

Newsletter

May 2013



Development of new analytical methods

In the food and drink industry, responding to new issues or consumer concerns or demands often requires the development and validation of new analytical test methods. The output from recent member-funded research demonstrates our commitment in the area of chemical and microbiological analysis.

Safety issues are always of primary importance, and we have been validating tests for allergen detection in wine, as well as improving the haemagglutination test for the detection of lectin activity in beans. On the microbiology front, we are evaluating a liquid chromatography (LC/MS/MS) method for the detection of *Bacillus cereus* emetic toxin (a chemical method for a microbiological problem). We are also assessing methods for shiga-toxin-producing *Escherichia coli* in sprouted seeds, following recent outbreaks, and investigating the suitability of decarboxylase agar for detecting histamine-producing bacteria in foods.

Quality issues are numerous and varied. We have been developing a method for vitamin K determination in foods, along with new taint analysis methods, LC/MS/MS techniques for permitted dyes, and methods for the differentiation of fresh and frozen-thawed meat. LC/MS/MS was also called into action for the determination of benzalkonium and didecyldimethylammonium chloride, which are widely used in disinfectant products, but with potential uses as pesticides - necessitating a method sensitive to around 0.01 mg/kg.

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Your partner for
analysis and testing

Next month: Analytical approaches
to quality issues in beer





Pesticides

Certificates of recognition for pesticide efficacy testing

Regulation EC No 1107/2009 requires that the tests and analyses required to demonstrate the efficacy of plant protection products must be carried out by 'Official' or 'Officially Recognised' efficacy testing organisations. Efficacy tests and analyses include field, glasshouse or laboratory trials and tests to determine the effectiveness and crop safety of plant protection products, plus their safety to other crops, plants and beneficial organisms.

Campden Technology Limited and Brewing Research International are both registered with the Chemicals Regulation Directorate as 'Officially Recognised' and competent to carry out efficacy trials/tests in the United Kingdom. The scope of the certification relates to specified field, storage, processing and taint test trials within the categories of Agriculture/Horticulture and Stored Crops.

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Pesticide controls - guidance

We have published updated guidance - *Managing pesticides in the food chain* (Guideline 19, 3rd edition) - to help farmers, growers, food processors, food manufacturers and retailers understand and respond to the legislative and voluntary controls of pesticides in the food chain.

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On the podium

We will have a significant presence at the **European Brewing Convention** on 26-30 May in Luxembourg. Debbie Parker, Sensory Manager in our Brewing Division, will discuss *Development of methods to measure real-time flavour profiles*, whilst Anastassia Johnson, Environmental Project Manager, will present a poster entitled *Brewery carbon footprint: a case study*. Also presenting posters will be Cecilia Damiani - *Beta-glucan hazes - what's the problem?*, and Eleanor Woods - *The perfect beer taster*.

Controlling your manufacturing process

Understanding the process and the controls in place in your manufacturing operation can help by saving product wastage and reducing costs. We are ideally placed to help with this. For companies looking at using "Lean Manufacturing" techniques it is important to know what variation there is within production so that the value streams can be effectively mapped. There is a need to understand where waste is occurring. This could be due to inefficient weight control or variation in product consistency leading to handling issues. The use of statistical process control (SPC) can assist in bringing the control back into line.

It is also often necessary to have effective liaison between technical and non-technical staff to achieve the desired outcome, especially in smaller companies.

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Dream on!

DREAM is an EU project which aims to develop physical and mathematical models to be used as standards that can be exploited across all major food categories. This will enable development of common approaches to risk assessment and nutritional quality for food research and industry. We have been involved throughout the project, along with our colleagues in Hungary - and will be participating in an **international conference in Nantes, France on 24-26 June** to disseminate the project's results.



Details on the project and the event can be found at <http://dream.aeuropae.org/>

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New this month

www.campdenbri.co.uk/analysis-testing.php

Is it dead yet? The microbiology of process validation
Blog by Joy Gaze: www.campdenbri.co.uk/blogs/microbiology-of-process-validation.php

Pulsed light and Power ultrasound Videos of emerging technologies: www.campdenbri.co.uk/videos.php videos

Cold plasma inactivation of food microorganisms Podcast by Danny Bayliss: www.campdenbri.co.uk/podcasts.php

Buhler food safety academy Case study by Paul Catterall
www.campdenbri.co.uk/case/buhler-food-safety-academy.php



Events and training courses

A list of 2013 courses is available at www.campdenbri.co.uk/training.php



June 2013

- 4 Threats, withdrawals and risks - business continuity seminar
- 4 Shelf life evaluation of chilled foods
- 5 HACCP - refresher
- 5 NAMASTE project seminar
- 5 Yeast management and brewery hygiene
- 6 Campden BRI Day
- 7 Rapid microbiological methods seminar
- 12 Beer labelling requirements
- 12-13 Allergen control
- 12-13 Food and drink labelling
- 18 Packaging sustainability seminar
- 18-19 HACCP - intermediate (workshop)
- 18-19 Internal auditing - principles and practices
- 19 Beer and food matching
- 19 Recognising beer faults
- 20 Hazard Analysis - meeting the requirements of the BRC/IoP Packaging Standard
- 24-28 FSSC 22000 Auditor/Lead Auditor Course
- 24-28 Prerequisite management - advanced
- 25 Wine analysis and tutored faults tasting
- 25-26 An introduction to food law
- 25-27 Cereal science - technology
- 26-27 Sainsbury's TMA D Allergen
- 28 Brewhouse efficiency and beer recipe formulation workshop

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Packaging - is it fit for purpose?

Packaging is fundamental to providing safe, high quality products to the consumer. We have helped many companies ensure that their packaging is 'fit for purpose' by, for example, assisting with the selection of materials, compliance testing and distribution testing. Lynneric Potter explains the range of our services:

"Within the purpose built packaging laboratory we can measure the strength of seals, perform integrity testing, and determine oxygen and water vapour transmission rates of materials. Seam analysis, drop testing, internal pressure resistance, and grease and moisture resistance are also within our portfolio of pack testing services. We have standard test methods, but we also develop bespoke methods to meet the needs of the client."

We have helped many companies ensure that they are meeting legal requirements by carrying out specific and overall migration testing for their packaging using a range of different simulants. We have also helped confirm that materials are what they claim to be, using FTIR technology to identify the materials, and physical testing to ensure that their properties match those stated on the specification. We can pack foods in our pilot plant for performance testing in a variety of formats: cans, glass jars and bottles, board, rigid and flexible packaging."



In one specific study for a client, we were able to conduct a range of tests to assure them that their product would not be compromised if they removed a layer of material from their packaging. This allowed the company to reduce the amount of packaging they were using and reduce costs. This is just one example of how the team can work in partnership with our clients in order to deliver practical, cost effective solutions.

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Members



This page highlights the latest news and information for our members.

Visit Member Zone to access privileged member information and services www.campdenbri.co.uk/memberzone.php

Campden BRI day - 6 June 2013

Have you booked your place? Michael McCain, President and CEO of Maple Leaf Foods Inc., will deliver the annual lecture. For more information and to register visit <http://bit.ly/campdenbri8>.

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Latest research report ... *Salmonella* growth in dry foods

Salmonella spp. are a major cause of food-borne illness world-wide. *Salmonella* is unable to grow at A_w below 0.94; however, it is able to persist at these lower water activities, leading to several instances of illness being associated with ready-to-eat low moisture foods. The resistance of *Salmonella* to heating is greatly increased at low A_w , and this work investigated the magnitude of this resistance.

For a free electronic copy of *Heat resistance determination of Salmonella in low A_w foods (RD344)*, send an e-mail to auto@campdenbri.co.uk with the subject line: **send RD344**

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Member interest groups

Presentation highlights from the last round of panel meetings are at www.campdenbri.co.uk/research/panels.php

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Welcome to new members

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

Better Fresh Ltd - supplier of bottled fruit juice

Catering Equipment Suppliers Association - trade association

Delicious Alchemy Ltd - manufacturer of gluten-free cereals

GRACE Materials Technologies - DAREX - supplier of formulated packaging products

Island Salads - manufacturer of soups, desserts, RTE salads, garlic bread and sauces

Nicholl Food Packaging Ltd - manufacturer and distributor of foil containers

Poeton Industries Ltd - provider of surface treatments to reduce wear, friction and corrosion

RS UK Foods Ltd - manufacturer of vegetarian sweets, snacks, savouries and frozen Indian desserts

The Booja Booja Company Ltd - manufacturer of vegan chocolates and frozen desserts

Uren Food Group Ltd - grower, processor and importer of frozen fruits, vegetables, purees, and fruit juice concentrates

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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.

Partner of choice



"Campden BRI staff always take a professional, purposeful and responsive approach to meeting our needs. They are obviously passionate about putting appropriate science and technology to practical use"

Ron Colwell, Science & Regulatory Affairs
HJ Heinz Company Limited



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