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Testing, Testing 1-2-3-4

Taking a science and risk-based approach to testing is key to obtaining relevant and reliable data that can be acted on to manage risks in practice.

CFA's Microbiological Testing and Interpretation Guidance (MTIG) can be downloaded from chilledfood.org. To broaden the principles it sets out, CFA has proposed the following simple approach to the FSA to help decide whether and how to test any food for any contaminant:

- Always consider why the test is being done. What information do you hope to obtain, and what would results mean? What are you going to do about the consequences? Is any potentially required corrective action within your control?
- Only use laboratories certificated for that specific method and ensure that the method has been validated for the analyte/organism and food matrix in question. Identify what interfering factors there might be in the food material; e.g. anthocyanins/ ELISA. See Appendix 2 of MTIG.
- Understand before testing is done what the sensitivity, accuracy and tolerance are of the method used, and how these may impact on results.
- 4. Before testing is done, obtain in writing from the laboratory an agreement covering communication of findings to you, the Food Business Operator (FBO), and to any agreed third party. This is important as samples may not be from food that has been placed on or which is intended for the market.

Kaarin Goodburn, CFA Director says: "We agree that a common science/risk-based approach in the UK is key to obtaining a similar approach across the EU and beyond. Could this be the basis of simple general guidance or a checklist for FBOs? There would be cost benefits and it



would enhance the value of testing done as the potential for irrelevant or erroneous results would be reduced."

For manufacturers' and brand owners' obligations see Section 10 of CFA's MTIG.

Our Aim is True

UK chilled food production is on course to meet its Climate Change Agreement obligations as agreed with the Government. In addition, effectively no food waste arising from chilled manufacturing sites is being landfilled. 95% more food waste arising from chilled food sites has been diverted from landfill compared with 2009. Chilled food sites are continuing to help their retail customers meet their sustainability targets.

Chilled Education UPDATE



Food + Science + Space = A Cool Mix

2015 got off to a flying start as CEd launched its partnership with the Association for Science Education (ASE) at its annual conference and exhibition.

The stand was buzzing as colleagues from Greencore, Samworth Brothers and CFA met more than 1,000 science teachers. Ella Connolly from Samworth



Brothers describes the weekend:
"Teachers were delighted with our
new approaches to their lessons, such
as using the science involved in keeping
chilled juices fresh to talk about
pH levels. As the only food-related
exhibitor we enjoyed occupying a
unique position!"

The team also met other like-minded organisations with conversations sparking interesting collaborations. One even led CEd to be part of the solar eclipse excitement. CEd was invited by NASA and the European Space Agency's Mission X project to join them at the BBC's Stargazing Live to talk about 'Bugs in Space'.



Using Glo-Germ kits, the team demonstrated correct hand washing – something not possible for astronauts working in zero gravity without access to soap or water.

Developing new ways of teaching science, and food science principles, is always exciting, and space travel is a good way to engage young minds. And, as an added bonus, CFA's Kaarin Goodburn caught giant microbes with astronaut Paulo Nespoli!

Free Resources Whet the Appetite of New Contacts

CEd's new partnership with ASE has resulted in new free lesson plans covering science and food safety for KS3-5. As with all CEd resources they are being developed with industry experts and school staff, including chemistry teacher Sam Holyman from Bablake School in Coventry.

The first free downloadable Science and Food Safety lesson plans, teacher notes, homework and practical sheets for KS3-4 look at the effect of pH on yeast activity in fruit juice. www.schoolscience.co.uk/scienceandfoodsafety



CEd 'On The Road'

CEd is looking forward to its third year at the Big Bang East Midlands on 30 June and its second year at the Institute of Food Research's Open Day on 25 September.



As well as these larger events, chilled STEM Ambassadors enjoy being part of local school activities. Heather Hayward of Ferndale Foods recently shared her industry experience with career-curious students at Invicta Grammar School in Maidstone. And at Leicester Grammar School's science fair, Ella Connolly (pictured) met keen children and parents.

These events are always a great

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opportunity to pass on experience, enthusiasm and knowledge to young people – the next generation of chilled food scientists and technologists.

Focusing on older age groups and teachers, CFA's Kaarin Goodburn recently gave her third Chilled Food QA lecture to BSc and MSc Food Science students at the University of Leeds, and has again set exam questions for each course.

Chilled Education

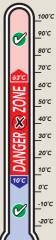
Kaarin will also be presenting CFA's teaching resources at an ASE TeachMeet in Kettering in July.

Chilled STEM Ambassadors very much enjoy the opportunity to inspire the next generation of food scientists face to face. There's more about becoming a STEM Ambassador at: www.stemnet.org.uk/ambassadors

Free Resources: Do You Know Your Microbes?

CEd's free 'Know Your Microbes' PowerPoint presentation is designed to support work at KS3-5. It explains basic microbiology including cell structure and how bacteria grow. It also explains the 'danger zone' for bacterial growth and how bacteria are classified. The PowerPoint presentation is downloadable from:

www.chillededucation.org/ multimedia



Classifying Re: Temperature

Foodborne pathogens' optimum growth temperatures usually close to host body temperatures, eg:

- Humans 37°CBirds 42°C
- Heat-loving (Thermophile) 30-55°C
- Cold-loving (Psychrophile) 0-35°C
- Others (Mesophiles) 10-45°C

CEd in Numbers...

chilled astronaut!

150,000 students engaged with CEd 144.500 fridge thermometers distributed 90.000 Nanobugs microbe tattoos distributed >21,000 chilled lesson plan downloads 1.500 teachers working with CEd >1.000 Cool Schools 34 CFA-sponsored students at University of Nottingham Food Science Summer School (and 10 more this summer) chilled STEM Ambassadors 17

Growing Guidance Grows Stronger!

CFA publications provide invaluable best practice guidance to members and the wider industry. Regularly updated, the latest one to be revised is the Microbiological Guidance for Growers.

The first edition was published in 2002 and has been taken up widely by UK RTE growers and industry, including via major retailers' standards and codes.

Greg Hunn, Technical Executive at Greencore describes the Guidance: "It is incredibly easy to understand, use and implement. It has been well thought through and involved a wide and influential stakeholder group who have contributed to the industry in many different arenas. As such it should be used as a key part in the growing sector to help build deliver safe product to the further processing industry and general market place. I believe its implementation will help support the base of a strong due diligence."

The CFA document followed the European Chilled Food Federation's review (VTEC and Agriculture, 1998) which was presented to the EC in 1999 and again in 2001 to a specially-



convened EC WG, which resulted in the EC's risk assessment.

The 3rd edition will include CFA's produce washing and decontamination assessment protocols (Parts 1 and 2) as well as incorporating key elements of watercress standards, GlobalGAP and commercial requirements.



Biocidal Products Regulation Update

Following the European Commission's potential imposition of Limit of Quantification Maximum Residue Limits (MRLs) for certain active substances in biocides (as reported in CFA News Winter 2014) CFA is pressing for the EC to carry out risk assessments to consider potential health and food safety impacts of restricting available disinfectants before setting MRLs. There are strong indications that the EC is willing to consider alternative approaches. And lobbying of the Food Standards Agency has resulted in it becoming more closely engaged on the issue with the Health and Safety Executive.

Warwick EHOs Learn about Listeria

Environmental Health Officers are a key audience for CFA. In September, Kaarin Goodburn will be returning to the University of Warwick where she will give her annual presentation on Listeria and shelf life to EHOs attending the Advanced Food Microbiology Course.

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