

Newsletter

www.campdenbri.co.uk



Developing foods that make you fuller for longer

sarah.chapman@campdenbri.co.uk +44(0)1386 842212

In new member-funded research we will be looking at ways in which food structure can be manipulated in energy-reduced foods to enhance satiety. It will help the industry to produce food products that assist in weight management, by exploring the manipulation of food structure to modify consumer perceptions of, and satiety responses to, energy reduced products. Sarah Chapman explains how this can contribute to industry's aims to tackling weight management issues.

"Obesity, and its associated metabolic complications, is an ongoing public health issue. It is accepted that there is no single solution to lowering obesity rates; however, the food industry has a part to play in providing food choices that assist in weight management. The Department of Health recognises this role, and this is reflected in the 'Calorie Reduction' pledge as part of the Public Health Responsibility Deal.

This pledge currently has 37 industry signatories who have committed to take action. Suggested actions include use of satiety enhancers, development of lower calorie options and reformulation to decrease energy density. We will also be investigating the enhancement of protein content to enhance satiety."

Visit the project website at
www.campdenbri.co.uk/food-structure

Your partner for
nutrition, health and wellbeing

April 2015

Innovation for healthy business

The food and drink industry continues to be dynamic and challenging. With the increasing pressure from the government and consumers to reduce the fat, sugar and salt content of food, the wider area of nutrition, health and wellbeing has become high on the list of priorities for many food manufacturers and retailers.

Reformulating existing products without affecting consumer perceptions of quality, taste and appearance is complex and there is no simple way to reduce the fat, sugar and salt content of food while maintaining texture, flavour and microbial stability.

In response to feedback from you, our members, about the growing need to focus on this area, we created a new nutrition, health and wellbeing group last year. With a cross-disciplinary team of experts, over 3,500m² of pilot plant facilities and a product development kitchen, we can help you through all the stages of NPD and reformulation.

Our expertise is exemplified by our role in leading the Food & Health Innovation Service (FHIS), which has helped over 430 Scottish food and drink companies invest in R&D and develop new products for the health, nutrition and wellbeing market. Over 20 products are now in the market place as a direct result of FHIS and a further 20 are in the pipeline.

To find out more about how we can help you tackle the challenges of reformulation and developing new healthier products please email NHW@campdenbri.co.uk

Steven Walker, Director General

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Latest on the website

www.campdenbri.co.uk

Product and ingredient development trials:
overcoming challenges in scaling-up the process

Blog by Simon Penson

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

FHIS - stimulating product innovation in Scotland

Case study by Philip Richardson

www.campdenbri.co.uk/fhis

Sous Vide

Video by Greg Jones

www.campdenbri.co.uk/videos/sous-vide.php

Campden BRI and Cotswolds Distillery create winning blend

Case study by Geoff Taylor

www.campdenbri.co.uk/case/winning-blend.php



IFT partner for Certified Food Scientist training

Food science and technology professionals must be up to date on the latest developments in food science to address global food and consumer needs. To help them achieve this, we have partnered with the US Institute of Food Technologists (IFT) to bring the internationally recognised Certified Food Scientist (CFS) Preparatory Course to the UK and Europe for the first time. The CFS programme is an internationally recognised certification for food professionals. The course will help participants to prepare for the CFS exam, and provide a refresher of their applied scientific knowledge via a series of lectures from expert instructors and practical tests. The first course takes place on 25-26 June. See www.campdenbri.co.uk/cfs-course.php for further details.



Brewing on the podium

chris.rice@campdenbri.co.uk +44(0)1737 822298

caroline.walker@campdenbri.co.uk +44(0)1737 822229

We will be well represented at the 35th European Brewery Congress on 27 May in Porto.

Dr Chris Rice will give a presentation entitled: Understanding haze formation in novel drink matrices. Chris will discuss how colloidal stability in novel alcoholic products is an important quality-control stage to ensure that the beverage meets customer expectations. He will present the results of research into haze in three types of novel beverage. The work aims to establish a correlation between the chemical make-up of the products and their susceptibility to haze formation.

Our Professor Caroline Walker, along with Dr Carsten Zufall of Cerveceria Polar, Venezuela will present The Crystal Ball – Hot Topics for the Brewing Sector. They will summarise the results of a hot topics debate held with the members of the EBC Brewing Science Group last year and look at how these may have long, medium and short term impacts on the industry.



Stimulating product innovation

philip.richardson@campdenbri.co.uk +44(0)1386 842036

A consortium led by Campden BRI has had a major impact on 'healthy' food and drink product development in Scotland. Philip Richardson explains:

"The Food & Health Innovation Service (FHIS), financed by Scottish Enterprise and Highlands and Islands Enterprise, was established to directly support Scottish food and drink companies seeking to exploit the burgeoning market for healthy food and drink products."

Through FHIS we have helped over 430 different Scottish companies across the food and drink supply chain to reformulate existing products for health, including helping them to reduce fat, sugar and salt, exploit naturally healthy food and drink products, and develop leading edge functional food and drink products. Over 20 products are now in the market place as a direct result of FHIS and a further 20 are in the pipeline.

Alongside the programme of one-to-one support for companies, we ran a series of half day workshops focusing on technology aspects of new product development, including sensory science, HACCP, packaging and gluten free, which have attracted 800 delegates over the four years to date.

We have also contributed towards a series of materials on the FHIS website to help companies explore their NPD options for nutrition, diet and health, including 10 NPD insights, 22 case studies, 280 technical papers, 13 videos and 23 newsletters."

The consortium includes Scottish Agricultural Organisation Society (SAOS), Interface and the Rowett Institute of Nutrition and Health.

For more information about FHIS and to view the full range of case studies and videos visit www.foodhealthinnovation.com.

Packaging that says health

sarah.thomas@campdenbri.co.uk +44(0)1386 842254

New member-funded research will investigate how packaging design can be effectively utilised to communicate product health benefits and enhance consumers' healthy food experience and enjoyment.

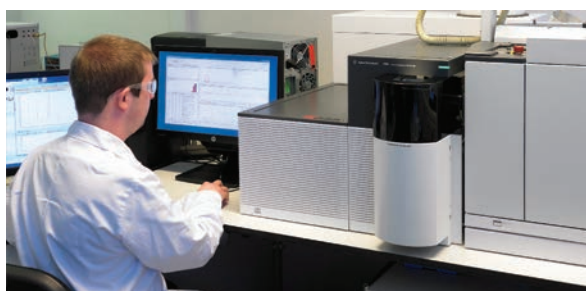
Our previous research has revealed associations between packaging design elements (e.g. colour, graphics and shape) and expected product sensory characteristics (taste and flavour), and demonstrated the impact of packaging designs on consumers' liking and perceptions of product attributes. In this project, we will explore how consumers associate a number of design elements, e.g. colour, shape, images, with the perceived 'healthiness' of the product. Outcomes from the research will provide general guidance on various packaging design elements and the likelihood of consumers perceiving them as being healthy.

Sensitive flavour analysis

rob.levermore@campdenbri.co.uk +44(0)1386 842264

We are embarking on a range of projects involving food flavour, using a new instrument for analysis of flavour volatiles. It can be used in product reformulation, benchmarking, and cost reduction projects.

The instrument is now being extended to a range of flavour projects in foods, including coffee, hops, spices, fruit juices and olive oil. The advantage of the new instrument is that it enables us to detect a wider range of compounds at lower levels. This enables us to look for unknown compounds, at low levels, and identify them using accurate mass determinations. Semi-volatile compounds using a thermal desorption unit can also be detected. Applications using this instrument include investigations of quality, shelf-life, and authenticity. As part of this service we also offer advanced interpretation of data including principal components analysis.



Personalised nutrition for consumers

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



Healthier lifestyles are associated with the reduced risk of diseases

such as type 2 diabetes and cardiovascular diseases. However, adopting healthier behaviours is a challenge. Advances in technology have made it easier for individuals to monitor lifestyle attributes such as diet and physical activity (e.g. through smart phone applications and wearable technology); however, one of the main challenges is motivating people to make lifestyle changes before risk factors develop into life threatening and expensive diseases.

PRECIOUS, an EU project in which we are a partner, is developing a system that can integrate all the factors that affect a consumer's health and investigating how motivational techniques can be used to encourage a consumer to further personalise their lifestyle to make healthier choices.

There are different degrees of personalised nutrition, from a targeted product range for a sub-section of the population to the use of nutrigenomics. Whilst nutrigenomics results in accurate nutritional guidance, the practicality of implementing this on a mass scale is currently unfeasible; therefore alternative approaches to providing personalised nutrition need to be found, to complement industry product development initiatives.

One approach that is popular with consumers is the use of technology. This allows an individual to monitor their food intake and personalise it to suit their needs. As the use of technology is becoming increasingly popular, manufacturers need to not only look at their product development activities, but also how they can use technology to further tap into this consumer approach to managing health.

Quick reference food law

www.campdenbri.co.uk/food-law/food-law-notes.php

Food Law Notes provides a web-based, inexpensive, fast and reliable way of finding readily-understandable information about the detailed UK and European legislation that controls food and drink production and marketing. Written by our expert and highly-experienced Food Law Advisers, Food Law Notes will:

- Help you understand and comply with legal requirements
- Provide guidance on how to interpret complex controls
- Satisfy the BRC Technical Standard requirement for access to relevant legislation
- Allow searching for specific topics or terms

Offered on an annual subscription basis, Food Law Notes is the ideal first port of call for legislation queries.

Video insights into processing technologies

Following on from our recent processing technology feature, we have uploaded a series of video clips onto our website, covering different aspects of innovative processing techniques and technologies. From coffee roasting and friction testing to cold plasma and continuous UV treatment, these provide insight into a range of technologies that could be of value to you. These complement previous clips on other aspects of food and drink technology – and more are on their way. Take a look at www.campdenbri.co.uk/videos.php



Log your CPD – easily!

james.allen@campdenbri.co.uk +44(0)1386 842065

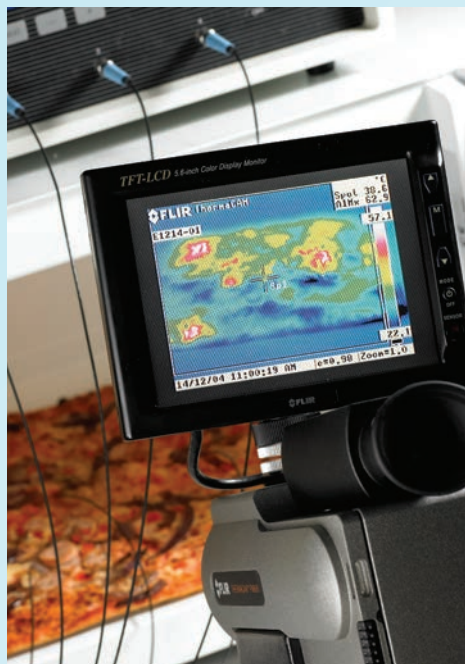


Many organisations run training courses that you can log as part of your Continuous Professional Development (CPD) – but CPD is much more than this, and we can provide other facets that standard training organisations miss out on. James Allen explains:

“Every delegate who books a place on a Campden BRI course, conference or seminar receives a free two year subscription to MyCPD - an online CPD management system developed by the Institute of Food Science and Technology. MyCPD provides an online facility to maintain details of your personal development plan, your planned development activities, and records of your completed development, whether this is a formal training course or more informal, self-directed learning. This helps ensure that you keep up-to-date with your record keeping, alerting you when you need to update your records following a learning activity.

And we provide a wide range of experiences to enhance your professional development. As well as running courses covering the full spectrum of food and drink science and technology, many structured from 'starter' level through to 'advanced' level, we can help you broaden your horizons by attendance at our Member Interest Groups. Here you can liaise with peer groups and learn about the latest development in your particular field.

At the corporate level, we work with businesses to provide tailored, on-site training designed to meet the specific needs of staff. In essence we help companies come up with a training plan. And we can take it a stage further, to provide a Training Academy – a suite of training courses which together fulfil the overall needs of employees.”



Training events

May 2015

- 12 HACCP for craft brewers
- 12-14 Brewing – an introduction
- 12-13 Understanding microbiology - foundation
- 13-14 Snacks technology - recent developments in cereal based snacks
- 14 Root cause analysis
- 18-22 HACCP - advanced (level 4)
- 19-21 Cake innovation
- 19-21 Thermal processing validation
- 20-21 Internal auditing – principles and practices
- 20 Packaging technology for non packaging technologists
- 21 New product development
- 22 BRC Standard Issue 7 Briefing Sessions

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

Introductory brewing course

www.campdenbri.co.uk/training/introduction-brewing

This intensive short course – running on 12-14 May - will provide those new to the brewing industry with a basic understanding of the brewing process. It is suitable for employees at all levels who need to have a basic technical understanding of the malting and brewing process. On the optional third day attendees can have hands-on training in either the pilot brewery or the maltings at our Nutfield site.

Food colour and appearance - seminar

martin.whitworth@campdenbri.co.uk +44(0)1386 842139
www.campdenbri.co.uk/food-colour-seminar.php

The colour and appearance of foods are an important aspect of their consumer appeal. Achieving a successful product appearance requires an understanding of consumer preferences, control of colour during product manufacture, and reliable methods for specification and measurement of raw materials and products.

Our seminar on 1 May will focus on factors affecting the colour and appearance of food products, how to control them and how to assess and specify them. Key areas to be covered include:

- Sensory and consumer aspects of food colour and appearance
- Colour formation in food manufacture
- Instrumental colour measurement and sorting
- Specifications for colour and appearance
- Food colouring agents and regulations



www.campdenbri.co.uk/training.php

Visit Member Zone

www.campdenbri.co.uk/memberzone.php

to access privileged member information and services

Welcome to new members

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

Best Foods Ltd - producer of frozen fruit and vegetables and meat and poultry

British Measurement & Testing Association - trade association

C Gerhardt UK Ltd - distributor of laboratory equipment for the food and drink industry

Dojima Sake Brewery UK - sake producer based in London

GEA Refrigeration UK - supplier of customised total solutions of industrial cooling and refrigeration systems

Heaven Made Foods of Holt Ltd - chilled desserts manufacturer

Intoxyque Limited - condiment manufacturer

IPS (Integrated Packing Services Ltd) - co-packer with some primary and secondary wrapping

Snowflake Gelato Group Ltd - gelato manufacturer and retailer

The Spice Tailor Ltd - manufacturer of chutneys and sauces

Tony Amaro Bakeries - bakery

Veolia Water Technologies UK - specialist in technical solutions and design for build projects for water and wastewater treatment

Walsh Mushrooms - producer and packer of mushrooms

Wessanen UK - manufacturer of tea, rice cakes and spreads

Western Brand Group Ltd - producer of chilled and frozen chicken products

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.

Benefit of membership Easy access to experts

For short enquiries (up to 20 minutes) you can call our experts free of charge. Longer enquiries can be paid for by using your Member Service Account (MSA)



New research reports

[Water from alternative sources](#) (R&D Report 384)
(members only)

The use of alternative sources of water has the potential to reduce the use of supplied potable water and to complement water reuse and recovery systems within food businesses. One issue connected to this is that the risks associated with using such water need to be assessed; so far, there is little guidance in this area. This report discusses suitable means by which alternative sources of water can be safely used in the food industry.

[Measuring oven exhaust gases during bread baking](#)
(R&D Report 385)

By balancing the inlet and outlet gas flows in a bakery oven it is possible to improve oven combustion and save energy. Energy savings of 4.7% were estimated through improved control of flue gases by linking this to the gas burner fire rate. Payback periods varied from 1 to 5 years depending on the burner and controller technology fitted to an oven.

[Surface decontamination by hot filling and post filling processes](#)
(R&D Report 386)

Most hot fill surface processes are thought to be excessive and it was the intention of this project to quantify by how much. This may enable companies to reduce the severity of the applied time-temperature regime or eliminate (or minimise) additional process steps such as post-filling pasteurisation tunnels.

For a free electronic copy of these reports, send an e-mail to auto@campdenbri.co.uk with the subject line: **send RDxxx** where xxx is the number of the report



Campden BRI Day – 3 June

annalie.brown@campdenbri.co.uk +44(0)1386 842270
www.campdenbri.co.uk/campdenbri-day.php

Campden BRI Day will be on Wednesday 3 June. The theme is 'Driving innovation', based on the 'Innovation needs' document that we published recently (see www.campdenbri.co.uk/industry-needs.php), and will feature:

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

The Annual Lecture will be presented by Charles Wilson, Chief Executive of Booker.

And if you want expert advice, our specialist staff will be available for free short consultations.

To register, visit:
www.campdenbri.co.uk/campdenbri-day.php

Network, catch-up, learn,
share.... and all in great
company

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

Campden BRI

Station Road, Chipping Campden,
Gloucestershire, GL55 6LD, UK.
+44(0)1386 842000 Fax: +44(0)1386 842100
information@campdenbri.co.uk

Nutfield site, Campden BRI,
Centenary Hall, Coopers Hill Road,
Nutfield, Surrey, RH1 4HY, UK
+44(0)1737 822272 Fax: +44(0)1737 822747
information@campdenbri.co.uk