



FOOD SAFETY BULLETIN

ISSUE 7 2013

DYSON AIRBLADE TAP -

A leap forward in wash station design

NOROVIRUS –

The sickening truth!



dyson airblade tap

The fastest, most hygienic hand dryer.



HOSHIZAKI'S COOL AND CLEAN WORLD



Hoshizaki is a global leader in the design, production and supply of a range of food, beverage and specialist application cooling equipment.

The Hoshizaki family is used by most of the world's major players in food and hospitality and sectors such as education, bio-science and healthcare. Quality, durability, hygiene and sustainability are key elements in Hoshizaki's solutions.

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- · Pure, hard ice production
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Welcome

Our food safety bulletin is reaching a wider and wider readership in all quarters of the globe. We at HACCP International are pleased to know that it is useful, interesting or just a point of reference for so many people. We are always delighted to consider any submissions — please feel free to keep us in the loop of any developments you would like broadcast to the industry in terms of food safety.

In recent months, our organisation has forged strong links with Cert ID, a company that leads the field and represents the highest standards in Non-GMO certification. We see this highly sensitive issue becoming very important to both industry and the consumers in coming years. Too many manufacturers and retailers around the world are dismissive of community concerns about the identification of GMO ingredients in food products. We have seen this before with food safety and content labelling. This incoming tide, like the ones before cannot be stopped. The science of GMO, and the effects in the long term are open to debate, but what most agree is that information regarding a food product's genetically modified structure should be available to consumers allowing them to make their own choices. Hiding such only leads to mistrust. The USA food industry has taken pro-active steps in this regard in recent years; we trust the rest of the world will take notice.

GMO - the tide won't turn.

Superbugs present as a real threat to human health and the food industry's own immunity system is at risk too. E. coli is up at the top of the superbug league and is becoming increasingly menacing. We therefore have every reason to congratulate Gloria Culver, Keith Connolly and the University of Rochester in The USA on their ground-breaking work attacking this bacterium. More on this can found on page 22.

HACCP International's certification scheme for equipment, materials and services used in the food industry has seen some more excellent products join the ranks of those already carrying the mark. Without wishing to be overly selective, my eye has been drawn to BioZone's purification systems which are particularly appropriate for ice machines. Dyson too has developed a very effective no touch wash station with the clever design and efficiencies for which the Airblade has become so popular. Pest Controllers, Star Pest, based in Singapore and Malaysia, and selected branches of ISS in India have gone to great lengths to achieve certification of their HACCP compliant service — this is no easy task and they are to be congratulated.

The food safety attributes of these products (and services) are very important. As leading food safety standards increasingly require due diligence in such products, especially those with incidental food contact, the food industry is rightly looking for assurance and conformance and our mark provides this. We, at HACCP International, believe our scheme to represent the very highest food safety standards in this regard - not just addressing individual qualities or characteristics such as cleanability or materials but always evaluating all the relevant criteria before offering certification. This extends to process controls and consequences of error as well as demanding a positive contribution to food safety. It is therefore no coincidence that the mark is worn by products which have long pedigrees in excellence - not just in food - safety but in all they do in terms of quality, systems and innovation. These newly certified product join those manufactured by such well-known companies as 3m, Deb, BioCote, Clorox, Kimberly-Clark, Hoshizaki, Champion, ISS, Bayer, BASF, Altro and Misa as well as many more. The evaluation process is extensive and the mark represents the very best in food safety. If any QA staff are looking for food safe products, we would encourage them to look for this mark and by all means make enquiries of HACCP International as to the features of our accredited scheme. Furthermore, if any members of the industry have any particular enquiries as to the food safety attributes of the products carrying our mark, they are more than welcome to contact our technical staff for details. Just call us or email: info@haccp-international.com. Alternatively, do look us up at many of the food industry events around the world where we are in attendance, on show or sponsoring, such as the upcoming NRA in the USA, The Food Magazine Awards in Australia, The Food Summit in Singapore, our workshops in the UK or the BRC conference in The Netherlands.

Thank you for your support in recent months, we look forward to assisting in any way we can.



Clive Withinshaw - Director, HACCP International



For more information on any article in this magazine or to submit editorial or a comment please email to : ifsb@haccp.com.au

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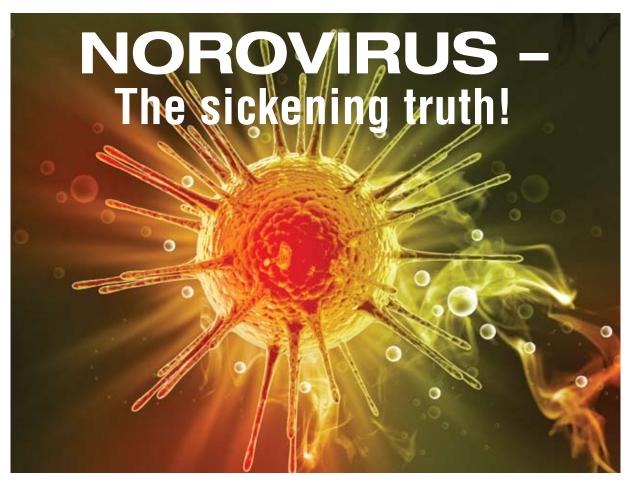
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Norovirus is thought to cause about 20 million gastroenteritis cases each year in the U.S. alone.

By Richard Mallett, Microbiologist and Director of HACCP Europe

Often mislabelled and misrepresented in the popular press (bacteria often become viruses and vice versa in newspapers), viruses are in fact among the smallest infectious agents known to man, ranging from about 20 to 300 nanometres in diameter, where 1 nanometre is 1 millionth of a millimetre. On a human hair of maybe 80,000 to 100,000 nanometres, a virus particle



Richard Mallett, European Director of HACCP International

could comfortably get lost!
Norovirus is one such virus and has huge implications for the food and healthcare industry.
This is a virus which can be carried on food, food contact surfaces and hand contact surfaces and in many ways is the perfect human parasite — infection is relatively quick, millions upon millions of new particles are created in the infected human host, released and then the virus moves on to the next host, without ever

killing (except in exceptionally rare cases) any host.

Close up, and close up really means using a powerful electron microscope, viruses like Norovirus are very simple – nucleic acid (in the form of DNA or RNA) encased in a protein shell.

They lack the organised structure, cell membrane and enzymes within a bacterial cell which means they cannot, unlike bacteria of course, multiply in foods or water. The host cell is required because this is the only environment in which a virus can penetrate, safely un-coat, synthesize replicated DNA or RNA, and viral protein before newly synthesized, progeny viral particles can be released to go on and infect a new host. Imagine if you will, a human target cell, which in the case of Norovirus is the cell lining of the intestine, being like a sphere made up of a membrane of snooker balls of all of the colours, representing the different proteins of that cell membrane. Now it just so happens that Norovirus is able to interact with the blue balls. It finds a blue ball, attaches to it and then begins the process of penetration, or technically, engulfment. Inside, the virus uncoats itself of its proteins and at the same time "borrows" the machinery of the human intestine cell to replicate the nucleic acid and the viral proteins. The progeny virus is re-assembled and released back out of the human cell, in numbers of millions and millions, and usually with the destruction of the host cells, the physiological result of which is illness, which in the case of Norovirus, which damages the intestinal cells, is manifested as vomiting and diarrhoea, sometimes projectile and explosive respectively.

The incubation period is 16 to 48 hours and onset of symptoms is rapid. And this rapidity and severity of these non-life threatening symptoms is the cause of the problem

associated with this virus in the food industry. Imagine kitchen (or for that matter hospital) staff who may present themselves at work feeling more or less healthy but then deteriorate rapidly within their working shift. Contamination of all sorts of hand contact surfaces, especially in washrooms, is highly likely due to the explosive nature of the diarrhoeal or vomiting action and the consequent droplet spread of virus particles on a number of surfaces around the site of the vomiting and diarrhoea. Unless hand hygiene, and area cleaning schedules are stringent, really stringent, then it is highly probable that virus particles are going to be picked up by other staff or visitors. They are then likely to, of course, handle a number of other surfaces and equipment and may, within 16 to 48 hours themselves become ill, producing and excreting huge numbers of viruses, completing this vicious circle.

So what is our defence? Our defence is really based on common sense, having accepted and understood the facts presented above:

- Personal hygiene, personal hygiene, personal hygiene!
 Scrupulous hand washing using high quality hand washing materials. Wash the hands after using the bathroom, AND wash them again on entry to the food area, or in the case of hospitals which have seen some of the largest and most alarming Norovirus outbreaks, between wards and patients.
- Monitor and act on staff illness. Have a health policy that requires staff (or visitors) to declare symptoms before work and absolutely immediately should they suffer from them whilst at work. In the latter case, identify ALL areas where they have worked and disinfect thoroughly all surfaces. THROW AWAY any food that might have become contaminated with vomit or diarrhoea, remembering how far those virus particles may have spread! Bear in mind that an incidence of children suffering from Norovirus (which really is quite common) is likely to mean that, if you are a parent or carer, you could be carrying the virus too on your hands or clothes.
- Use raw foods only from reputable suppliers. There
 have been outbreaks linked to salad items fertilised with
 contaminated fertilisers and shellfish caught in sewage
 contaminated water. Ask them how they control such
 potential contamination.

And just so we don't forget how much of a problem Norovirus has become:

- Norovirus is thought to cause about 20 million gastroenteritis cases each year in the U.S.
- In the UK, the Health Protection Agency has released figures for the half year from week 27 of 2012 to week 01 of 2013 which shows laboratory confirmed Norovirus cases up 56% at 4,407. But for every reported, confirmed case there are thought to be nearly 300 that are not reported which puts the potential case number up to an astonishing 1.3 million in the UK alone.
- Noroviruses mutate rapidly and new strains are constantly emerging, which means that they can stay one step ahead of normal human immune response defence mechanisms.

Makes you sick, doesn't it! ■



Chris Osborn of Dyson introduces the Dyson Airblade Mk2 and Dyson Airblade Tap hand dryers and answers questions on their design and effectiveness

AirbladeTM technology dries hands quickly, effectively and hygienically. The original Dyson AirbladeTM hand dryer was the first and only hand dryer to get endorsement by HACCP International for use in all food handling areas, the new Dyson Airblade Tap and Dyson Airblade Mk2 hand dryers have now joined it.

In 2006, using hand dryers in food preparation areas was unacceptable. The problem was one of technology - conventional hand dryers rely on evaporation to dry hands, which is slow and ineffective. Water is chased around hands by a feeble gust of dirty washroom air – most people simply give up, dripping water over the floor in the process and wiping their hands on an apron.

But wet hands spread up to 1000 times more bacteria than dry ones¹.

Paper towels can be used but are problematic. Dispensers need constant restocking and towels need to be disposed of – they can end up on the floor of busy washrooms. Even recycled ones have one of the highest carbon footprints compared with any other hand drying method.



The new Dyson Airblade™ hand dryers are powered by the Dyson digital motor V4. It draws in up to 30 litres of air a second to produce sheets of air travelling at 430mph. Hands are dried quickly and efficiently.

Now Dyson engineers have revolutionised hand drying once again. The Dyson Airblade Tap hand dryer washes and dries hands with no need to leave the sink. There's no need to drip water over the floor to grab a towel or leave the sink with wet hands.

Infrared sensors pinpoint hand positions and release water from the tap stem. Once hands are wet and drying is requested, integrated circuitry computes the information and activates the Dyson digital motor V4, creating two high velocity sheets of air on the tap's branches.

Using Airblade™ technology, the Dyson Airblade Tap hand dryer sends sheets of 430mph unheated filtered air towards hands literally scraping them dry. Hands are dry in 12 seconds and there is no need to touch anything.

And Dyson engineers have reengineered the original Dyson Airblade™ hand dryer for improved acoustics and low carbon emissions. Dyson acoustic engineers have now virtually eliminated all of the unpleasant tones using six Dyson-designed Helmholtz silencers. The reactive silencers target specific frequencies and reduce their intensity.

Dyson engineers removed over 1.1kg of materials from the machine making it leaner too. Performance has not been compromised. The Dyson Airblade MK2 hand dryer is still the fastest way to dry hands – hands are dry in just 10 seconds.

Both machines are endorsed by HACCP International as safe for use in all food handling areas.



The Dyson Airblade Mk2 hand dryer. The fastest, most hygienic way to dry hands. Hands are dry in 10 seconds.

Dyson Airblade[™] hand dryers are the most sustainable way to completely dry hands. Dyson Airblade[™] hand dryers produce at least 62% less C02 than paper towels and at least 67% less C02 than some other warm air hand dryers.

The Dyson Airblade[™] hand dryers make commercial sense. The Dyson Airblade Tap hand dryer is able to dry 15 pairs of hands for the price of a single paper towel; and the Dyson Airblade Mk2 hand dryer dries 18 pairs of hands for the price of a single paper towel.

The Dyson Airblade Tap hand dryer costs £48 a year to run; and the Dyson Airblade Mk2 hand dryer costs £40 a year to run – or 97% less than paper towels².

¹ Please visit the following link for access to the University of Bradford study: http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2672.2010.04838.x/full The full citation for study: Snelling, A.M., Saville, T., Stevens, D. and Beggs, C.B. (2010) Comparative evaluation of the hygienic efficacy of an ultra-rapid hand dryer vs conventional warm air hand dryers. Journal of Applied Microbiology, doi: 10.1111/j.1365-2672.2010.04838.x

² For calculations please visit dysonairblade.co.uk/calcs.aspx

Q&A with Chris Osborn

How have Dyson engineers developed a machine that dries hands in just 12 seconds?

TThe power dense Dyson digital motor combined with Airblade™ technology means we can scrape water from hands rather than evaporate it. This makes Dyson Airblade™ hand dryers the fastest way to dry hands.

The Dyson digital motor V4 is a brushless DC design, using a rotor consisting of a bonded magnet encased in a carbon fibre sleeve. It accelerates from 0-90,000 rpm in less than 0.7 seconds. This motor is able to generate two high velocity sheets of air from the tap's branches which travel at 430mph. This filtered air literally scrapes water from hands like a windscreen wiper. And because the technology is patented, only Dyson machines use this technology.

How hygienic is the machine?

The Dyson Airblade™ hand dryer is the most hygienic hand dryer. This is because it dries hands quickly and effectively whereas warm air dryers can take up to 43 seconds. Most people end up rubbing their hands on their jeans or dripping water all over the floor as they give up.

And of course other hand dryers don't filter bacteria from the washroom air. They suck in dirty air then simply blow it back onto hands. With the Dyson Airblade™ hand dryer, dirty washroom air is passed through a HEPA filter which captures 99.9% of bacteria and viruses in the washroom air.

What was the engineering brief?

Engineering at Dyson is always about performance. From the start there was a clear design intent – the Dyson Airblade Tap hand dryer must be intuitive to use and must wash and dry hands quickly and effectively in one place.

We experimented with different angles, shapes and sizes developing hundreds of prototypes along the way. The challenge was to develop a machine which combined water, air and electrics in a condensed package at the sink.

The form we developed means the user does not need to touch a thing. There is an infrared field in the central part of the tap alongside the nozzle. Disrupting this field triggers water. And there are infrared sensors with a field of vision that runs alongside the air blades of the tap. Disrupting this field will trigger air.

The design of the tap encourages the user to separate their hands and hold them at a 45 degree angle from the wall. This strips water more effectively into the sink. We have achieved a robust, hygienic and high performing tap capable of washing and drying hands.

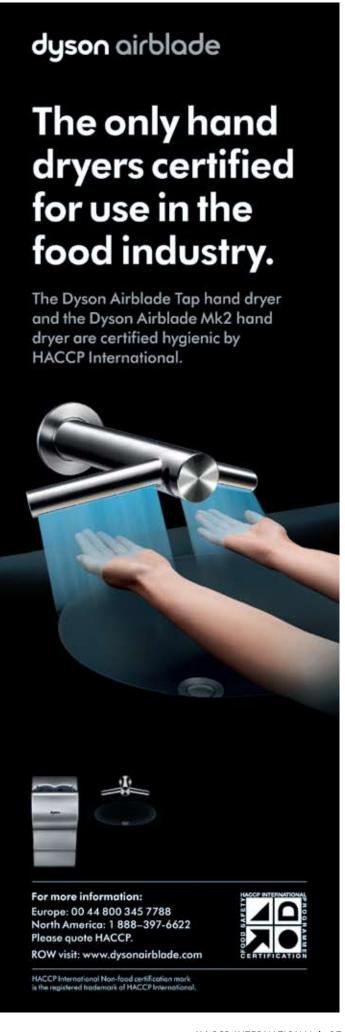
How did Dyson engineers decide which materials to use?

The Dyson Airblade Tap hand dryer uses 304 stainless steel, a marine grade steel selected for its anti-corrosive properties. This makes it easy to clean as the surface is smooth and free of crevices.

Materials are important to all our machines. Our Dyson Airblade Mk2 hand dryer uses PC ABS for example – the same plastic found in police riot shields. And we test all our Dyson Airblade™ hand dryers for physical and chemical abuse to make sure they can withstand the rigours of pubs, kitchens and sports stadiums. The Dyson Airblade Mk2 hand dryer is also certified as safe for use in all food handling areas. ■

dyson airblade tap

The fastest, most hygienic hand dryer.





The only HACCP International approved provider of antimicrobial technology



BioCote antimicrobial technology complements existing cleaning practices to help reduce the risk of bacterial contamination.

The BioCote range of antimicrobial additives can be added to materials during the production process including polymers, coatings, textiles and more.

Once integrated BioCote additives provide a permanent antimicrobial protection which reduces microbes by up to 99.99%,

BioCote offer unparalleled support to partners. When you choose to partner with BioCote we offer not just additive but use of the BioCote brand as well as the background technical, regulatory and marketing support.



www.biocote.com

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An ounce of prevention is worth preventing a pound of grease from igniting!

Halton's KGS Duct Safety System is an innovative signalling device that monitors the grease deposition leve in all ductwork. Once this level exceeds the programmed threshold, an alarm is displayed on the system alerting the operator, and the Building Management System, that the ductwork needs to be cleaned.

An ideal combination of fire safety, food safety and financial savings for both new and existing kitchens

Constant monitoring of grease deposition level mitigates the fire risk and assists with food safety. The KGS system ensures that expensive duct cleaning takes place only when it is needed and not by a predetermined schedule. Minimum



aintenance costs are combined with the highest safety level.

Enabling Wellbeing www.halton.com/foodservice



New Global Food Safety Survey:

Barriers to Effective Training

A new survey by Campden BRI and Alchemy Systems in partnership with BRC and SQF questioned 649 food and drink manufacturers and processors worldwide to identify the needs, effectiveness and challenges of food safety training in the industry. While companies recognized improved product quality and higher employee morale as the greatest benefits of effective food safety training, over 70 percent of those surveyed said finding the time for training was the greatest challenge. Other barriers cited included verifying the effectiveness of training (43 percent), dealing with language issues when delivering a consistent training program across global sites (28 percent), resource problems (24 percent) and keeping the training curriculum up-to-date (24 percent).

The companies surveyed represent a cross section of the industry, drawn from across the world. They ranged in size from under 50 employees to over 1,000 and cover many sectors including cereal and baking, dairy, meats, fish and poultry, and packaging. Laura Dunn Nelson, Director of Industry Relations at Alchemy Systems commented, "With food safety being so critical to the food industry, the importance of adequate training remains vital. The results of this study are an excellent way for food manufacturers and processors to benchmark their performance against their competitors and identify any opportunities for development."

The most frequent deficiency found in the survey was a lack of employee understanding of food safety training

With only 66 per cent of companies saying they are satisfied or very satisfied with the quality of food safety training, room for improvement clearly exists. In particular, the study found lack of employee understanding and incomplete training records were the largest barriers to effective food safety training.

Surveyed companies were distributed fairly evenly according to size, with 24 percent of respondents representing companies of between 100-250 full-time employees. Respondents worked in areas of food and beverage processing including cereal and bakery; processed meats, fish and poultry; fresh meats, fish and poultry; beverages; dairy; processed fruit and vegetables; fruit and vegetables; packaging; and sugar and confectionery. North American companies represented 65 per cent of respondents, while Europe accounted for 22 per cent.

Seven out of 10 manufacturers said responsibility for food safety training resides with quality control/assurance departments, with 10 per cent and 9 per cent answering technical and human resources, respectively.

While roughly two-thirds of respondents indicated they are satisfied or very satisfied with the quality of their food safety training, a slightly smaller number was equally satisfied with the quantity of that training. That level of satisfaction was backed up by the survey: Most employees received between four and eight hours of food safety training per year, and 80 per cent received 15 hours or less. Results for management and supervisors were marginally better, with 80 per cent receiving 20 hours of training or less per year.

"The only thing worse than training good employees and losing them is not training your employees and keeping them." - Zig Zagler*

"If you think training is expensive, try ignorance and stagnation." - Peter Drucker*

The most common forms of training included, in descending order: on the job; reading and understanding rules; refreshers; and classroom training with an instructor. Least common training types included, in ascending frequency of use: collaborative/social media training; just-in-time training; audience interactive technology; and continuing professional development.

HACCP was covered in more than 90 per cent of food safety training sessions, followed closely by good manufacturing practices, sanitation/cleaning and employee hygiene. Training on food safety programs and allergen programs were also covered in over 80 percent of training sessions, while internal auditing programs, food defence programs, maintenance staff training and prerequisites, food quality programs and corrective action procedures were included in only about 60 per cent of training.

Around 50 per cent of food safety training included validation/ verification training, and only approximately 40 per cent included risk assessment, supplier audit/quality assurance, root cause analyses, GFSI program overview or product sampling protocols.

Around 90 per cent of manufacturers reported internal audits to review food safety training practices and records, followed closely by GFSI-type audits. Customer audits and regulatory audits were each reported just over 60 per cent of the time.

The most frequent deficiency found in the survey was a lack of employee understanding of food safety training, noted in around 25 per cent of responses. Incomplete training records were another common issue, along with refreshers being overdue, insufficient training of visitors/subcontractors, lack of training records, training records not being verified and incomplete documentation for a training program.

The results suggest employers will see benefits – including better audit results and fewer recall incidents – by improving training as well as the recordkeeping associated with that training.

To read the full results of the study, which surveyed companies on all areas of food safety from auditing and measuring competency to management of training records, please visit www.alchemysystems.com

*Accompanying the survey report were the highlighted salient quotes



Majority of shoppers still do not consider salt when buying food.

A major drive to help reduce the amount of salt we eat by a quarter, including by setting targets with food companies, has been launched by the UK's Public Health Minister Anna Soubry.

Research figures show that more than half the public (53 per cent) rarely or never consider the amount of salt when buying food, despite more than four in five people (86 per cent) knowing too much salt is bad for their health.

As part of "The Responsibility Deal", the new Salt Strategy outlines how the Department of Health will help people reduce their daily intake from an average of 8.1g a day towards the 6g a day goal. It will do this by:

- revising the 2012 salt targets for industry by the end of the year to encourage companies to reformulate recipes;
- pushing the catering and take away sector to do more

 by setting new maximum targets for the most
 popular dishes such as sandwiches and chips;
- asking companies to help people choose lower salt options – through promotional and other activities; and
- getting more companies across the food industry sign up to salt reduction.

Public Health Minister Anna Soubry said:

Today our typical shopping basket contains much less salt than it did 10 years ago but more needs to be done to help lower these levels even further.

Through the Responsibility Deal, we are working with the food industry to make sure people are given healthier options with less salt in their favourite foods. The voluntary approach is working and we have already seen results in our everyday foods, but, to get the greatest impact, we need more companies pledging to reduce salt levels, particularly in the catering and take away sector.

The UK is world-leading in salt reduction but more needs to be done to reach our goal of no more than 6g a day. This is because eating too much salt can have a serious impact on people's health – causing high blood pressure which could lead to heart disease and stroke. Currently 90 companies have signed up to make salt reduction a priority, and we want to see real action from many more.

Responsibility Deal Food Network chair Dr Susan Jebb said: It's essential we maintain momentum in our efforts to reduce salt in our diet if we are to prevent the many thousands of premature deaths each year from stroke and heart disease linked to eating too much salt.

The UK is world-leading in salt reduction but more needs to be done to reach our goal of no more than 6g a day.

Today is the start of the next phase of the salt reduction work. This strategy combines work to develop new targets for reformulation, with action to urge more companies to play their full part and renewed efforts to encourage consumers to do more to reduce the salt we're eating.

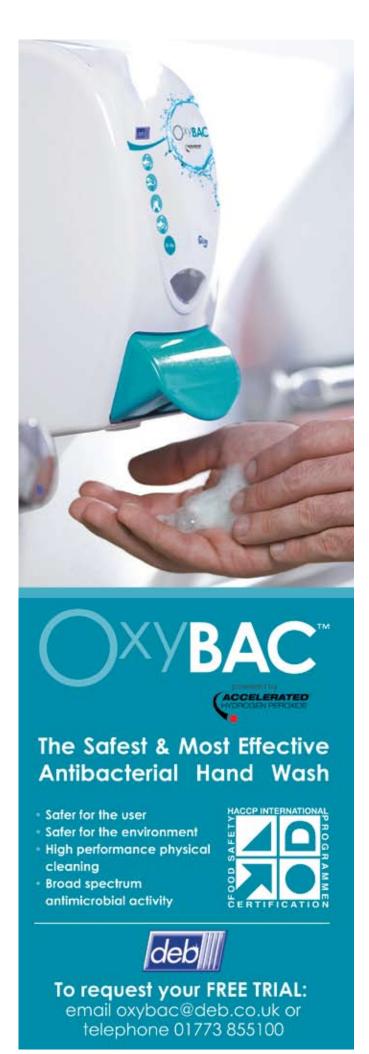
Background information on the UK's government Responsibility Deal

- For further press enquiries, please call the Department of Health press office on 0207 210 5301.
- The Public Health Responsibility Deal aims to tap into the potential for businesses and other influential organisations to make a significant contribution to improving public health by helping us to create this environment.

- Since launching in 2011, the Responsibility Deal has worked with industry to achieve the following:
- over 70 per cent of the fast food and takeaway meals sold have calories clearly labelled – almost 9,000 high street outlets with more companies signing up;
- all of the major supermarkets and 69 per cent of the retail market have committed to removing artificial trans fats some 97 companies in all;
- over 70 per cent of the retail market and over half of the major high street and contract caterers are committed to further reductions in salt in over 80 categories of foods – such as bread, soups, cereals and pasta sauces;
- over 80 per cent of all alcoholic drinks on shelves will have clear labelling on units, NHS guidelines and pregnancy messages by the end of next year – with 92 companies signed up. [Early indications are that over 60 per cent of labels already carry this information].
- 23 leading food and drink companies, including Cocacola, Mondelez International (formerly Kraft Foods UK),
 Nestle, Subway and the major retailers had already signed up to the calorie reduction pledge making some strong commitments to cut and cap calories, as well as through promotional activity encouraging people to eat healthier foods. The additional signatories bring the total to 31.

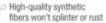


- 34 major alcohol companies have committed to removing a billion units from sale. The initiative, which includes major brands like Echo Falls, First Cape and Heineken will see a greater choice of lower strength alcohol products and smaller measures by 2015.
- We now have more than 500 partners across the entire Responsibility Deal with 127 in the Food Network.
- Earlier this year, we invested over £2 million in our Change4Life food smart campaign. The campaign empowers people to make healthier food choices. It will also lifts the lid on the 'hidden nasties' (too much salt, sugar and saturated fat) that are in many everyday food and drinks and encourage people to be more mindful of what they are eating.
- Methodology note: ComRes interviewed 1,805 English adults online between 31st August and 2nd September 2012. The data was weighted to be demographically representative of all English adults. ComRes is a member of the British Polling Council and abides by its rules. Full data tables can be found on the ComRes website. ■



Still using metal scrubbers in your kitchen?





Kick the habit!



Scotch-Brite[™] Extra Heavy Duty Pot 'n Pan Handler 88 🔀

- Remarkable scouring pad replaces metal scour pads and sponges for an easy-clean alternative
- Powerful scouring action removes heavily encrusted baked-on food — even stubborn cheeses and thick sauces
- · HACCP International certified as "Food Safe" and "Fit for Purpose"

Product Information

UPC	Size	Case Oty.	
500-48011-08292-4	3.5" x 5"	10 pads/box, 4 boxes/case	

For more information, visit www.3M.com/foodservice

3M

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Testo measuring instruments are certified by HACCP International.

Food safely monitored. From Farm to Fork.

BioZone Scientific's IceZone® keeping 'the forgotten food' safe

Ice is often recognized as "the forgotten food" in the foodservice industry, but ice deserves more attention. After all, ice is a major ingredient of popular foods and beverages, and is an integral part of food processing, transportation, and storage. Two main practices contribute to the adequacy of proper ice hygiene and they include safe handling techniques and routine ice production and ice storage equipment sanitation. While many recognized best practices exist for safe ice handling and are in widespread use, developments have only recently made available automated ice machine sanitation systems that are both effective and affordable.

Why Is There A Need For Ice Machine Sanitation?

Despite improvements in ice maker and ice storage bin design, which often include antimicrobial material surfaces, commercial ice machine operators are all too well aware of the demanding maintenance requirements that ice equipment can require under certain conditions. Environments with high airborne yeast concentrations are especially taxing on ice makers, such as restaurants with onsite baking, or bars and pubs with draft beer on tap. In these high yeast environments buildup of a visible bacteria-laden biofilm matrix, known in the industry as slime, is a frequent occurrence inside ice equipment.

Although we typically associate an ice machine with a frigid enclosure resistant to organic growth or biological fouling, in actuality ice equipment offers bacteria and other microcontaminant the conditions to not only survive but to thrive, and especially in foodservice settings. To grow, slime requires a source of nutrition (introduced via the circulating air), oxygen, moisture, substrate (ice machine and ice bin surfaces), and a temperature range which extends down to 4°C (40°F).

Factors that can promote slime growth:

- Airborne yeast
- Hot or humid climate
- Poor ambient air quality
- Poor water quality

Why Should We Care About Proper Ice Machine Sanitation?

Well, firstly, ice is a food, and although freezing can cause a slowdown in colony expansion, bacteria and other microcontaminants are known to survive the freezing process. Ice maker sanitation can grow to a point of concern with infrequent or improper cleaning regimens. In fact, unhygienic ice has been implicated in serious illness and in the most serious cases has even been tied to human death.

Bacteria/Viruses known to contaminate ice cubes:

- Cholera
- E. coli
- Hepatitis A
- Mycobacterium fortuitum
- Norovirus
- Salmonella Legionella
- Shigella
- Typhoid fever



An extreme but not uncommon sight in ice machines servicing

Secondly, aside from the unsightly visible slime or the food contamination risks, regular ice machine sanitation is required by manufacturers to maintain the equipment in proper working condition. Slime can, over time, build up to the point where it causes ice maker malfunctions. In standard installations, the recommended cleaning cycles outlined by the major ice machine manufacturers range from as little as once a year to as often as once a month, although foodservice sites usually require monthly cleanings if not more frequent. Typically, equipment cleaning and sanitation will require some disassembly, however new clean-in-place sanitation systems exist which can significantly reduce, if not eliminate, machine downtime.

What Are The Impediments to Adequate Ice Sanitation?

Cleaning ice equipment is an inherently difficult undertaking. As compact equipment has been shrunken down to reduce valuable floor footprint, many areas inside of ice machines and ice bins have become less accessible as a result. Often, a pressure washer is necessary to access difficult to reach areas

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inside of ice equipment and that usually requires complete disassembly of the equipment and relocation to an area where the pressure washer can be operated without disrupting kitchen service. Ice machine cleaning can sometimes take up to 4 hours to complete, depending on the make and model and the condition of the machine.

The cost of ice machine sanitation cannot be discounted as a factor in decreased occurrence. A survey in the United States revealed that the average cost of sanitising an ice machine ranged from \$125 to \$300. Many operators will unexpectedly find that they will spend more money over the lifetime of an ice machine on cleaning than on the equipment acquisition cost.

Restrictions on the use of chemicals to clean food equipment, including ice machines and ice bins, have increased due to both governmental and corporate initiatives. This has left many operators feeling outgunned at the prospect of keeping ice equipment clean. Chemical-free ice machine sanitation solutions are stereotyped as being both ineffective and expensive.

What Alternatives Exist to Traditional Equipment Sanitation?

Automated ice machine sanitation systems are now available as factory installed options on many models of new ice makers. These systems are ultraviolet light-based devices that convert air and water from inside the ice machine into powerful oxidants that are distributed throughout ice equipment, targeting vulnerable areas prone to slime buildup and extending the interval in between required cleanings. These chemical-free systems

typically are priced around the cost of 2-3 ice machine cleanings, meaning that in most settings the return on investment can be realised in less than one year.

Retrofit ice machine sanitation systems for all makes and models of commercial ice machine equipment are also on the market that utilize similar technology to the factory installed UV disinfection systems. Both the factory-installed and retrofit systems typically only require a simple annual UV lamp replacement to maintain effectiveness.

Conclusion

It is time that all stakeholders in the foodservice industry take a closer look at the challenges that often prevent adequate ice machine sanitation, and what options are available to assist operators in reducing risks and hazards that extend to consumers. Cutting corners in performing necessary ice equipment cleaning should never be an option for operators, especially now that affordable solutions exist that can significantly reduce the buildup of slime and slash the operational expenditures. \blacksquare

Adam Anthony BS, MBA, is Chief Operating Officer of BioZone Scientific International, manufacturer of IceZone® - the only HACCP certified ice machine sanitation platform. BioZone Scientific International for years has been fighting



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IceZone® has been certified by HACCP International and that means that all IceZone models are suitable for use in food environments. The IceZone® series is the only ice machine sanitation system certified by HACCP International.



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Many shoppers believe private labels are national brands in different packaging

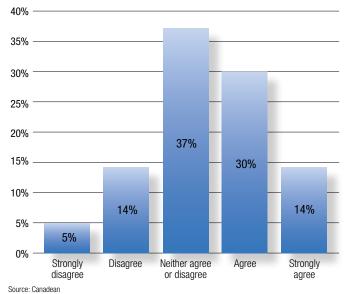
Research by Canadean shows that...

- 44% of UK shoppers believe that private labels are produced in the same factory as national brands
- 59% believe that national brands are only more expensive because of advertising costs

Brand loyalty towards food and drink in the UK grocery market is declining at a sharp rate, research conducted by Canadean in February 2013 reveals. While there has been much attention to the issue of food inflation, consumers shopping around more for the best deal and retailers improving their private label portfolios, new research shows that this decline in brand loyalty can also be attributed to shoppers questioning where the groceries they buy are manufactured. Despite pledges by many of the leading manufacturers in the UK not to produce private label versions of their known and recognised brands, many shoppers feel both branded and non-branded groceries are produced in the same factory and price differences are not linked to quality but advertising costs.

Research conducted by Canadean found that 44% of UK shoppers believe that private label and national brands are produced in the same factory and it is only the packaging that is different. Moreover, the same survey found that 59% believe that the only reason national brands are more expensive than private label brands is because of national advertising costs and not the manufacturing process or ingredients used, again highlighting how shoppers cannot distinguish between branded and non-branded items. The findings will be of particular concern to branded manufacturers who look to position their

The extent to which consumers agreed that private label and national brands are in the same factories (% UK respondents) N=2000, February 2013





products around authenticity, heritage and premium ingredients to fend off the threat of cheaper alternatives.

This attitude will be particularly apparent when it comes to everyday staple grocery items. The research for example, found that 70% of shoppers believe that private label tinned foods are either "just as good" or "better" than branded items when it comes to quality, indicating this to be a particular product category where shoppers feel groceries are produced in the same factory. Emma Herbert, Research Manager, comments, "Although perceptions of the quality of private label products have been improving for decades, these findings show that shoppers now believe they can actually get their preferred brands for a cheaper price because it is presented in supermarket style branded packaging. This will be a significant blow for branded manufacturers who look to differentiate from store-own products by promoting attributes such as brand authenticity, heritage and expertise in manufacturing".

While shoppers have difficulty telling the difference between branded and non-branded products when it comes to staple groceries, they are more likely to believe that private label brands are inferior in the alcoholic beverage and personal care categories. For example, 52% thought that private label beer products were of inferior quality compared to national brands, whilst 44% said the same when it came to hair care, indicating shoppers will be less inclined to believe that products are manufactured in the same factories in these product categories. Ms. Herbert concluded, "Fortunately for manufacturers of luxury items, shoppers believe that national brands are of better quality and as such will be produced separately where there is greater expertise. Therefore brand loyalty will be higher in these categories meaning that shoppers will be less inclined to switch to cheaper alternatives".







PART 1

In this issue of the HACCP International Bulletin, we look at some of the main articles and provisions below, considering the impact where we can on the food industry and consumer. We strongly recommend that you download a copy of the regulations from the Europa website if you want to see the proposed text in full. In the next issue we will complete our summary of these important new Regulations.

The European Parliament approved the text for a new Food Information for Consumers Regulation on 6th July 2011 and this was adopted by the Council of the European Union on 29th September 2011. Most requirements do not apply until 2014 and the nutrition labelling requirements of the regulation become mandatory in 2016. With the year 2014 bearing down fast upon us, now is the time to be prepared.

Consumer confidence in food, and in particular, what's in it, has certainly dipped in the recent past. We have been through the unidentified horse meat in meat products issue, and non halal meat in halal products, which has particularly upset consumers in some parts of Europe, home to this intransigence. At the same time we are living in an era of an ever growing obesity problem in many parts of the developed world, and certainly in Europe. The European Union now has increasing, and most would agree, credible, concerns over the mounting costs of this particular public health issue. It seems appropriate therefore to look at the forthcoming Food Information Regulations and we discover that they are an evolution rather than a revolution on the existing labelling regulation framework. But they will support the stated aim of these forthcoming regulations, which is to achieve a high level of health protection for consumers and to guarantee their right to information, permitting them to make informed choices in relation to food they consume. The regulations underpin this with intent to prevent any practices employed by food producers in labelling that may mislead the consumer.

The update is timely - Directive 2000/13/EC, relating to the labelling, presentation and advertising of foodstuffs contains provisions dating back to 1978, and the provisions within

Directive 90/496/EEC on nutrition labelling date back to 1990.

- 1. The regulations apply to food business operators at all stages of the food chain and with regard to foods intended for the final consumer, including foods delivered by mass caterers and foods intended for supply to mass caterers. The regulations also apply to catering services provided by transport undertakings when the departure takes place on member state territories. On the basis of this article we can take it to mean that they will apply to airline, train and ferry catering services.
- 2. Fair information practices are demanded, ensuring that food information shall not be misleading particularly in regards to:
 - a. The characteristics of the food including nature, identity, properties, composition, quantity, durability, country of origin or place of provenance, method of manufacture or production.
 - b. Attributing effects or properties which the food does not possess.
 - c. Suggesting that the food possesses special characteristics when in fact all similar foods possess such characteristics.
 - d. Suggesting by means of appearance, description or pictorial representation the presence of a particular ingredient when in reality a component naturally present has been substituted with a different component.
 - e. Ensuring that food information shall be accurate, clear and easy to understand for the consumer.
 - f. Ensuring that food information shall not attribute to any food the property of preventing, treating or curing a human disease, nor refer to such properties.

All of the above also apply to advertising and the presentation of foods. This will require particular care and one might suppose a requirement to validate claims such as "builds strong bones to CONTINUED ON PAGE 18

prevent osteoporosis" or "guaranteed to shorten the symptoms of colds and flu".

3. Food business operators that supply food to other food business operators, food which is not intended for the final consumer, or to mass caterers, shall ensure that those other food business operators are provided with sufficient information to enable them to meet their obligations under this legislation.

This could be considered as a kind of food information "traceability" to ensure accurate transcription of labelling information from, for instance, raw materials that are contained in a finished packaged product, to ensure accuracy of label of that finished product.

Consumer confidence in food, and in particular, what's in it, has certainly dipped in the recent past.

- 4. The list of mandatory particulars to be listed on a label are as follows :
- The name of the food
- The list of ingredients
- Any specific ingredient or processing aid listed in annex II causing allergies or intolerance and still present in the finished product even if in altered form.
- The quantity of certain ingredients or categories of ingredients.
- The net quantity of the food.
- The date of minimum durability (the use by date).
- Any special storage conditions and / or conditions of use.
- The name or business name and address of the food business operator.
- The country of origin or place of provenance where required.
- Instructions for use where their absence would otherwise make it difficult to use the food appropriately.
- Alcoholic strength by volume for beverages containing more than 1.2% by volume of alcohol.
- A nutrition declaration.
- 5. Mandatory food information shall be marked in a conspicuous place so as to be easily visible, clearly legible and not in any way hidden, obscured, detracted from or interrupted by any other written or pictorial matter. Character font size must be a minimum of 1.2 mm "x" height, literally the height of a lower case "x" as it appears on the label in any word (for instance in the word "Appendix" the "x" shall be 1.2mm). Where packaging or containers have a largest surface area of less than 80 cm2 the character "x" height shall be minimum 0.9 mm. This mandatory information, except minimum durability date shall be available before the conclusion of purchase of pre-packed foods offered for sale by means of distance

communication and the information must appear on the material supporting the distance selling.

In a growing internet food sales market, the sellers will need to be preparing for this, although one can see the potential for difficulty in policing and enforcing the regulations here!

- 6. The list of ingredients must be headed or preceded by a suitable heading which consists of or includes the word "ingredients". All Ingredients shall be included in descending order of weight as recorded at the time of their use in the manufacture of the food. The following foods however will be exempt from the requirement to bear a list of ingredients:
 - a. Fresh fruit and vegetables, which have not been peeled, cut or similarly treated.
 - b. Carbonated water where it is described as carbonated.
 - c. Fermented vinegars derived from a single basic product.
 - d. Cheese, butter, fermented milk and cream to which no ingredient has been added.
 - e. Food consisting of a single ingredient, where
 - i. The name of the food is identical to the ingredient name, or
 - ii. The name of the food enables the nature of the ingredient to be identified.

With regard to this last point (e), pre-packed sugar, salt or pepper might provide for a good example of this type of food.

In our next bulletin we complete our analysis of the regulations, starting with everyone's favourite subject – allergens!



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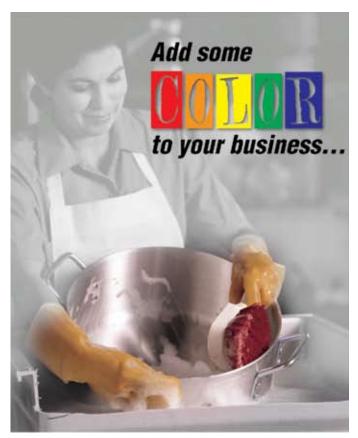
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ISO 22000 and Event Management Organisations

A lead auditors view of food safety management in a high profile sector

Danny Littlechild, from Certification Body QMS, provides us with an overview of ISO 22000 in an Event Management Company. QMS PLC is an international organisation which specialises in assessment and certification. QMS has associate offices around the world and has issued more than 19,000 Certifications in 60 countries, to standards such as ISO 9001, ISO 14001 and ISO 22000.

ISO 22000 provides a set of requirements for a Food Safety Management System (FSMS). It was initially developed to provide a worldwide and recognised Standard for Food Safety. It is regarded as a broader, flexible standard because the prerequisite requirements of ISO 22000 are not solely specific to food manufacturing and can be applied to any stage of the food supply chain including, for instance, storage, distribution, retail and mass catering. As a result, it is providing an excellent solution to the complex processes that event management companies are require to manage. Such organisations are required to show that they have developed a documented food safety system, identified hazards through a HACCP Plan and that the system is effectively monitored and measured to ensure that the identified controls for hazards are effective. With every event being different, it is not so easy to rely on standard processes.

Event Management Companies are now seen as being 'one stop shops' providing a full service for events as varied as country weddings, product launches, concerts, one off sporting events and corporate PR displays. Most often they are providing food to a very large number of people at a one-off event. In the past, several food poisoning outbreaks have been attributed to this kind of mass preparation and service of food. Loss of key controls such as cold storage and holding times, food handler health assurance, poor cleaning and even the use of inappropriate catering equipment and materials, have been attributed with the cause of food safety or food poisoning incidents.

It is essential that any service the Event Management Companies provide, that requires handling of food, is conducted in a safe and efficient manner and that the process has been evolved to ensure that the food provided is safe for consumption. Using the old adage of 'what gets measured gets done' as a basis, records and timely reactions to data are the best ways of demonstrating adherence to the food safety management system.

A food management system such as those carrying an ISO 22000 certification, combined with your HACCP plan, can only increase clients' confidence as to the level of service. The preparation of a HACCP plan for a business as complex as event management is not easy and obtaining certification is difficult with so many risks and variations to consider and control but a food poisoning outbreak at any function will ensure the business is lost and will pose a real threat to the company itself.



Laying the table is one thing but serving safe food is another!

The work environment and infrastructure must be capable and sufficient to produce safe product so it is important that the HACCP plan includes venue information, including layout and use of equipment in kitchens, raw materials approval, control of cross contamination in preparation areas, control of transport of the food around venues as well as the many other factors that are peculiar to the event itself. They are never the same.

There is little more complicated than event management and HACCP mangers in this field have to face complex issues

The Hazard Analysis enables identification of the hazards and the related control measures that the subsequently developed HACCP plan requires will be used to reduce or eliminate all those hazards. All identified hazards must be eliminated or reduced to acceptable levels through the use of controls. Controls include Pre-requisite Programs, critical control points and operational Pre-requisite Programs. The HACCP plan will need to include the planned actions that will be taken if there is an out of control CCP or PRP and with the variable nature of event management – these can be many! They must include determination as to which products may have been affected, how the product will be controlled and how the process or system must be put right.

With experience, the nature of the risks in event management will take on a pattern and can be grouped but considerable experience and analysis is required to do this. That said there will always be unusual circumstances presented by the one-off nature of event management and new one-off hazards will present themselves. These need addressing in the event planning stage and any risk that is not covered might require a single-use or event specific prevention measure. Such measures will in time accumulate to give a library of solutions to the event manager that can be called upon to deal with the unusual nature of the business .

There is little more complicated than event management and HACCP mangers in this field have to face complex issues that are totally different to those faced in manufacturing or processing. High risk products, time pressures and transient staff complicate it. Investment in a certified food safety scheme is essential and the requirement of management commitment and investment is vital.

Certification to ISO 22000 is an ideal solution to any Event Management Company looking to offer assurance to its customers of its ability to perform to the highest standards.

Danny Littlechild, Lead Assessor

QMS International PLC, www.gmsuk.com



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FACTERIA Superbugs may have a soft spot, after all

The overuse of antibiotics has created strains of bacteria resistant to medication, making the diseases they cause difficult to treat, or even deadly. But now a research team at the University of Rochester has identified a weakness in at least one superbug that scientists may be able to medically exploit.

Biologists Gloria Culver at Rochester and Keith Connolly, now at Harvard University, thought one key to stopping the bacteria may lie with proteins, so they studied the mechanism behind the development of bacterial ribosomes — the cell's protein-manufacturing machine.

"We targeted the ribosomes in our research because cells and organisms can't live if they don't make proteins, and they can't make proteins if their ribosomes aren't functioning properly." said Culver.

Culver and Connolly specifically worked with cultures of E. coli, a bacteria commonly found in the intestines. While E. coli is usually harmless, some strains are resistant to antibiotics and can cause serious food poisoning.

They discovered that two proteins already present in E. coli cells – RbfA and KsgA – need to be in balance with each other in order for ribosomes

to function. If those proteins are present in the wrong concentrations, the ribosomes will not mature properly and will be unable to produce proteins, leading to the death of the cells. Their findings are being published this week in the journal Molecular Microbiology.

Culver said with the discovery that KsgA and RbfA.must be balanced for the cells to function properly, the next goal is to determine an effective way to disrupt that balance.

Crucially, RbfA does not exist in humans. "That may make it possible," Culver said," to kill E. coli without having a harmful effect on people."

Eric Brown, a professor of biochemistry and biomedical sciences at McMaster University in Hamilton, Ont., calls their work creative and scholarly. "Ribosome assembly represents a rich target for much needed antibacterial drugs to treat drug-resistant infections," said Brown, "and this work offers new and important insights into the process."

Culver explained the role the proteins play in ribosome maturation. A healthy ribosome is made up of two compartmentsor subunits – that must come together only when each one is mature. An overabundance of RbfA hurries the process along, which could result in an ineffective structure. The job of the KsgA is to bind with the smaller of the compartments, preventing the formation of the ribosome until both parts are ready.

Culver says RbfA and KsgA belong to "the chicken or the egg" category of microbiology. While they're essential to the development of ribosomes, the ribosomes themselves are needed to create proteins, including the RbfA and KsgA. She calls it an ongoing and intriguing question for biologists.





are they the meat of the food related illness problem?

A US study points the finger

NEW YORK (AP) – A big government study has fingered leafy greens like lettuce and spinach as a leading source of food poisoning, a perhaps uncomfortable conclusion for health officials who want us to eat our vegetables.

"Most meals are safe," said Dr. Patricia Griffin, a government researcher and one of the study's authors who said the finding shouldn't discourage people from eating produce. Experts repeated often-heard advice: Be sure to wash those foods or cook them thoroughly.

While more people may have become sick from plants, more died from contaminated poultry, the study also found. The results were released Tuesday by the Centers for Disease Control and Prevention.

Each year roughly 1 in 6 Americans – or 48 million people – get sick from food poisoning. That includes 128,000 hospitalisations and 3,000 deaths, according to previous CDC estimates.

The new report is the most comprehensive CDC has produced on the sources of food poisoning, covering the years 1998 through 2008. It reflects the agency's growing sophistication at monitoring illnesses and finding their source.

What jumped out at the researchers was the role fruits and vegetables played in food poisonings, said Griffin, who heads the CDC office that handles foodborne infection surveillance and analysis.

About 1 in 5 illnesses were linked to leafy green vegetables – more than any other type of food. And nearly half of all food poisonings were attributed to produce in general, when illnesses from other fruits and vegetables were added in.

It's been kind of a tough month for vegetables. A controversy erupted when Taco Bell started airing a TV ad for its variety 12-pack of tacos, with a voiceover saying that bringing a vegetable tray to a football party is "like punting on fourth-and-1." It said that people secretly hate guests who bring vegetables to parties.

The fast-food chain on Monday announced it was pulling the

commercial after receiving complaints that it discouraged people from eating vegetables.

Without actually saying so, the CDC report suggests that the Food and Drug Administration should devote more staff time and other resources to inspection of fruits and vegetables, said Michael Doyle, director of the University of Georgia's Center for Food Safety.

Earlier this month, the FDA released a proposed new rule for produce safety that would set new hygiene standards for farm workers and for trying to reduce contact with animal waste and dirty water.

Meanwhile, CDC officials emphasised that their report should not be seen as discouraging people from eating vegetables.

Many of the vegetable-related illnesses came from the norovirus, which is often spread by cooks and food handlers. So contamination sometimes has more to do with the kitchen or restaurant it came from than the food itself, Griffin noted.

Also, while vegetable-related illnesses were more common, they were not the most dangerous. The largest proportion of foodborne illness deaths – about 1 in 5 – were due to poultry. That was partly because three big outbreaks more than 10 years ago linked to turkey deli meat.

But it was close. CDC estimated 277 poultry-related deaths in 1998-2008, compared to 236 vegetable-related deaths.

Fruits and nuts were credited with 96 additional deaths, making 334 total deaths for produce of all types. The CDC estimated 417 deaths from all kinds of meat and poultry, another 140 from dairy and 71 from eggs.

Red meat was once seen as one of the leading sources of food poisoning, partly because of a deadly outbreak of E. coli associated with hamburger. But Griffin and Doyle said there have been significant safety improvements in beef handling. In the study, beef was the source of fewer than 4 percent of food-related deaths and fewer than 7 percent of illnesses.

Credit: Centers for Disease Control and Prevention www.cdc.gov/eid/



The HACCP International certification and endorsement process supports organisations achieving food safety excellence in non-food products, material, consumables and services that are commonly used in the food industry. The HACCP International Certificate of Conformance (often referred to as a 'CoC') is particularly aimed at those organisations that are required to supply 'food safe', 'compliant or 'approved' products and services to their food safety conscious customers.

Such products or services are usually those that have incidental food contact or might significantly impact food safety in their application. Food safety schemes, particularly the leading ones which are GFSI endorsed, require food businesses to subject many such products to a 'due diligence' process and the HACCP International certification is designed to meet this. This independent assessment and verification of fitness for purpose offers assurance to the buyer or user that food safety protocols and processes will not be compromised in using such a product or service correctly, that such a product is 'fit for purpose' and that it makes a contribution to food safety in its application.

Certified products have been rigorously evaluated by HACCP International's food technologists and, in their expert estimation, are manufactured and designed to meet all the appropriate food safety standards. In performing the assessment, they look for 'world's best' in terms of food safety features and characteristics. The food technologists undertaking these reviews, as well as being highly qualified, also have extensive industry and manufacturing experience. Only products that are assessed as meeting the criteria can carry the mark. Quite often, organisations are required to make modifications to the product, design, delivery, literature or recommendations in order to comply. This process is therefore particularly useful for products that are designed for many industrial applications.

There are 10 key components reviewed in this process and certified products need to demonstrate their conformance in all the relevant facets. The ten key components are:

- Materials and specifications
- Zerozicity
- Contamination risks
- Ease of cleaning
- 5 Operating instructions
- 6 Consequences of error
- Batch and process controls
- Claims
- Packaging and labelling
- 10 Contribution to food safety

In addition to these, service providers are also assessed, through an audit process, in terms of:

- HACCP and food safety awareness
- Food Safety Training
- Documentation and reporting
- On site service delivery
- Standard Operating Procedures

HACCP International is accredited by JAS-ANZ, as a 'Conformity Assessment Body' (CAB). JAS-ANZ is member of, and signatory to, The International Accreditation Forum (IAF). HACCP International's product certification scheme is titled 'Food Safe Equipment Materials and Services'. (Accreditation No: Z4621010AN)

The companies listed on page 25 carry a range of excellent food safe products or services certified and endorsed by HACCP International. For more details, please visit www.haccp-international.com or email info@haccp-international.com. The contact numbers for our regional offices can be found on the back cover of this bulletin. ■

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CATERING AND FOOD SERVICE EQUIPMENT	CHEF INOX (I) HOSHIZAKI (I)	FACILITY FIXTURES, FLOORING AND FIT OUT	PHILIPS LIGHTING ROXSET
	MACKIES ASIA PACIFIC (I) S.P.M. DRINK SYSTEMS S.r.I. (I)	CONTINUED	THORN LIGHTING (I) UNIVERSAL FOOD SERVICE DESIGN
CLEANING EQUIPMENT	CARLISLE CLEANING EQUIPMENT (I) CHAMPION MACHINERY HK LTD (I) ESWOOD	FOOD INDUSTRY SERVICES	SHADOW GROUP SKILLED GROUP
	GLOBAL CHAMPION (Shanghai) LTD (I) OATES CLEAN SABCO	FOREIGN BODY IDENTIFICATION	SMITH HEINMANN ACTIVE MAGNETIC RESEARCH(I)
	STEAMASTER AUSTRALIA	LABELS - FOOD GRADE	OMEGA LABELS W W WEDDERBURN
CLEANING CHEMICALS KITCHEN MATERIALS AND SANITATION PRODUCTS	3M (I) BAXX (I) BIOZONE SCIENTIFIC (I)	MAGNETS	MAGNATTACK GLOBAL (I)
	BUNZL CHAMPION CHEMICALS LTD CLOROX (I) CONCEPT LABORATORIES DEB GROUP (I) EDCO (EDGAR EDMONDSON) KIMBERLY-CLARK (I) LALAN SAFETY CARE	MANUFACTURING EQUIPMENT COMPONENTS & CONSUMABLES	BIOCOTE (I) BSC MOTION TECHNOLOGY ENMIN (I) FCR MOTION ITW POLYMERS & FLUIDS LANOTEC (I) SICK SMC PNEUMATICS (I)
	OATES CLEANING PREMIUM PRODUCT SOLUTIONS (I) TORK	PEST CONTROL EQUIPMENT AND MATERIALS	BAITSAFE(I) BASF (I) BAYER (I)
CLEANING & MAINTENANCE SERVICES TO THE FOOD INDUSTRY	ACE FILTERS AERIS HYGIENE SERVICES (I) BORG CLEANING CHALLENGER CLEANING SERVICES ICE CLEAN INDUSTRIES		BELL LABORATORIES INC (I) PEST FREE AUSTRALIA (I) STARKEY PRODUCTS (I) WEEPA PRODUCTS
	INTEGRATED PREMISES SERVICES ISS HYGIENE SERVICES METROPOLITAN FILTERS OZ TANK PINK HYGIENE SOLUTIONS	PEST CONTROL SERVICES	AMALGAMATED PEST CONTROL ARREST-A-PEST CPM PEST & HYGIENE SERVICES ECOLAB ISS
CLOTHING, DISPOSABLE GLOVES AND PROTECTIVE WEAR	KIMBERLY-CLARK (I) LALAN GLOVES SAFETYCARE LIVINGSTONE INTERNATIONAL PARAMOUNT SAFETY PRODUCTS		ORIGIN EXTERMINATORS RENTOKIL SCIENTIFIC PEST MANAGEMENT STAR PEST CONTROL
	RCR INTERNATIONAL STEELDRILL WORKWEAR & GLOVES SCA HYGIENE	REFRIGERATION, GOVERNORS, EQUIPMENT AND DATA SYSTEMS	AERIS HYGIENE SERVICES (I) CAREL DIGINOL (I) MISA(I)
FACILITY FIXTURES, FLOORING AND FIT OUT	ALBANY DOORS (I) ALTRO SAFETY FLOORING & WALLING (I) BASF CONSTRUCTION - UCRETE BLUE SCOPE STEEL (I) CARONA GROUP DEFLECTA CRETE DYSON AIRBLADE (I) GENERAL MAT COMPANY	STORAGE EQUIPMENT & PACKING MATERIAL	REJUVENATORS ACHIEVE AUSTRALIA DALTON PACKAGING NETPAK RCR INTERNATIONAL SCHUETZ DSL
	HALTON (I) HIDRIA GIF (I) MANTOVA	THERMOMETERS, PH METERS AND DATA LOGGERS	3M TESTO (I)

(I) indicates that the company offers products or services with global compliance or registration. Others have a national registration in one or more countries



CERT ID - The World's leading Non-GMO Certification

http://www.cert-id.com/Certification-Programs/Non-GMO-Certification.aspx

The headline says it all! A robust, internationally recognised certification programme now delivered in Australia by HACCP Australia.

Food allergies explained

http://www.accupos.com/pos-articles/food-allergy-guide-for-restaurants.php

A lot of great info here on food allergies, particularly relevant for the food service sector. Read this then do our online allergen training course from our website! (Link supplied by Katlyn from Delaware...thanks)

A collection of every food safety article known?

www.barfblog.com

Image a man who scans the globe on a daily basis collecting and referencing food safety articles. Does such a man exist? Can such a man dedicate his every waking minute to food safety? Yes and Yes! Meet Dr Doug Powell.

What's For Dinner?

http://www.taste.com.au/

Mmmm! Easy to make a choice here from 24,000 (yes, twenty four thousand) recipes. Thank goodness it is indexed and searchable. I think they should have a mystery pick where 1 from 24,000 gets chosen for you. Fantastic. 199 artichoke options!

Some bacteria are OK!

http://www.livestrong.com/article/279639-list-of-foods-made-with-bacteria/

We spend a lot of time working out how to kill or stop bacteria. But there are a lot of them around. Actually, the weight of all bacteria on earth is possibly more than the weight of all plants and animals combined! And some of them are good! Find out here which ones are used to make food and what foods need them.

Things that make you go Argh...

www.weirdfood.com

OK, if you couldn't find something to wet your appetite on the recipe page above, this one may help. Unusual foods from around the world including recipes for such mouth-waterers as Rootworm Beatle Dip. Mmm Mmm.





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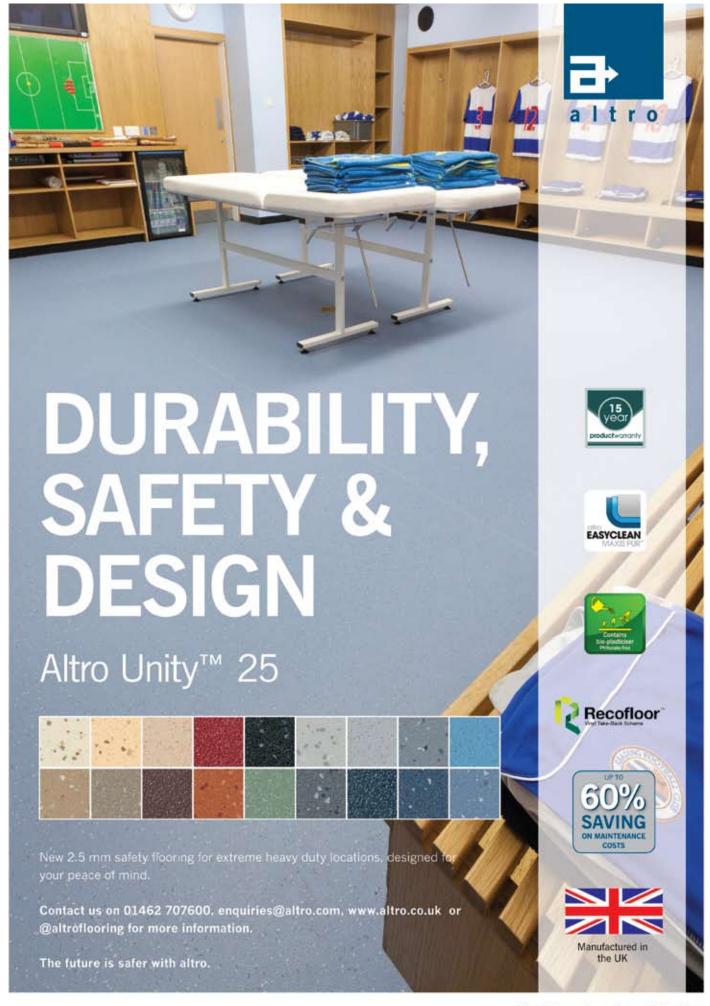


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