

A new member-funded research project will identify, develop and document solutions to food hygiene risks that result from carrying out modifications at an existing food and drink manufacturing premises. It will provide up-to-date impartial guidance on changes to an existing processing plant, ensuring that hygiene considerations influencing food safety risks are known and correctly managed.

Building modifications and equipment rearrangements can be very invasive. They sometimes need to be carried out whilst other parts of the building continue to operate. Modifications can increase food safety risks and, if not properly managed or understood, will remain untackled until product failure. With continuous operations happening in the same area, the risks of carrying out these modifications have to be closely managed.

The project will look at the food safety related issues that can arise, such as incorrect drain directed flow, damaged flooring or inappropriate use of air systems. This will be done through practical trials under controlled conditions, and a case study will be developed at an existing factory site. Findings from the studies will be incorporated into a new guideline document and other activities and materials to help companies.

Upgrading plant hygienically

mariane.hodgkinson@campdenbri.co.uk
+44(0)1386 842272

Pilot scale production

Linking small scale development to full scale commercial production is a key part of product development. Pilot scale trials allow 'what if' scenarios to be explored, provide an opportunity to assess production implications, prevent interruptions to production, and can eliminate undue waste.

Over the last year, we have produced over 13,000 samples in our pilot plant of a wide range of products including meat, fish, carbonated drinks, juices, breakfast products, jams, sauces and tea. We processed over 5,000 cans, 5,500 bottles, 855 pouches and 420 plastic bottles. It is your toolbox for innovation.

You can tour our pilot plant facilities on Campden BRI Day or you can visit our online pilot plant www.campdenbri.co.uk/tours/pilot-plant.php

Steven Walker

Rapid beer analysis

gordon.jackson@campdenbri.co.uk +44(0)1737 824255

Do you suspect a taint in your beer? Do you need rapid confirmation of your suspicions? We can perform GC/MS or sulphur volatiles analysis and have an answer to you within 24-48 hours. Similarly, if you have problems in production, such as a suspected leak of coolant, we can usually provide an analysis within 24 hours. Rapid response is also often needed in ensuring compliance with legal limits or in-house specifications, for example mycotoxins such as ochratoxin A, aflatoxin and zearalenone. We conduct over 100 different beer-related analyses - if you need rapid turn-around (or even if you don't!), please get in touch.

Switch channel



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Research contract and new office in Korea

martin.hall@campdenbri.co.uk +44(0)1386 842014

We have been awarded a contract worth over £500,000 for a joint food research programme in South Korea. The three-year agreement also involves The Korea National Food Cluster (FOODPOLIS) and Dongguk University.

The contract, funded by the South Korean government, aims to enhance food safety, quality and product innovation. We will be working in three key areas: advanced analytical methods for non-targeted chemical screening, analytical methods for difficult to measure components, and the commercial exploitation of insects as a source of high quality proteins.

In support of this new initiative we have also opened an office within FOODPOLIS in order to encourage international collaboration among food manufacturers, researchers, universities and business support services in the North East Asia region.

Priming food partnerships

simon.penson@campdenbri.co.uk +44(0)1386 842280

We are involved in a new BBSRC-funded project led by Prof Emma Stevenson (Newcastle University) that will develop guidelines for protein products for healthy ageing that are cost effective with a high level of consumer acceptance. The project will take a unique multi-disciplinary approach to understand current consumer behaviours around protein intake and barriers/constraints to increasing protein intake in an ageing population. This information, together with existing empirical research evidence, will be used to inform industry on reformulation and new product development for the ageing consumer.

We will be leading the industrial partners' input to the project, which will focus on the development of design rules for higher-protein products, and formulation and production of an exemplar product for trials.



klaudyna.terlicka@campdenbri.co.uk +44(0)1737 824265

Maintaining an awareness of current food legislation, understanding its commercial implications and remaining alert to changes is increasingly challenging. There is no 'one size fits all' approach, although progress has been made to harmonize legislation and enforcement: many food-related matters are regulated at the level of the European Union, Eurasian Economic Union, Gulf Cooperation Council (GCC) or Codex Alimentarius. National disparities can still, however, be seen, and creation of one product that complies with each market is not possible. Klaudyna Terlicka, Head of regulatory Affairs, explains:

"Differences in legislation and interpretations, providing recommendations for improvement of 'grey areas' and guidelines for food business operators have been my main interest and passion for several years. It is a very exciting time for the Global Regulatory Team at Campden BRI with its ongoing expansion of labelling and regulatory support services. Our experienced team offers authoritative advice and helps clients stay compliant with food legislation in over 80 markets. We can cover most European countries, as well as several international markets, including Argentina, Australia, Brazil, Canada, Chile, China, GCC, Mexico, Russia, South Africa, USA and many more.

Our aim is to provide bespoke and flexible services with practical solutions. Please let us know if you would like to discuss our services in more detail, provide feedback and suggestions or just keep in touch."

New kit for emerging technologies

craig.leadley@campdenbri.co.uk +44(0)1386 842059

New and emerging technologies often require specialist equipment. With our industry connections we are able to acquire this equipment, allowing us to both evaluate the technologies and carry out developmental contract work for clients.

We have recently installed several new pieces of kit, covering thermal preservation, non-thermal preservation and packaging technologies. All have been installed as part of longer term research projects, but many will also be available for contract trials whilst on site.

“Dubble Bubble”

This is a fully automated packaging solution designed to protect delicate products. The technology (developed with Ulma) combines a pillow pack and a quad pack in one, to produce the bubble. The product is suspended in a ‘hammock’, sealed only at the pack ends and surrounded by a cushion of air or modified gasses. The product is held securely in the inner web in either a soft vacuum or inflated, safely away from damage. We are exploring this innovative system as a means of reducing pack damage and extending shelf-life.

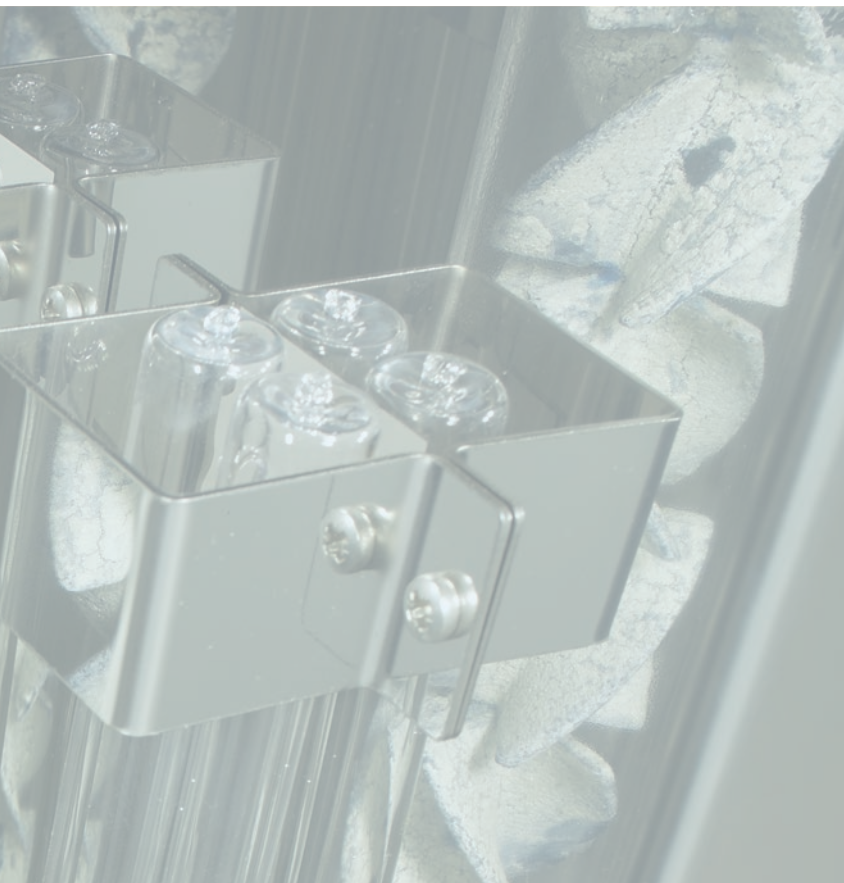
Microwave and ohmic heating

We have also recently installed an AMT continuous flow microwave heating unit. This rapid heating method is being used in a research project where we are looking at reducing energy use and enhancing product quality. On the same project, we have also installed a C-Tech continuous flow ohmic heating system for liquid pasteurisation.

Non-thermal pasteurisation

A new non-thermal pasteurisation system for pumpable products is being evaluated as part of a new research project. We will be looking at both process efficacy and hygienic design aspects of the technology.





Pulsed electric field processing

New equipment from Pulsemaster Solidus is helping us with a new feasibility study on using pulsed electric fields (low field strength) for improving product quality. We will be exploring its potential for brining and marinating meat products, as well its potential in brewing (improving cold hops), coffee extraction and vegetable processing (cutting and frying).

Continuous flow UV

Ipurtech's UV/titanium dioxide treatment system is being used in a project on scale up processing of industrial waste water to reduce microbial loading, BOD and COD. We are also assessing applications in water reuse, beverage processing and hygienic design. In particular, the baffle design on the equipment allows the treatment of turbid/cloudy liquids.

There is plenty to get excited about in the next few months, with a range of technologies at a range of commercial maturity. Please get in touch if you'd like to discuss any of the above or if you've got a new preservation technology you're trying to bring to market - we want to hear about it first please!

Preservation - naturally!

chris.smart@campdenbri.co.uk +44(0)1737 824228

The issue of sourcing natural preservatives has been high on the agenda for food and drink product developers for several years. Industry is under pressure to use 'clean label' preservatives as an alternative to traditional ones, such as sorbate, benzoate and sulphites. At the same time, many drinks manufacturers are looking to reduce thermal processing - to reduce energy costs, avoid flavour deterioration, help maintain heat labile nutrients, and vary packaging options, whilst maintaining shelf life (and thus preservation capacity). A new member-funded project will develop, from the literature, a knowledge matrix of natural preservatives with suggested product applications, presenting their effects on microbial stability, flavour, labile nutrient protection and shelf life - to help companies identify clean label options for use in new product development investigations. This will provide the groundwork for subsequent practical investigations of novel natural preservatives

Follow the progress of the project on the web page - www.campdenbri.co.uk/research/natural-preservative-systems.php - or get in touch if you'd like to chat about it.

Member zone

www.campdenbri.co.uk/memberzone.php

to access privileged member information and services

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Recently published

Chia seeds as ingredients

charlotte.holmes@campdenbri.co.uk +44(0)1386 842257

There is a huge potential for the use of chia seeds in selected food products, not only for their significant nutritional value but also for their potential technological functions. In a feasibility study with orange juice we found that chia seeds affect product viscosity and sensory characteristics. It showed how important pre-wetting is in improving processability and how temperature affects the rate of wetting out. Read the report ([Chia seeds - considerations for use - RD420](#)) on the project web page at www.campdenbri.co.uk/research/emerging-ingredients.php

UV-C for improving fresh produce quality

danny.bayliss@campdenbri.co.uk +44(0)1386 842130

The application of ultraviolet light (UV-C) systems has been steadily growing commercially for the surface decontamination of food products, packaging and equipment. UV-C not only impacts on microorganisms; it has been shown to modify metabolic pathways to improve the quality of selected fresh food products. UV-C has also been shown to penetrate some types of packaging. A feasibility study focused on understanding the types of packaging which allow the transmission of UV-C as well as the potential quality benefits for an example food product (sweet potato). Results are reported in [Exploring the feasibility of UV-C "In pack" applications and quality improvement of fresh produce](#) (RD421), which is available on the project web page at www.campdenbri.co.uk/new-technologies.php

Campden BRI Day

Wednesday 7 June 2017

Exhibits will focus on four themes

- Food and drink safety
- Product quality and innovation
- Nutrition and health
- Skills and knowledge

Highlights of the day

39th Annual Campden lecture

This year presented by Heather Hancock, FSA Chair



Heather Hancock has chaired the Food Standards Agency since April 2016, having joined the FSA Board as Deputy Chairman in September 2015. She had previously held senior positions at Deloitte with responsibility for innovation,

brand, communications and, later, talent and client relationships following an earlier career in government and non-governmental organisations.



Briefing sessions

We will be running three short briefing updates:

- 13.45 Imaging technology: what can it tell you about your product? *Martin Whitworth*
- 14.15 Global regulatory differences: will one label ever satisfy all markets? *Klaudyna Terlicka*
- 14.45 Metagenomics: do you really know the microbes in your food? *Greg Jones*

Tours of the pilot plant

A number of areas will be open for you to look at equipment and facilities. These include our:

- Pilot process plant: including drink technology, emerging processing technologies, thermal processing
- Bakery pilot plant - with facilities for the production of a range of baked goods

Ecotrophelia UK

The day also features the Ecotrophelia UK 2017 Food Innovation awards student competition.

Register

campdenbri.co.uk/campdenbri-day.php
 or contact Annalie Brown +44(0)1386 842270
annalie.brown@campdenbri.co.uk

Helping your business succeed

Campden BRI Day provides an opportunity to see the latest scientific and technical developments through interactive exhibits. You are encouraged to view exhibits, discuss our work with staff, and network with each other throughout the day. You will also be able to listen to the 39th Annual Campden Lecture this year presented by [Heather Hancock, FSA Chair](#).

Programme

- 09.00 Coffee and registration
- 09.15 AGM of Campden BRI
- 09.30 Tour of pilot plant
- 10.15 Lecture and Ecotrophelia UK 2017 award
- 11.30 Tour of pilot plant
- 12.45 Networking buffet lunch
- 13.30 Tour of pilot plant
- 13.45 Briefing sessions start
- 16.00 Close

For a flavour of the day see the video from 2016 at campdenbri.co.uk/campdenbri-day.php



June events

7	Campden BRI Day
13-14	HACCP - intermediate (level 3)
13-14	Supplier quality assurance - foundation
15	Sensory evaluation - an introduction
20-21	Food and drink labelling
20-22	Food safety - intermediate (level 3)
20-23	Principles of baking
21-22	HACCP - validation and verification
22	Setting shelf life: how to do it better
27	USA food and drink labelling course

A full list of 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

www.campdenbri.co.uk/training.php

Welcome to new members

We are delighted to welcome the following new members:

- AGT Poortman - traders in pulses, beans and ancient grains
- Bionaturals International LLC - producer of fermentation based food protection ingredients
- Dunnet Bay Distillers Ltd - gin and vodka distilling
- EBS Automation Ltd - manufacturer of automation machinery
- GA Petfood Partners - pet food manufacturer
- GNT Group BV - manufacturer of food colouring
- IPN (Inspired Pet Nutrition) - manufacturer of dry/extruded pet food
- Kimm & Miller (UK) Ltd - manufacturer of seasonal food gifting items
- Mediterranean Foods (London) Ltd - manufacturer of snacks, dips and sandwich fillings
- Naturex - France - specialists in natural ingredients
- Sapphire Foods Ltd - sourcing chilled and frozen meat and poultry
- Slimming World - weight management organisation
- Stillorgan Trading Post t/a Swift Fine Foods - chilled and frozen ready meals manufacturer

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.

Seminars

Rapid and conventional microbiological methods 8 June

www.campdenbri.co.uk/rapid-conventional-micro-methods.php

Emerging ingredients 15 June

www.campdenbri.co.uk/emerging-ingredients.php

Allergens: challenges facing the food industry 27 June

www.campdenbri.co.uk/allergens-industry-challenges.php

Campden BRI (Chipping Campden site)
 Station Road, Chipping Campden,
 Gloucestershire, GL55 6LD, UK

+44(0)1386 842000 Fax: +44(0)1386 842100

Campden BRI (Nutfield site)
 Centenary Hall, Coopers Hill Road,
 Nutfield, Surrey, RH1 4HY, UK

+44(0)1737 822272 Fax: +44(0)1737 822747

For other sites, see

www.campdenbri.co.uk/campdenbri/contact.php

information@campdenbri.co.uk
www.campdenbri.co.uk