

Newsletter

www.campdenbri.co.uk



Small scale test baking

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We have developed a method for baking and assessing small scale loaves of bread. This is a valuable addition to the test baking methods because it allows the functionality of flour and other ingredients to be evaluated at an early stage in their development. For example, in a wheat breeding programme or ingredients development project, where only small quantities of grain or the ingredient are available, those that are unlikely to be suitable can be quickly identified and eliminated.

AACCI standard method

The method is adapted from an AACCI* standard method (AACC 10-10.03) so that it meets the needs of the European bread sector. Only 100g of wheat is required to produce flour for the 35g loaves (see photo). Results show that differences in bread making suitability can be identified using volume, C-Cell and a Baker's score.

This new test will be a valuable complement to our full-scale test baking methods, because it is designed to be applied at an earlier stage. It can save considerable cost in screening out unsuitable wheat lines and ingredients such as enzymes that only are available in small quantities.

* American Association of Cereal Chemists International



Your partner for raw materials
and product quality

October 2014

Quality counts

Good quality food and drink products start with good quality raw materials and ingredients. Issues such as weather, variety or breed, agronomic practices, storage and process conditions can each lead to variation in the quality of raw materials and ingredients, and hence the quality of the finished product. Understanding and setting ingredient specifications and knowing how raw materials can be modified are essential to improving product quality. This becomes even more complex when there is also a requirement to reduce costs.

Superimposed on these 'constraints' are the intentional changes - such as product reformulation, product innovation, shelf-life extension, innovations in processing technologies and new packaging opportunities. This can all lead to changes in the quality of the finished product.

Whether you are developing a new product, responding to variation in raw materials and ingredients, or reformulating to create new variations, it's crucial to match raw materials and ingredients to final product quality.

Over the next three months, we will be focusing on product quality and showing how understanding the chemical and physical characteristics of raw materials can help you manage quality-related issues. If you think we can help, please don't hesitate to contact us at information@campdenbri.co.uk

Steven Walker
Director General

Highlights

www.campdenbri.co.uk



Preparing a due diligence analysis plan for a brewery

Blog by Gordon Jackson

www.campdenbri.co.uk/blog/brewing-due-diligence.php

Food reheating instructions - a key element in the delivery of safe, high quality foods

White paper by Greg Hooper outlining the stages that need to be considered. To receive a copy send an e-mail to auto@campdenbri.co.uk with the subject line: **reheating**

Exporting to the UK

Podcast - Steve Spice and Julian South discuss some of the issues

www.campdenbri.co.uk/podcasts/exporting-to-the-uk.php

Member Interest Groups (MIGs)

Podcast by Richard Powell on what MIGS can do for you

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

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Cofresco Forum Round Table

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We will be hosting the ninth Cofresco Forum Round Table, entitled *Food Protection and Convenience - Trends in Household Packaging*, on 27 November. The Forum was founded by Cofresco Frischhalteprodukte GmbH & Co. KG in 2001, with the aim of promoting research in the field of household packaging.

As well as providing the conference facilities to Cofresco, we will be contributing four practical sessions using our facilities and expertise covering [Eye Tracking](#), [Re-heating Instructions](#), [Packaging Testing](#) and [Inclusive Design](#), as well as an expert presentation on issues with allergens from Helen Brown.



Post graduate studentship on salad safety

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Dr Primrose Freestone of the Department of Infection, Immunity & Inflammation at the University of Leicester will be supervising a project in conjunction with our Microbiology Department on improving the safety of salads. It will lead to a better understanding of the interaction between food-borne pathogens and chemicals released from salad produce, and the resident flora on the plant's surface. The student will be able to evaluate their model findings using industrial-scale salad processing and washing systems here at Campden BRI. The project is funded by the BBSRC as a CASE studentship.

Developing foods for weight management

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Reduction or removal of sugar and fat are key routes in the development of reduced energy products; however, when reformulating it is important to consider the technical functions. By simply removing these ingredients significant changes may

occur, including loss of bulk and changes in mouth feel, flavour, texture, aeration and colour. There may also be impacts on shelf life and production methods; for example, if sugar is providing a preservative effect changes may be required to make the reformulated product safe.

Among the replacement options for sugar are high-potency sweeteners such as aspartame and acesulfame, and bulk ingredients such as inulin, fructo-oligosaccharides and polyols. As an alternative, several studies have investigated the effect of high and low concentration pulses of sugar to boost overall flavour perception whilst reducing the overall level. After initial manufacture, results appear positive; however, there are concerns that migration may occur over time, neutralising the effect.

Fat mimetics are ingredients with distinctly different structures to triglycerides, and are used to mimic some of the functional and sensorial properties of fat, for example mouthfeel, appearance and viscosity, while providing fewer calories. We have had significant success with using alginates for reducing fat in bread and cakes.

Reducing portion size is another alternative option to changing formulation. This can be achieved by reducing total pack size or increasing the recommended number of portions. A potential problem with this approach is that consumers may ignore serving size suggestions, or consume multiple portions.

Enhancing satiety may also assist in reducing overall energy intake. Protein and fibre have been studied with respect to their ability to increase satiety. Similarly the manipulation of food texture and structure could also be used to enhance satiety responses.

Spreading the word on TACCP

www.brcfoodsafetyeurope.com/programme.aspx

With food fraud and other external threats to the food supply chain in the news recently, it is timely that Richard Leathers will be presenting *TACCP - Threat Assessment and Critical Control Point* - at the BRC Global Standards Food Safety Conference on 21-22 October.

Hygienic design for the fresh food industry

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Our involvement in the EU SUSCLEAN project aims to contribute to the development and implementation of a new generation of environment-friendly equipment sanitation and food product decontamination technologies, to ensure the safety of minimally processed vegetables. As part of the dissemination of the information, TOP bv will be offering expert training on hygienic design in Wageningen, the Netherlands on 22 October. The following day we will be participating in the first International Seminar on Hygienic Design, in the Papendal Olympic Sports Center in Arnhem, the Netherlands. Delegates can attend either or both events.



Lab Innovations 2014

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Once again we are involved in events at the Lab Innovations exhibition, on 5-6 November at the NEC, Birmingham. To complement our parallel seminars on *Food Fraud* and *E. coli* STECs, we will be hosting a programme of presentations as part of the exhibition itself, which will address microbiological and analytical topics, fitting in with the event's focus on the laboratory industry.

Join us at Lab Innovations to find out more and experience these fascinating seminars for yourself.

Label checks - better safe than sorry

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Much of the UK's food industry's focus since the EU's Food Information to Consumers Regulation (EU FIC) was published has rightly been concentrated on revising labels and getting them all changed in readiness for later this year. What has not been so widely discussed is the possible consequence of getting those labels wrong. This is understandable, perhaps, as this was only disclosed fairly recently in the domestic Food Information Regulations (FIR). The FIR contain a largely unknown process in food labelling enforcement of issuing improvement notices where there are reasonable grounds for an enforcement officer to believe that a food business operator (FBO) has failed to comply with the provisions of a piece of labelling law, in this case the EU FIC. There are rights of appeal, but it is an offence if the FBO fails to comply with an improvement notice served on them. Naturally, it is far better not to find yourself in that situation to begin with by getting your labels compliant; our regulatory advisors, who are expert in interpreting the FIC, are on hand to check them.



International hand washing day

Each year, 15 October is designated International Handwashing Day. This is highly relevant to the food industry, as hands are one of the major sources and routes for cross-contamination. Reducing cross-contamination is key in the production of microbiologically safer, higher quality food. If you haven't had a chance yet to see our video on hand washing*, visit www.campdenbri.co.uk/videos/handwashing-technique.php. And there is also our 'Hand hygiene: guidelines for best practice' Guideline 62 <http://bit.ly/hand-washing-guide>

* This is available for companies to use for in-house training; contact paul.thompson@campdenbri.co.uk

Featured kit



Friction in the packaging lab!

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New equipment in our laboratories will help food manufacturers evaluate the friction characteristics of their food and drink packaging, which are highly relevant to package use and handling.

Coefficient of Friction (CoF), or *slip resistance*, is a significant issue in the world of packaging and is an important property of all materials which run on high speed printing and packaging lines. CoF is routinely specified in materials such as cartonboard containers and plastic films. Understanding and controlling a packaging material's CoF gives processors and packers the ability to optimise performance and avoid problems in forming, filling, transporting, and even storing of packages.

Cartonboard containers which exhibit a high CoF will tend to resist sliding in unit loads, while low coefficients may result in potential problems, with packages slipping from the load. For plastic films, low CoF values may be conducive to fast filling line speeds, while high coefficients may be the cause of abrasion, scuffing and jamming of the film on the line.

Power ultrasound - versatile and powerful

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Power ultrasound can be used to modify the properties of liquids in a number of ways, through viscosity reduction, homogenisation and emulsification - allowing manufacturers to develop products with different characteristics, or facilitate processing. It acts by temporarily or permanently disrupting molecular structure, depending on the severity of the treatment.

Our continuous pilot scale power ultrasound system is now operational for client use. It has a capacity of 20L minimum for continuous use, but a batch capacity of 600mL is still available for laboratory-scale experiments.

A number of system parameters can be varied:

- Temperature of the product (up to 85°C)
- Sonotrode type (radial or cascade)
- Amplitude of the ultrasound treatment (20 to 100%)
- Residence time of the product



November training events

A full list of 2014/15 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

- 3-7 HACCP - advanced (level 4)
- 4 Packaging technology for non packaging technologists
- 5 Food fraud: advances in combating food and beverage crime
- 5 Threat assessment critical control point (TACCP)
- 6 STEC and the enterics
- 8 Dubai food safety conference
 - Internal auditing session
 - Risk based food safety management
 - Shelf life: setting realistic shelf lives
- 10-11 HACCP - intermediate (level 3)
- 11 New product development
- 11-13 Thermal processing validation
- 12-13 Internal auditing - principles and practices
- 14 Thermal processing - quality optimisation
- 17-20 Safe production of heat preserved foods - the essentials (including principles of canning)
- 18-20 Biscuit technology
- 18 Sensory evaluation - an introduction
- 19-20 Food and drink labelling
- 24-28 FSSC 22000 Auditor/Lead Auditor course
- 25 HACCP - foundation (level 2)
- 26-27 Allergen control
- 26-27 Aseptic processing

www.campdenbri.co.uk/training.php

On site pilot plants and laboratories allow for practical training

Food labelling seminar - FIC is here!

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The new EU Regulation on the Provision of Food Information to Consumers is here. But there are still questions that need answering, such as:

- What does compliance look like in different sectors?
- What will the enforcement position be once the FIC Regulation applies?
- What is the latest situation with implementing steps and national provisions?

The answers to these questions, and many more, will be explored at our annual Food Labelling Seminar on 2 December. The key issues to be addressed in 3 sessions at the seminar are:

- **Enforcement** - nutrition and health claims in advertising
- **Implementing steps and national provisions** - the current situation with trans fats, country of origin and alcohol
- **Compliance** - provision of information to consumers and compliance in retail and catering

Each delegate will receive a free two-week trial of our on-line Food Law Notes.

Water activity seminar

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www.campdenbri.co.uk/water-activity-seminar.php

Some microorganisms, including pathogens such as *Salmonella* species, can survive for long periods in low water activity (A_w) foods such as flavourings, nuts and chocolate. On 26 November we are holding a seminar to look at the importance of water activity to micro-organisms and therefore food microbiologists. Different methods of assessing the available water in foodstuffs will be described and discussed, alongside how microorganisms are able to cope within challenging environments. In particular, the seminar will address:

- Validation and optimisation of low A_w foods
- The factory environment
- Water activity and microbial growth
- Information on testing methods and equipment available

Visit Member Zone

www.campdenbri.co.uk/memberzone.php



to access privileged member information and services

Latest research - cold atmospheric plasma

A series of trials have been carried out to examine the feasibility of using a cold atmospheric plasma system as a decontamination tool for food contact surfaces and food products. The focus of the work was on stainless steel, conveyor belts and strawberries. Initial findings suggest that, if conditions are optimised, a three-day extension of shelf life of strawberries could be obtained.

Full results are presented in *RD377 Cold atmospheric plasma: a feasibility study*. To obtain a copy, send an e-mail to auto@campdenbri.co.uk with the subject line: send RD377



DONWORTH CAPITAL becomes 100th new member for 2014

Donworth Capital was founded in Ireland in 2012 by two senior food and service industry professionals, John Casey and Peter Strange, with the aim of raising finance to buy businesses with strong growth potential in the food and service sectors. In 2013, Donworth acquired Irish food producers Galmere and Taravale, who make high quality private label soups, salads, pestos, hummus and deli fillers for Irish and multinational retailers based in Ireland.

Peter Strange comments: *"Research into industry developments and food production best practice is critical to our growth strategy, where export development is a key objective, and we are delighted to have joined Campden BRI to facilitate this."*

www.donworthcapital.com



Voting underway

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All full member companies can help to steer our member subscription-funded research programme. If you haven't already done so, don't miss out on the opportunity to vote for the research you most want!

www.campdenbri.co.uk

As part of the continued improvement of our website, members can log on using an individual username and password based on their company email address.

To find out more about the benefits, and to set up your password, visit: www.campdenbri.co.uk/register.php



Welcome to new members

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

Brightwater Diagnostics Ltd - developer of an on-site testing system for agricultural, horticultural and environmental waters

Donworth Investments Ltd - finance company

Exosect Ltd - developer of safe, sustainable bioconventional pest and control solutions

Food Utopia Ltd - former Avana Bakeries and Solway Foods operations

Fusion Ingredients - supplier of culinary herbs and blends

Harvest Foods Egypt - producer of fava beans, chick peas, stuffed vine leaves and pastes

Hunter Food Services - consultancy providing support to those wishing to do business with China

Ocean Spray International Services (UK) Ltd - producer of soft drinks and cranberry-based products

Point Blank Cold Brew Ltd - developer of a ready-to-drink coffee product

Reasons Farm Ltd - developer of an oat based drink

Snowdonia Cheese Company Ltd - cheese maker

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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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