during the growth of the plant or in storage. Many of these mycotoxins are extremely toxic to animals and humans and it is important for the food industry to ensure that foods do not contain hazardous (and illegal) amounts. Many different mycotoxins exist, and there is ever changing legislation, so food manufacturers must remain aware of developments and adjust their due diligence accordingly.

New threats

New threats have recently been identified. One is from an established hazard in the form of ergot contamination in cereals, notably from the toxic alkaloids produced by the fungus *Claviceps purpurea*. The other is from a group of toxins produced by *Alternaria* spp. Both are of considerable concern in relation to chronic human toxicity and both have analytical challenges for the food chemist.

The new methods are based on LC/MS/MS and have been validated according to ISO 17025. We are now able to offer both analyses through our contract services.

For *Alternaria* contact ian.slaiding@campdenbri.co.uk and for ergot nick.byrd@campdenbri.co.uk



Our wide ranging services are underpinned by extensive method development, validation and accreditation - giving you access to what you need

At your service - microbiological troubleshooting

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The management of microorganisms (such as bacteria, moulds, yeasts and viruses) throughout the food chain is a vital aspect of producing acceptable foodstuffs. As well as food products, consideration should also be given to ingredients, process intermediates and production premises.

We have considerable knowledge and expertise of advising and assisting clients with microbiological issues when things have 'gone wrong'. So when you have a problem and need some expert assistance, give us a call. We can be on site with you quickly, reviewing the problem, checking microbiological results, and walking the line to identify potential problems. The rapid response visit can be backed up with sampling and testing of products, environment and ingredients for those troublesome organisms, and we can genetically fingerprint and match isolates. Our incident reports are a useful aid in showing that you take food quality and safety seriously, and will help solve problems quickly and permanently.

We are always happy to assist and advise on microbiological issues that are causing concern, or that don't seem right, before they potentially escalate into a major issue. We can easily visit your premises to talk any concerns through if it's not possible or convenient to come to us.

Sometimes all you need is a fresh pair of [experienced] eyes to pick out points that would otherwise be missed.

Making samples for proficiency schemes

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We are involved in the running of several analytical proficiency schemes, in which test samples are sent to laboratories so that they can evaluate their ability to analyse it. We also have many years' experience in the manufacture of scheme reference samples. Drawing on industrial experience and using an extensive range of equipment in our process halls, we work closely with scheme providers to manufacture a range of reference test materials.

We can advise on suitable formulations, make bespoke products with spiked amounts of measurand (the analyte being measured) and evaluate the most suitable processing conditions to ensure stability of the reference material. Some test materials can withstand thermal processing, some require freezing, some are preserved by other means; the preservation of the test material is often dictated by the stability of the analyte being tested, e.g. sodium metabisulphite would be destroyed during thermal processing.

We have experience in the manufacture of a range of food and drink products incorporating measurands at very low levels, e.g. vitamins, to much higher levels.



Range of analyses for natural toxins and allergens

www.campdenbri.co.uk/services/toxins-allergens.php

Many foods naturally contain chemicals that are either toxic to a greater or lesser degree, or contain allergenic proteins. The range of potential problems is wide, but we can help you decide what these are and carry out analyses to see if a hazard exists in your products.

Practical application



Helping to put the flavour back in fireworks



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We recently assisted food experience designers Bompas and Parr in the risk assessment of the world's first ever multisensory firework display, which took place as part of the London 2014 New Year celebrations. Fruity flavours were matched to different coloured fireworks and among the sensory elements devised were Seville orange flavoured bubbles, edible banana-flavoured confetti and clouds of fruity mists.

Under the guidance of Anton Alldrick, our Special Projects Manager, a conceptual risk assessment was carried out to ensure that the proposed recipes for the sensory elements would cause no harm. This included using sophisticated microbiology modelling software to assess safety. Once the event was confirmed as safe in principle and in order to verify the risk assessment, audits were performed of the manufacturing processes of the companies that were producing elements to be used in the display. A review of all their production documentation verified that they were following good manufacturing processes. In addition, tests were carried out in our laboratories to microbiologically analyse the mists and confetti used. This ensured that the entire firework display was safe and risk-free for the enjoyment of the general public.

Our risk assessment methods can work on a very large scale, as demonstrated above, down to something much smaller.



June 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

- 3-4 Bakery technology conference: recent developments
- 3-6 Food safety - intermediate (level 3)
- 3-4 Factory inspections - technical issues
- 4 Nutrition and health claims
- 4 Brewhouse efficiency and beer recipe formulation workshop
- 10-11 HACCP intermediate course for wine makers
- 12-13 Thermal processing conference
- 17-18 Internal auditing - principles and practices
- 17 Shelf life evaluation of chilled foods
- 17-18 Food and drink labelling
- 18 MAP - an introduction
- 18 Improving your brewing (microbrewers)
- 18-19 Allergen control
- 18-19 HACCP - intermediate (workshop)
- 19 Threat Assessment Critical Control Point (TACCP)
- 23-27 FSSC Auditor/Lead Auditor training course (ISO 22000)
- 24 Continental meats seminar
- 30-4 Jul Food safety - advanced (level 4)

Early booking discount available

10% discount available on courses that are booked 2 calendar months in advance when paying by credit card on scheduled training courses (excludes conferences and seminars)

www.campdenbri.co.uk/training.php

Conferences and seminars

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Thermal processing conference

www.campdenbri.co.uk/thermal-processing-conference.php

To be held on **12-13 June 2014**, this conference features presentations from internationally renowned food industry experts who will look at the quality, safety and regulatory issues of producing commercial heat preserved foods. Interesting and informative, whether you work in the food, packaging, instrumentation or legislative area of heat processing, or have an academic interest in the science and technology.

Continental meats event

www.campdenbri.co.uk/continental-meats-seminar.php

Continental meats are quite different from traditional British meat products in terms of their manufacture and preservation. Our seminar on **24 June** provides an opportunity to gain an understanding of key processes and principles affecting the quality, safety and stability of many continental meats, as well as an appreciation of key ingredients and casings.

Food contact materials event

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

This seminar, on **1 July**, will focus on challenges associated with current legislation and how any future changes will affect industry. Specialist experts will advise on how you can ensure that you meet the requirements. It will also focus on:

- Adhesives, printing inks and coatings for food contact
- Machinery in contact with food
- Declarations of compliance
- How the paper and board industry can ensure compliance

Building safety in - advanced

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This two-day microbiology pilot course on **2-3 July** builds on the foundation level course and is designed for company microbiologists and technical managers. The key to building safety in is to understand what makes it safe from a microbiological point of view. To this end, ingredient quality, processing, intrinsic (e.g. water activity, pH) and extrinsic (e.g. temperature, gas-content of the headspace) properties of the food, packaging, and shelf life parameters need to be understood and formulated properly.

The latest news and information for our members



Visit Member Zone to access privileged member information and services

www.campdenbri.co.uk/memberzone.php

Attending Campden BRI Day on Wednesday 11 June 2014 is free

Visit us to network with your industry peers, see the latest scientific and technical developments through interactive exhibits and hear the 36th Annual Campden Lecture, to be delivered by Dr. Mehmood Khan of PepsiCo.

Outline programme

- 8.45 onwards Coffee and registration
- 9.00-16.00 Visitors are encouraged to view exhibits, discuss our work with staff, and network with each other
- 9.15 AGM of Campden BRI
- 10.00 Prizes and the 36th Annual Campden Lecture presented by **Dr. Mehmood Khan**, Executive Vice President and Chief Scientific Officer of PepsiCo Global Research and Development
- 12.45 onwards Networking buffet lunch
- 9.00-16.00 Exhibits, networking and discussions

To register for Campden BRI Day, please contact Annalie Brown +44(0)1386 842270 annalie.brown@campdenbri.co.uk or visit www.campdenbri.co.uk/campdenbri-day.php

While you're here

If you have a few spare moments when you visit our Chipping Campden site and would like to make the most of the location, there are 50 great ideas on our website:

www.campdenbri.co.uk/campdenbri/50-things-to-do-chipping-campden.php

Member input required on research project

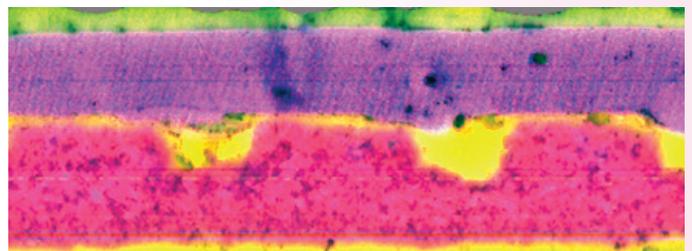
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On-line technologies for food process control is a new member-funded project to demonstrate new applications of on-line sensing technologies and to assess their benefits for food process control.

www.campdenbri.co.uk/research/food-process-control-technologies.php

The project has two main approaches, and for both we are asking members for input. As part of the first approach, the project will involve the publishing of a review of properties that can be measured online in food processes. This will involve a comparison of the types of sensor technologies available; examples include temperature measurement using thermocouples, resistance thermometers or infrared detectors, and measurement of moisture or fat content using NIR sensors. Member suggestions for additional or alternative technologies would be appreciated.

The second approach will be the evaluation of several new applications of on-line sensors. This could include new technologies ready for evaluation or new applications for established technologies. Initial trials will be conducted here, with subsequent trials at member sites. We are looking for suggestions of on-line measurement needs, approaches you would like us to evaluate, and sensors for evaluation, and the opportunity to conduct trials at member sites.





Welcome to new members

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

A B Produce - specialising in the preparation and packing of fresh chilled vegetables

Borough Council of Wellingborough – local authority

Easiyo Products Ltd - specialising in the blending of dry powders, flavours, colours and cultures

Innis & Gunn Brewing Company - independent brewing company

JCS Fish Ltd - salmon processor

KFC GIDA AS - producer of sun dried sultanas, apricots, figs and tomatoes

Pluswipes - manufacturer of impregnated wet wipes, liquids and gels

Snowbird Foods Ltd - manufacturer of cooked sausage and meatball products

Struik Foods BV - producer of soups, sauces and ready meals

Tendring Pacific - distributor and servicer of test equipment for MAP

Westminster City Council – local authority

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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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