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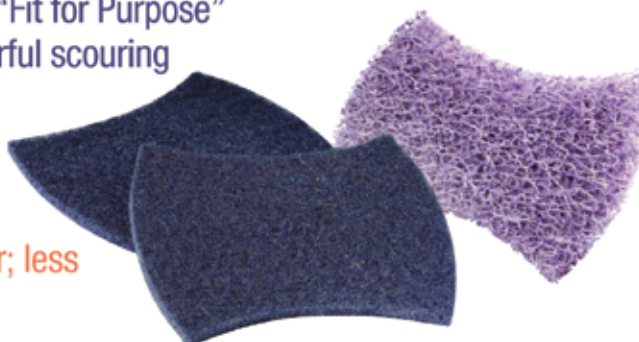
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# Welcome

## Food industry prospects looking good – let's be ready

The world economy lurches from glimmers of light to dark clouds and back again with what appears to be metronomic regularity. Political and economic tensions continue to put pressure on governments and industry in all parts of the world and many western companies are struggling in this environment. However, the food industry has always lived in difficult circumstances (and none more so than primary producers in Africa) but it's a state to which we are accustomed. So the prospect of significant growth, as is forecast for forthcoming years, is met with a smaller groan than usual – the equivalent of a euphoric squeal in any other industry sector!

**With this industry growth and product shift comes an increasing need for food safety vigilance, initiative and discipline**

We should perhaps be less doleful. The prospects are bright. This growing sector presents substantial opportunities to those companies that are committed to this industry for the long term. It does have its challenges - sustainability, climate change, an increasing population, GMO issues and massive dietary shifts, especially in Asia. This last issue is well illustrated by 'Yum!' which has opened 800 KFC restaurants in China in 2011 alone and has plans to open a further 650 more in 2012. It speaks volumes that a single brand can manage such a task in itself but even starker is the change this mirrors in diet as a result of a burgeoning middle class in China. China itself has begun to reveal plans for significant agricultural investment and capacity increase in coming years while other Asian economies such as those of Malaysia and Thailand have been developing food industry capabilities and capacity for many years.

With this industry growth and product shift comes an increasing need for food safety vigilance, initiative and discipline from food safety and food science organisations all over the world. We at HACCP International recognise this and are committed to providing highly qualified, well informed robust and technically sound advice and services to our customer throughout the world. To this end, we have embarked on a programme of stationing expert technical resources in more and more countries in the coming months. Singapore and Fiji are the two most recent stations to come on line with further offices scheduled to open in America, Asia and the Indian sub-continent in the near to mid-term future. We look forward to being even more available and better able to serve our customers with very best resources in this rapidly changing industry.

Our accredited 'Food Safe Equipment, Materials and Services' scheme continues to attract much attention and uptake as food companies as are increasingly required to fulfil due diligence processes in selecting products that have incidental food contact or have a significant impact on food safety. Particularly impressive products that have undergone this process in the last few months include Hoshizaki's range of ice machines and refrigerators (as featured in this bulletin), 'Glad' from Clorox, a significant number of Testo's temperature and measurement devices, pest control chemicals and devices from both BASF and Bayer, the UK's Biocote's antimicrobial additive and 3M's complete global range of scourers/scourers sponges (see opposite page). All these products can be used by the food industry with total confidence as to their fitness for purpose and food safety characteristics. A more detailed list of certified product suppliers can be found on page 27.

Our service is highly differentiated by the quality of technical assistance and marketing benefits that we bring to our customers. We are particularly proud of the response from them as to the quality and value of the benefits that such advice and support bring. Do come and talk to us about it. HACCP International will be on show at a number of events in the coming few months – in particular, the BRC Food Safety Conference in The UK in March, of which it is proud to be the headline sponsor, the FHA in Singapore in April and soon after as sponsors of the Food Awards in Australia. Wherever you find us, you are more than welcome to talk to us. We are always delighted to help whether it is in seeking the very best food safe materials and equipment or just to engage in 'technochat'! Otherwise just drop us an email.

Thanks very much for reading. ■



*Clive Withinshaw - Director,  
HACCP International*



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**SP** can fit every location and represents a unique solution for coffee creams, ice cappuccino and sorbets.

Technical data	SP1	SP2	SP3
Dimensions (WxDxH)	25,2x42,7x61,2cm	44,7x43,8x61,2cm	62,75x43,8x61,2cm
Bowls capacity litres	5	5+5	5+5+5
Net Weight	28Kg	48Kg	65Kg



## SOFT ICE CREAM MAKER



GT1 | GT2

The first over counter Soft Ice Cream machines introduced exclusively by **SPM DRINK SYSTEMS**.

An elegant design and style, made of **GT1** and **GT2** a benchmark in the field and scored a real change for the frozen market.

Technical data	GT1	GT2
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Bowls capacity litres	6	6+6
Net weight	28	46



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The choice of SPM DRINK SYSTEMS: HACCP mark for food safety.



# Salmonella in Europe and in the USA – WHERE ARE WE?

By Richard Mallett, European Director of HACCP International  
and one of our resident microbiologists.

The UK Health Protection Agency has informed the UK Food Standards Agency of an outbreak of Salmonella Newport that has infected over 30 people in the UK since December 2011. The source of the outbreak has not been confirmed but a potential link to watermelons has been identified. One person with underlying health problems has died in the outbreak. The situation is being monitored in conjunction with the European Commission, other countries, local authorities and the food industry. Cases of illness from the same strain of the bacterium have arisen in Scotland, Ireland and Germany. In the meantime the EFSA has issued advice concerning good food hygiene practice and the need to wash or peel fruit and vegetables.

Outbreaks associated with salmonella contaminated fruit or salad items have occurred in the past with recent outbreaks being linked to lettuce for instance and fruit items. These were almost certainly linked to poor hygiene practices contaminating such items during harvest, washing, processing and/or packing. Fruit and salad are not a “normal” source of this organism – it is found in the guts of infected animals – with eggs and poultry being most commonly associated with human illness.

Salmonella has been the subject of the Food Standards Agency’s five year strategies in the past but is not specifically considered in the 2010 to 2015 plan which instead concentrates on the development of risk management strategies to reduce the incidence of illness caused by Campylobacter and E. coli O157. The former due to sheer numbers of cases and the latter relating to a higher incidence of fatality within infected patients.

This does not mean that the importance of Salmonella has been ignored. Indeed, the European Food Safety Authority (EFSA) has recently released reports and evaluations relating to the reduction of Salmonella in laying hens and pigs through 2010 and 2011. What is interesting though is that last year’s

report issued by the EFSA and the European Centre for Disease Prevention on zoonoses and food borne outbreaks in the EU for 2009. That report showed Salmonella cases in humans falling by 17% that year, the fifth consecutive, annual decrease. The figure for the number of laying hen flocks infected with Salmonella also reduced by 9%. Compare that to the USA where the health authorities are reporting Salmonella as the most common cause of food borne illness with no real progress being made in the last 15 years. Salmonella infections in 2010 were broadly unchanged from 1996 to 1998, but up 10% from the period 2006 to 2008.

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food chain.**

Meanwhile the EU is celebrating the fall in Salmonella cases as a great achievement and relates it to the control measures implemented by the European Union and EU member states. In 2009, 17 Member States met their Salmonella reduction targets for laying hens and the proportion of EU laying hen flocks infected with the targeted Salmonella types continued to fall (3.2% in 2009 compared to 3.5% in 2008). The number of human cases dropped from 131,468 in 2008 to 108,614 in 2009.

So what is Salmonella? It is one of the most undesirable of the bacteria to be present in the human food chain. The earliest salmonella infection to be reliably described is said to be credited to the French physician, Pierre Bretonneau, who published a paper on typhoid fever in 1829. There are around 2300 antigenic variants currently recognised. These bacteria are shaped like rods,



½ micron by roughly 1 to 3 microns in size. A micron is a unit representing just 1/1000 of a millimetre. They can grow in food from just above 5°C to up to 47°C but the fastest growth rate is at 37°C. This is no surprise of course – we know that the normal source of the organisms is within the gut of warm blooded animals. They are readily destroyed by pasteurisation temperatures and by the commonly used sanitisers and disinfectants in the food industry. Resistance to heat is markedly enhanced in foods with a lower water content which goes part way to explaining how outbreaks involving chocolate can, and have, occurred.

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The most common symptom of food borne illness is commonly referred to as enteritis. This describes a gastrointestinal infection which becomes apparent after an incubation period of approximately 6 to 48 hours. Mild fever, nausea, vomiting, diarrhoea and abdominal pain may last for a few days, after which the disease is self limiting. Complications, including death are possible in the very old, very young or those with current

chronic illness of certain types. Ingested organisms survive the stomach acid and then stick to the epithelial (surface) cells of part of the gut. They are then engulfed by these cells and multiply. This causes an influx of inflammatory cells which, together with the chemical toxins that Salmonella produces, leads to typical diarrhoeal symptoms. Generally around 1 million cells must be ingested to elicit this reaction but studies from outbreaks have also pointed to an infective dose as low as 10-100 cells.

How can we reduce the number of outbreaks? Well in the EU as a whole, as reported above, it is something of a good news story and EU implemented controls seem to be working. What about at a local level – in the domestic kitchen and the hotel, restaurant and catering sector? We can go some way by remembering these simple rules:

- Wash and/or peel salad, fruit and vegetable items.
- Keep cold food cold.
- Cook food to at least 70°C.
- Keep hot food hot.
- Segregate raw poultry and eggs (consider them infected).
- Clean and sanitise your surfaces – food and hand contact surfaces, especially if they have been used to handle raw poultry or eggs.
- Wash your hands, especially after handling raw poultry and eggs or touching surfaces where they have been processed or stored. ■



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**Halton**





**The gulf between our fears and the facts of this E coli story may put us in greater danger, says risk consultant David Ropeik.**

The outbreak of foodborne disease in Europe offers an interesting lesson in the psychology of risk perception. To be sure, the danger from this outbreak is real. It has killed 18 people so far and infected more than 2,000, hundreds of whom may suffer lifelong kidney damage. Cases have been recorded in 10 countries, but all were infected in northern Germany. In addition, this appears to be a new and more dangerous strain, a reminder of the constant battle medicine and public health must wage against the phenomenal ability of germs to mutate to resist our controls.

Certainly this risk is far more real than, say, the hypothesised human health risks from GM foods, or the disproved risk that vaccines can cause autism – other threats that demonstrate how our response to risk is more emotional than evidence-based. The number of dead and ill from this foodborne disease outbreak is already higher than the likely long-term mortality and morbidity caused by the Fukushima nuclear power plant accident in Japan, based on what we know so far about the dosages of radiation released (though that event is still unfolding).

But the actual danger for any vegetable-eating European, even in Hamburg or other places where the cases have been concentrated, is low. Statistically. Scientifically. But then, we don't just use scientific evidence or statistical probabilities to figure out what's dangerous. Risk perception is a mix of facts and feelings, intellect and instinct, reason and gut reaction. And in many cases, the feelings/instinct/gut have the greater influence.

This is neither right nor wrong, smart or stupid, rational or irrational. It's simply the reality of how we go about protecting ourselves, using the few facts we have, and applying a set of instinctive risk perception "fear factors" that help us gauge, quickly and subconsciously, how scary those few hints and clues feel.

The problem is, as good a job as this instinctive system has done during human evolution, it can make mistakes. Dangerous mistakes. We can fear too much (vaccines), or too little (particulate pollution from coal-burning power plants), despite the available evidence, and our perceptions can create risks all by themselves. Excessive fear of vaccines is allowing diseases that had almost been eradicated to spread once more. Conversely, inadequate concern about coal-burning power stations has meant coal has been favoured over scarier nuclear

power, risking sickness and death for thousands of people from particulate air pollution. Fukushima is now playing a powerful part in this retreat from nuclear power.

So watching this foodborne E coli outbreak unfold has been instructive. Why, if the actual risk for any given person is so low, does it feel so scary to so many? The study of risk perception has found that uncertainty raises fear. We are uncertain about this risk for two reasons. First, science doesn't have all the answers, about which foods are risky, where they came from and so on. Second, any invisible/odourless/tasteless risk like this that we can't detect with our own senses is scary because we don't know all we need to know to protect ourselves. And in this case there is great uncertainty because of the unknown nature of the organism, and the difficulty in tracking down where it originated. That's a lot of unknowns, which make the risk scarier.

If you think a risk can happen to you, it doesn't matter what the numbers say. Many risk communication experts work hard to find clearer ways to help people understand risk numbers, as though that will make us think about those numbers more rationally, but if a risk is only, say, one in a million, but you think you could be the one, you are likely to worry at least a little, because your job is to keep yourself alive, not the other 999,999.

High awareness also increases fear. Subconsciously, the danger-detection systems in the brain give extra weight to information that's coming in all the time, or that can be readily recalled. This "availability heuristic" then feeds on itself in a positive feedback loop. We pay more attention to information that could mean we are at risk, and the media, in fierce competition with each other to bring us the information we want, feed this appetite, and feed our fears.

These are just three among many specific components of our instinctive risk perception system that can lead to the "perception gap": the gap between our fears and the facts. This gap presents its own, very real risks. In this case there are a lot of people who aren't eating vegetables – any vegetables. That's not good for their health. Hundreds of thousands of people are more worried than necessary, and more worried than normal, and chronic worry produces the myriad damaging health effects of stress (including a weakened immune system, which makes us more vulnerable to the very bacterial infections about which people are worried in the first place).

In addition, this outbreak will cost a huge amount of money, and damage the livelihoods and lives of thousands of people engaged in the produce and food industries across Europe.

I am not criticising people for being irrational about risk. Science has taught us just how inescapably instinctive and emotional the system is. But it is valuable to observe that the way we perceive and respond to risk can itself put us at risk. Understanding that, and understanding the specific elements that make a given risk more or less frightening than the facts alone suggest, is the first step toward avoiding the dangers of the "perception gap", and making healthier choices for ourselves and for society. ■

David Ropeik is an instructor in the Harvard University Extension School and author of *How Risky Is It, Really? Why Our Fears Don't Match the Facts*.

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[guardian.co.uk](http://guardian.co.uk)



**“Because of its HEPA filter, the Dyson Airblade™ hand dryer is the only one capable of capturing bacteria. It dries hands quickly and has an anti-microbial coating. That’s why HACCP International certified it for use within the food industry. We recommend it as a suitable alternative to paper towels.”**

Richard Mallett, Director.  
HACCP International.



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\*Usage based on 2 towels per dry (data from Dyson internal research – Sept 2008). 1600W machine shown. Calculations include standby power. Cost based on 1 pence per paper towel (data from Dyson internal research – Jan 2010) and £0.1194 per kWh (data from Eurostat 2009 Semester 2 – published March 2010). Paper towel dispenser and Dyson Airblade™ hand dryer purchase costs are excluded from comparison. 10 second dry time based on NSF protocol P335. HACCP International Non-food certification Mark is the registered trademark of the International HACCP Alliance. Endorsement applies to AB01.

# BioCote® set the standard

within the food industry by achieving HACCP International certification

By Richard Hastings – Microbiologist at BioCote Ltd

The burden of gastrointestinal infections worldwide is huge (1). A considerable proportion of the millions of cases is attributed to contaminated food and drinking water (2). In the UK, the Food Standards Agency, Defra, the UK Poultry industry and major retailers have agreed to target food poisoning with the specific aim of reducing poultry contaminated with the bacterium *Campylobacter* by 17% by 2015, equating to a reduction of food poisoning caused by *Campylobacter* of 30% – about 90,000 cases per year (3).

Despite their relative simplicity, bacteria can be considered the most successful form of life on Earth. They can be found virtually everywhere and can extract nutrients from environments where other organisms cannot survive. Without bacteria, life on earth would quickly grind to a halt.

Bacteria, and their fellow microorganisms, the fungi, are directly useful to man in many ways, notably in the food and brewing industries. Unfortunately many types of infectious bacteria cause disease in plants, animals and humans due partly to the ways in which these bacteria can spread between individuals. Cross contamination is the name given to the unintentional spreading of bacteria between objects such as work surfaces, equipment and even humans. Cross contamination of disease-causing (pathogenic) bacteria is extremely undesirable when it leads to illness. A classic example of undesirable cross contamination is poultry meat becoming contaminated with bacteria during processing resulting in campylobacteriosis in humans as mentioned above.

Man's response to pathogenic bacteria ranges from simple cleaning with detergents and disinfectants to antibiotics and vaccines. More recently, advances in technology have allowed the adding of certain chemical agents to a wide variety of materials for the purpose of producing a manufactured item with a continuous antimicrobial property. One of the more successful antimicrobial agents incorporated into manufacturing materials is silver. The logic of this practice is simple; antimicrobial materials persistently lower the level of bacterial contamination in an environment, so the risk of cross contamination can be expected to be reduced.

BioCote Ltd is the world leader in the provision of additives to industry, the inclusion of which, in manufacturing materials, results in a product with a highly efficacious, antimicrobial feature that lasts the product's life time. The types of materials that can be so treated to become 'antimicrobial' are extremely diverse; from paper to laminates, polymers to lacquers.

There are many environments that lend themselves to the application of antimicrobial materials because of the importance of hygiene and the effects of cross contamination. The food and drinks industries are, therefore, obvious candidates for the application of the BioCote® antimicrobial technology. It is, however, important to point out that antimicrobial technology is a complement to good hygiene practice and not a solution in itself. Its benefit is one of synergy.



BioCote microbiologist, Richard Hastings

Antimicrobial technology sounds favourable but what is the evidence to support its use? Certainly the application of permanent feature antimicrobial products to hygiene-sensitive environments makes sense but there is a cost to the technology so a decision to include antimicrobial technology into a food processing environment, for example, should be based on a proven record of the technology to reduce levels of contamination beyond standard hygiene practice. Understanding of the precise role of the environment in human disease has never been well understood but our knowledge is increasing as relevant studies are performed and published by the scientific community. BioCote Ltd has been particularly active in quantifying the effect of its antimicrobial technology in situ and has published various, peer-reviewed studies describing the difference in bacterial contamination between materials treated with its technology and identical but untreated materials in comparable environments. Results are promising because counts of bacteria have been shown to be significantly lower than those on equivalent, untreated materials. These findings have been repeated in environments as diverse as a food factory, an acute hospital, a poultry processing site, a nursing home, and a university laboratory.

As stated, BioCote's® antimicrobial technology should be regarded as a beneficial and complementary to hygienic practices, which explains its certification by HACCP International.

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# Break the chain of contamination



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## 3M's line of Scotch-Brite™ Scouring Pads and Scrubbing Sponges endorsed as "Food Safe" and "Fit for Purpose" by HACCP International

St. Paul, MN – November 10, 2011 – HACCP International has endorsed a comprehensive range of Scotch-Brite™ Scouring Pads and Scrubbing Sponges to be used for cleaning applications in all food processing, preparation and food handling facilities that operate in accordance with an HACCP-based Food Safety Program.

3M has certified a full range of scouring products for use in commercial food service outlets. These include the iconic Scotch-Brite™ Medium Duty Scourer 96, Scotch-Brite™ Medium Duty Laminate Scourer 74 and 3M's full line of Scotch-Brite™ Light Duty to Heavy Duty Scouring Products. "Now any restaurant or food service outlet around the world can purchase Scotch-Brite™ Scouring Products and have the peace of mind that not only will they be an efficient, effective cleaning tool, but that they are certified food safe," says Mark Anderson, Global Portfolio Manager for 3M's Food Service business.

"3M produces an excellent range of Scotch-Brite™ Scouring Pads and Scrubbing Sponges to meet the needs of cleaning surfaces in contact with food," says Bill Simos, Managing Director, HACCP International. "During the evaluation review, our food technologists examine the product material, design specifications, manufacture, toxicity characteristic, contamination risk, labeling,

claims and its contribution to food safety."

HACCP International, headquartered in Sydney, Australia, provides certification to suppliers of products and services which display excellence in food safety and meet the needs of food business operating a HACCP based food safety program. HACCP International evaluates products and services which are submitted for certification using a risk based hazard analysis protocol based on the principles of HACCP as described in the Codex Alimentarius of the World Health Organization.

### About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$27 billion in sales, 3M employs about 80,000 people worldwide and has operations in more than 65 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow @3MNews on Twitter.

Contact: Colleen Harris, 3M 651-733-1566

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# Hoshizaki ice makers known for quality, food safety and clean ice



Hoshizaki has rightfully gained an international reputation for quality and reliability and is committed to building and supplying the highest standards in commercial ice making equipment, used by many of the world's most renowned restaurants, bars and retail operations.

All machines are designed and specified by Hoshizaki's dedicated Japanese Research and Development team which ensures Hoshizaki continues to devise new and innovative products that cement the company's position as one of the world's leading suppliers of ice machines.

Customers can depend on the continued high performance of Hoshizaki machines, supported by a two-year parts and labour warranty. The equipment is manufactured in Telford, England from high quality stainless steel and precision-made detachable parts, enabling easy cleaning.

Hoshizaki provides industry-specific solutions for the needs of the restaurant, bar, fresh produce, food processing, education, healthcare catering and clinical markets so operators can deliver the best possible service to their customers or clients.

The company is also noted for innovation and developing energy/water efficient, environmentally friendly (Hydro Fluorocarbon free) ice makers, adding value for the end-user through cost-saving and sustainability. Hoshizaki innovates in the sectors it operates. For example, in the hospitality sector, end-users can choose ice-makers that produce different types of ice from ball ice to flaked which make the difference in quality beverages such as cocktails.

The role of ice is a crucial one in the bar environment as it not only chills drinks, but as it melts or is shaken it becomes a part of the drink so it needs to be given as much consideration as the other ingredients. Hoshizaki designs and develops ice makers for the production of cube ice, crescent ice, flake ice, nugget ice, in addition to ice dispensers.

With the ever-greater scrutiny of hygiene and health and safety guidelines in the foodservice sector, it is crucial that operators can demonstrate best practice in minimising the risk of bacterial contamination. Fully WRAS compliant for water ice quality/safety and economy, Hoshizaki machines help fulfill this requirement by using a closed-cell ice making system with automatic rinse and flush cycles that ensure the production of ice meets the requirements of HACCP Based, Food Safety Programmes.

The IM, KM and FM ranges of ice machines provide great flexibility in ice production with capacities of 22-1800kg of very high quality ice per 24 hour period. There is a model to suit the requirements of all sectors and the different sizes of operation within them.

At its upscale London restaurants, the Hakkasan Group installed Hoshizaki machines throughout. Bekir Gurfer, Design and Development Manager at Hakkasan Ltd, commented: "We

chose Hoshizaki units because of the brand's reputable status. It is fundamental that the equipment we use is robust and efficient so that, in our busy bar for example, we are able to produce a high quality of ice to keep up with customer demand."

The Hakkasan group say they chose the IM240DME and IM240DWME cube ice machines for their high-capacity production needed for the bar mixologists serving up amazing cocktails. The machines create exceptionally hard ice cubes that melt very slowly to maximize cooling without diluting a drink, particularly important in their signature premium cocktails such as The Hakka (vodka, Akashi-tai sake, lychee juice, lime, coconut and fresh passion fruit).

Meanwhile, the FM120EE-N, FM120EE50-N and FM170EE50-HC-N machines answered Hakkasan's kitchen requirement for cooling fish and keeping it in prime condition without causing freezer burn.



Hakkasan was the first UK establishment to install Hoshizaki's FM170EE50-HC-N hydrocarbon unit, which is the world's first hydrocarbon ice maker which meets the European standard IEC 60335 (set for domestic or similar appliances).

This means the machine can be installed in a small space, unlike other commercial ice makers that demand large space to comply with safety regulations.

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# The main changes to requirements in issue 6 of the BRC Global Standard for Food Safety

## PART 2

An article by Richard Mallett, European Director at HACCP International, with information kindly provided by David Brackston of the BRC.



Richard Mallett, European Director of HACCP International



David Brackston, Senior Technical Services Manager

Audits against Issue 6 of the BRC Global Standard for Food Safety commenced in January of this year. Whilst, in the words of the BRC, the changes made represent an evolution rather than revolution over the requirements of Issue 5, there are some potential pitfalls if the Standard is not read through properly and a serious gap analysis performed. We hope that this overall summary of the some of the key changes will help you.

## Section 1 - Senior Management Commitment

- The section has been reorganised and now includes some requirements previously in section 3. For instance, *Organisational structure* (1.2) and *quality policy statement* (1.1.1). The link between a company's policy statement, the setting of objectives and targets to achieve the policy, measurement of results and review through the management review process is made through requirements 1.1 - 1.3. Setting Quality Objectives was always part of the requirements of Issue 5. Now there is a requirement to document clear targets / measures of success, to monitor progress against the objectives and to report at least quarterly to senior management. The key word here is 'measurable'. Pick objectives that will lead to improvements and can be measured in some way. Think of these as just a few examples: Training of x% of staff in y months. An

improvement in hygiene audit score from 80 to 85% within 6 months. An improvement in surface swab results so that at least 90% are within target of x. Reduction in damages reported from 3% to 1.5% within 1 year. Above all, make sure the objectives have some advantage to the operation..

- The company shall have a demonstrable meeting programme (i.e. evidence will be required) whereby quality, food safety and legal issues to be brought to the attention of senior management at least monthly. Perhaps set up a simple agenda (Production quality issues, hygiene audit results and issues, non conformances and complaints for the last month, resources etc) and set in stone that the meeting, involving x,y and z, being conducted on the last Friday of each month, with minutes circulated to senior management, or better still, senior management involved.
- The company's senior management shall ensure that the root causes of non conformances identified at the previous BRC audit have been identified and addressed. It is worth starting to get used to the idea of root cause analysis now. When we review the clauses on corrective action this term will crop up again! A non conformance has occurred. Why and how did it happen? What root factors allowed or caused this to happen? An example: Cleaning chemicals are routinely left out, close to food / food areas. The corrective action is not just "ask the staff to put them away". It is now an investigation – why does this happen? Have we got sufficient lockable storage areas? Are they appropriately sited? Do we have appropriate key-holders?

## Section 2 - The Food Safety Management System – HACCP

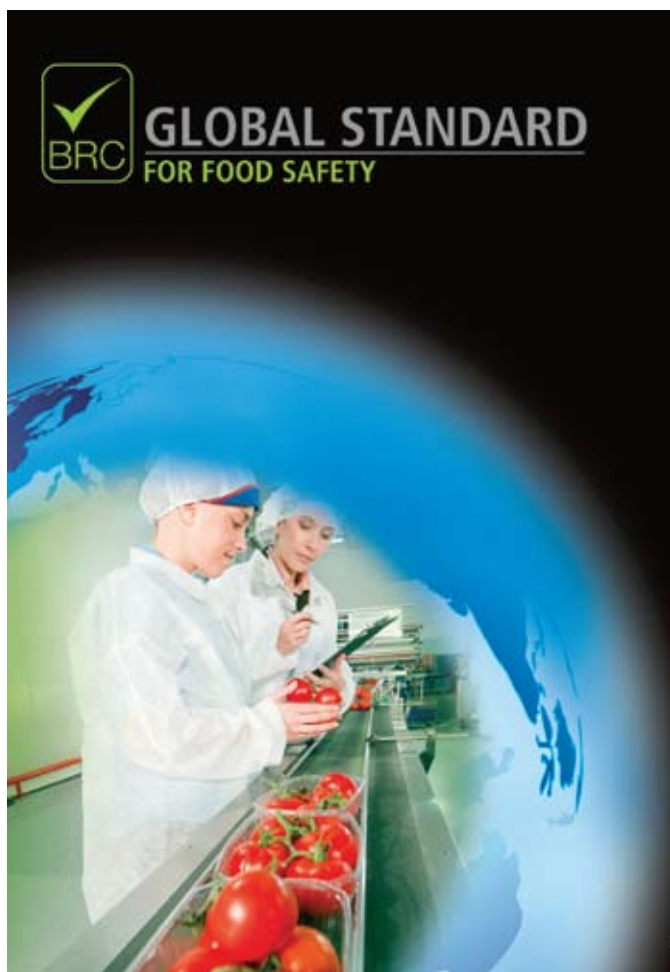
The mandatory requirements have been expanded somewhat over Issue 5. There are revised clauses on managing the pre-requisite programmes, a change that brings the Standard in keeping with the level of detail given to pre-requisites in ISO 22000.

In summary, section 2 on HACCP in Issue 6 places a greater emphasis on the implementation and validation of the pre-requisite programmes. It states that the pre-requisite control measures must be clearly documented and included in the development and review of the HACCP programme. So what does this mean in practice? What is a pre-requisite programme? Try to think of it as a "site-wide" or "covering all process steps" control, as opposed to a process specific control. Now thinking of some examples becomes easy:

- Pest control is a site wide control – the management of pests is crucial over all areas of the factory and loss of control could affect any process step.
- Cleaning and sanitation falls under the same definition – it's no good concentrating on some areas and leaving others dirty – the potential for cross contamination from these dirty areas renders the HACCP plan ineffective. The list goes on of course in much the same way including (but not exclusively):
  - Staff training
  - Personal hygiene rules
  - Maintenance

That is quite different to a process specific control. These exert control at one or few places in the overall process. Think for instance of:





- Pasteurisation at a pasteuriser
- Metal detection
- A thermal processing step applied to food
- A specific packaging gas mixture used at a packaging machine
- A deliberate “at process” check such as a specific goods inspection or analysis following a defined instruction.

Issue 6 of the BRC Global Food Safety Standard requires that:-

- You document clearly the pre-requisites. This means a proper cross reference (perhaps a separate table?) within the HACCP Plan showing which pre-requisite controls manage which site-wide potential hazards. Include references to the SOP numbers or the Quality Manual containing these procedures.
- You validate these pre-requisites and include them in HACCP development and review. You should be able to manage this through an internal audit programme. But beware that validate means “check that they are effective at reducing the hazard” – constant pest issues recorded means that the pest control programme cannot be validated as effective and thus will put at risk the HACCP Plan. Cleaning and sanitation can be validated by visual checks and a programme of rapid or conventional microbiological swabs – this is scientific and ultimately tells us we’re doing a good job. But just swabbing one area all the time doesn’t validate!
- And your HACCP review audit or meeting checklist (yes it should be this formal) should require an examination of your pre-requisite programmes. Are they effective or do we need to do more?

## Section 3 - Food Safety and Quality Management System

Although much of the actual content of this section remains similar to Issue 5, it has been re-organised with the transfer of some clauses to section 1, the removal of customer focus entirely and inclusion of *control of non conforming products* (3.8) which was formerly in section 4 of Issue 5.

The *internal audit* (3.4) requirements have been extended to include process/environment inspections, often carried out as part of a “hygiene audit” check, and require that this check is carried out at with a minimum frequency of monthly. This is both an example of the greater GMP focus of Issue 6 and of the appearance of some mandatory procedural frequencies. This is a sensible move forward in ensuring that fabrication, equipment or housekeeping issues can be dealt with in a timely fashion – something that would not really be possible with, for instance, quarterly audits in certain circumstances.

Greater emphasis has been placed on *Supplier and Raw Material approval and performance monitoring* (3.5). This now requires a documented risk assessment of raw materials (3.5.1.1) as the basis for establishing raw material supplier approval and sampling regimes. You will need to consider each raw material or raw material group, the credible hazards that could arise from them and the level of control you can or cannot exercise in eliminating these hazards. Your approval, testing and inspection criteria should be clearly based on this. Within section 3.5 requirements for suppliers of raw materials (3.5.2) have been separated from the management of suppliers of services (3.5.3). A new section has been included to cover the *management of outsourced processing* (3.5.4). This covers intermediate parts of a process which may be undertaken at another site e.g. Agglomeration of powders or maturation of cheese and ensures transparency to customers.

Requirements for *corrective actions* (3.7) and *complaint handling* (3.10) both now include requirements to ensure the root cause of the Issue is addressed.

The only change to the requirements for *Traceability* (3.9) is the inclusion of guidelines for the time, 4 hours, to retrieve records. This has been introduced to ensure information can be produced quickly in case of a recall. In practice, however, auditors will use the traceability exercise to undertake a review of processing records associated with the products chosen for the trace exercise.

*Product recall* now includes the requirement (3.11.4) to notify the Certification Body within 3 days of a recall being undertaken. This ensures that any incident can be reviewed and customers can have full confidence in certificates issued.

## Section 4 - Site Standards

*Site security* has attained greater significance with the global spread of the Standard and particularly where products are exported to the United States. A documented risk assessment of security arrangements is now included (4.2.1) to ensure security risks are adequately addressed. In practice this means you must consider each area of your facility, externally and internally, access and movement routes and areas in which food products, equipment, plant and chemicals are stored. Consider how easy it would be for an intruder to gain access to these areas. What current safeguards do you have – Is the actual site secured by

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means of fences/gates? Are all appropriate doors locked? Is signage apparent? Are monitoring systems, such as CCTV, used? Are areas always manned or are they empty for periods of a time?

*High risk/high care* – The Standard has attempted to clarify where high risk and/or high care areas are required by introducing a decision tree and new guideline. The intention is to ensure a consistent interpretation. The requirements for high risk areas were always strict of course, but the requirements for high care areas have been increased particularly in respect to changing facilities (4.8.4) and segregation between high care and low risk areas (4.3.5). This reflects the protection which needs to be provided to high care products to control the risk from pathogens. In both cases, risk assessment forms an integral part of satisfying the clauses. For high risk areas clause 4.4.13 requires that they shall be provided with sufficient changes of filtered air, with filter specification and frequency of air changes documented.

**Allergens (5.2) continue to be the cause of a significant number of product recalls in both North America and Europe.**

The *lay out product flow and segregation* (4.3) section has been extended with a requirement for a site plan showing different risk zones (4.3.1) and incorporation of process and staff flows (4.3.2). There should be clearly identified risk zones for enclosed product, low risk product, high care product and high risk product. This assists the organisation of process flow, identification of potential cross contamination points and appropriate levels of processing environment control. It should dictate and direct the implementation of pre-requisite programmes and the level at which they need to be implemented. Clearly, the cleaning of a high care area with open product should be at more depth and more frequent than the cleaning of an enclosed product storage / warehouse area.

*Building Fabric* (4.4) has been condensed but the expectation of sites is unchanged from Issue 5.

In recognition of the risk that water contamination can play in product safety a plan of the water system is now required (4.5.2). This is to be used in defining water sampling points and identifying areas where water may require treatment. A plan of water drainage is also required for high care or high risk areas to verify that there is no risk from drainage flow.

Within *Staff Facilities* (4.8) the requirements for both high care (4.8.4) and high risk (4.8.5) changing facilities are now more detailed to ensure a consistent approach and reflect established industry best practise.

The management of the risks to products of *chemical and physical contamination* (4.9) and *methods for detection and removal of foreign material* (4.10) has always had a high priority within the Standard. Within Issue 6 these requirements have been extended considerably to try to ensure a consistent approach. In particular the clauses reflect the management of risks from different materials and the different technologies available for removal of contamination. Included now are specific sections

on managing products packaged into brittle containers. The controls demanded are in place to prevent physical contamination of product from glass and brittle materials caused by breakage, and consequent clean down of production lines in which brittle containers are used. There are also clauses in place for the management of filters and sieves, X ray detection equipment, magnets and optical sorters as detection devices. The clauses require, where appropriate to the system employed, procedures for verifying operating effectiveness, integrity and inspection checks. Depending on the type of production undertaken, some requirements may not apply.

*Housekeeping and Hygiene* (4.11) is an area that was identified from the initial consultation as requiring greater emphasis and an area where most variability occurred on customer audits of certificated sites. Accordingly, audits will generally incorporate observation of line-change cleaning and may require dismantling of equipment for inspection where this does not adversely affect production. Cleaning standards are now required to be defined and validated to be appropriate for the particular risk (4.11.2). The new clause 4.11.3 expects resources and the planning of cleaning to take account of the cleaning of equipment which is only acceptable outside of production periods. New more detailed requirements have also been introduced to cover Cleaning in Place (CIP) systems (4.11.6) where these are used in liquid processing plants e.g. Dairies.

In recognition of increasing legal requirements on the use of “waste” food for animal feed, a new requirement (4.12.3) has been added to ensure products for animal feed are handled correctly.

The *Pest control* section has been revised to provide greater clarity on the expectations of a site where pest control is undertaken by the site (4.13.2). There is a new requirement for in depth pest control surveys (4.13.8) typically quarterly in addition to the routine pest control measures to provide an overview of the pest control programme.

The requirements for Storage (4.14) and for *Dispatch and Transport* (4.15) have been separated into two sections and more details have been added to the management of dispatch and vehicle checks. Off-site storage facilities owned by the company must now be included in the audit or specifically excluded where these are within 50 Km of the main site. This is to ensure products are not at risk when stored.

## Section 5 - Product Control

*Product design and development* (5.1) has been slightly revised to ensure that the development process does not unwittingly introduce new hazards to the production facility e.g. allergens without this being properly considered. Guidelines on products for development (5.1.1) and sign off of new products by the HACCP team leader (5.1.2) have been added to ensure new hazards are controlled.

*Allergens* (5.2) continue to be the cause of a significant number of product recalls in both North America and Europe. This area of the Standard has been revised to ensure that some of the main causes of the Issues are fully addressed. The list of controls to consider in making a risk assessment (5.2.3) and introducing allergen control procedures (5.2.4) have been extended. New clauses have been introduced to cover validation of cleaning methods to remove allergenic materials when changing products (5.2.8) and product change over and

label checks (5.2.10). There is now a need for all production staff to be given a general allergen awareness training (5.2.9) to have an understanding of the Issues. Where it is not possible to prevent cross contamination the use of warning statements on products in line with legislative or industry guidelines has been added (5.2.6)

There are an increasing number of assurance schemes for primary agricultural products which require an assessment of the chain of custody in packing and processing operations to allow a claim to be made on products. To address that need and prevent the need for additional inspections the section on *identity preserved materials* (5.3) has been extended and renamed to specifically cover assurance claims. This includes verification of origin of raw materials (5.3.1), mass balance checks at least 6 monthly (5.3.2) and review of process flows to identify and control risks of product mixing or loss of identity (5.3.3).

The interaction between food and its contact *packaging* (5.4) has been an emerging food safety issue. The new requirement (5.4.1) extends previous requirements concerning certificates of conformity for packaging and obliges the sharing of information on product characteristics and usage to allow the correct packaging to be used.

## Section 6 - Process Control

Control of operations (6.1) has been reworded to ensure that the production process is managed through recipes and process specifications to control not only product safety but also consistent quality of the products produced (6.1.1). New clauses have been added to ensure that the production lines are checked before start up and at product changes (6.1.6) and that the correct packaging is used, and packaging changes and coding are carefully controlled (6.1.7) to prevent errors.

There have been no significant changes to requirements for *Quantity control* (6.2) or *Calibration* (6.3)

## Section 7 - Personnel

This section of the Standard has been simplified with some rewording. The use of temporary workers, often supplied by Agencies, has been a significant development in recent years and auditors have been asked to ensure that temporary staff have been adequately trained and are aware of site hygiene rules. The *Training* section (7.1) has been extended by the requirement for sites to be able to retrieve training records for agency trained staff (7.1.4).

Requirements for *personal hygiene* (7.2) have been simplified to make these clearer. The wearing of jewellery, other than plain wedding rings or wedding wrist bands, is not permitted in production areas (7.2.1).

*Medical screening* (7.3) requirements have been reworded to take account of personal privacy laws which are present in some countries (7.3.2).

The requirements for *Protective clothing* (7.4) remain largely unchanged. Auditing of laundries however now only applies to laundries for High care/high risk clothing (7.4.4).

We wish all those food processors going through an audit against Issue 6 of The Standard this year the very best of luck – and take this opportunity to assure you that, with proper consideration of the changes within Issue 6, against what you may have had in place for Issue 5, it is not an onerous task. ■

# FACTERIA

## The Golden Grapes – Staphylococcus aureus

By Martin Stone - HACCP Australia

Named for their appearance under the microscope and the typical yellow colonies they form on agar, *S. aureus* is a human pathogen that was first isolated in 1880 from surgical infections. Well known as 'Golden Staph' as the bacteria responsible for a range of skin infections such as boils, pimples and more serious infections. A major concern in the medical field is the emergence of antibiotic resistant strains of the bacteria which have the capacity to kill patients recovering from surgery through infection. The organism is also responsible for food poisoning illness in a range of foods.

Between a third and half of the population are carriers of the bacteria (often in nasal passages) at any time so the potential for contamination from human sources is clearly high. The bacteria causes food-borne illness through the production of a toxin and an infective dose is reached when less than one millionth of a gram of toxin is consumed in the food. This level of toxin is achieved when about 100,000 cells are present per gram of food and can occur in a few hours of infected food being left at room temperature. A feature of the toxin is its heat stability. Even if the food is reheated and the bacteria are destroyed (they are killed easily with heat above 65 degrees Celsius), the toxin will remain viable and will cause illness.

*S. aureus* food poisoning is often associated with dairy, meats, poultry and egg and protein based salads. The bacteria are also salt tolerant and can grow in foods such as cured hams. Symptoms include vomiting, diarrhoea, nausea etc and rapidly onset (2-4 hours) and last for around 24 hours before the recovery phase of the illness is underway.

Control of the bacteria in food is managed by the basic food safety principles. Hand hygiene and the correct temperature control of foods are critical. Coughing and sneezing over food is also thought to be a primary source of introducing the bacteria into the foodstuff. Handling foods when infections such as boils or pus wounds are present is also a major risk scenario.

*Staphylococcus aureus* – the golden grape – a common source of rapid onset gastroenteritis, but one that can be easily controlled through appropriate food safety handling techniques. ■



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In this section are a few food safety and food related news snippets from around the world. Keep up to date with trivia as well as news!

## From the UK

### 'It's Fresh!' goes bin-pack at M&S

Marks & Spencer became the first UK retailer to use "It's Fresh!" ethylene-remover technology inside its strawberry punnets on Monday this week. The retailer hopes its introduction will help reduce food waste as part of its Plan A sustainability target.



The small in-pack strip is supplied by UK firm It's Fresh and although the technology has been used in transit packaging by other retailers in the past, M&S is the first to use it 'in-pack'. It means that shoppers will be able to store berries in the fridge for two days longer than previously. Trials carried out by the retailer showed a minimum in-store wastage saving of four per cent during the peak summer strawberry season, which equates to some 40,000 packs. Hugh Mowat, M&S agronomist said that fruit taste will be as good six days after purchase as on the day of purchase. "This new technology is a win-win for our customers – not only will their strawberries taste better for longer, but we really hope it will help them to reduce their food waste as they no longer need to worry about eating their strawberries as soon as they buy them."

The It'sFresh! strip measures just 8cm x 4.5cm and does not affect the recyclability of the packaging. The active ingredient in the strip is a patented mixture of minerals and clay, offering over one hundred times greater ethylene absorption capacity compared with any other known materials. The retailer is now looking to extend the use of It'sFresh! "This new technology is a very exciting step forwards for the fresh fruit industry and we hope that we can extend the use of it into more of our products during 2012," added Mowat.

'It's Fresh!' has supplied the technology to other UK retailers for transit packaging, however, this is the first time it is being used in packaging for consumer products 'It'sFresh!' have supplied the technology to other UK retailers for transit packaging, however, this is the first time it is being used in packaging for consumer products.

Simon Lee It'sFresh! director said: "Our technology is focused on food freshness designed to increase consumer satisfaction, taste and quality, through simple, safe, sustainable solutions. We are delighted to be pioneering this British technology with M&S on strawberries and are working on other products that will be in-store in the near future".



## From India

### McDonald's India to double outlet network in 3 years

The Economic Times - India

MUMBAI: Fast food chain McDonald's India has said it plans to double the number of outlets it has in the country to 500 over the next three years at an investment of Rs 1,000 crore. The American fast food chain is being operated in the country by two franchisees. While Hardcastle Restaurant - promoted by Amit Jatia - runs the chains in the West and South, Vikram Bakshi-led Connaught Plaza Restaurants runs the outlets in the North and East.

Together, these two franchisees run 250 McDonald's outlets in the country.

"We have about 250 McDonald's outlets now and we will double the number in the next three years. Hardcastle runs about 130 restaurants and we will take it to 250 outlets in the next three years with an investment of Rs 500 crore," McDonald's India (West & South) Vice-Chairman Amit Jatia told PTI here.

The rest of the outlets will be added by Connaught Plaza, which has about 120 stores now. The combined investment will be to the tune of Rs 1,000 crore over the three-year expansion period, Jatia informed.

A significant number of the new outlets will be drive-throughs, which are typical highway outlets where take-away orders are encouraged.

McDonald's has 45-50 drive-through outlets in the country at present and the franchisees are keen to more than double the number of outlets they operate in this format.

"Drive-throughs is a big focus for us. We want to more than double its reach. The investment is more for a drive-through, but we don't give a breakup for the investment," Jatia said.

The company has tie-ups with Bharat Petroleum, Hindustan Petroleum and IndianOil to set up drive-throughs at their petrol pumps.

McDonald's also plans to double its headcount in the next three to four years by adding 2,500 people each year.



"Today, we have about 12,000 working with us. We will double this in the next three to four years," he said.

On the attrition level in the company, he said it is comparatively better than the industry average of 70 per cent, at 30 per cent.

The company has managed to keep its prices affordable despite high input costs, Jatia said, adding that normally, McDonald's hikes prices by 3-4 per cent on an annual basis.

McDonald's India has set up farm and processing facilities that are owned by suppliers. It sources almost 98 per cent of its inputs locally.





## Mafia grip on Italian food sector putting industry at risk, report

By Jane Byrne, 23-Jan-2012

Mafia involvement in the Italian food industry is rife, with revenue from the agriculture and food sector generating 5.6% of the entire organised crime business in the country, finds a new parliamentary report.

The study, prepared by the Italian parliamentary commission of inquiry and released at the end of last week, concludes that the food sector is worth 12.5bn to criminal groups, who are undercutting prices paid to producers, and boosting trade in counterfeit Italian foodstuffs.

The report was informed by hearings over a 12 month period from prominent food industry stakeholders such as the directors of the buffalo mozzarella and balsamic vinegar trade associations.



The parliamentary inquiry, which concluded that organized crime has entered into every aspect of food supply chain from production to transport to supermarkets, also heard from the national anti-Mafia prosecutor, Dr Pietro Grasso and, Sergio Marini, the president of Italy's biggest farmers' group, Coldiretti.

### Price control

Coldiretti claims the safety and perceived standard of Italian food is "at risk" due to products such as olive oil and cheese being "passed off" as being of Italian origin and branded 'made in Italy', but in fact obtained with cheaper, imported raw materials often of dubious quality.

The agricultural organisation claims farmers' incomes are being hit and Italian consumers are being overcharged due to the fact that these criminal groups are dictating producer and retail prices.

"The prices of fruit from field to table even triple due to the infiltration of the underworld in the transport business," said Coldiretti, in an emailed statement to FoodNavigator.com.

And Mafia investigator Grasso is calling for legislation to be amended to ensure organised crime's control on the Italian agri-food industry is curtailed.

The parliamentary report calls for greater collaboration among international authorities to control trade in counterfeit goods and also urges more training of all the national bodies involved to hinder the manufacture of fraudulent goods as well as co-operation between the Italian civil and criminal court system in this regard.



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## Coriander oil could tackle food poisoning and drug-resistant infections

Coriander oil has been shown to be toxic to a broad range of harmful bacteria. Its use in foods and in clinical agents could prevent food-borne illnesses and even treat antibiotic-resistant infections, according to the authors of a study published in the Journal of Medical Microbiology.

The researchers from the University of Beira Interior in Portugal tested coriander oil against 12 bacterial strains, including *Escherichia coli*, *Salmonella enterica*, *Bacillus cereus* and methicillin-resistant *Staphylococcus aureus* (MRSA). Of the tested strains, all showed reduced growth, and most were killed, by solutions containing 1.6% coriander oil or less.

Coriander is an aromatic plant widely used in Mediterranean cuisine. Coriander oil is one of the 20 most-used essential oils in the world and is already used as a food additive. Coriander oil is produced from the seeds of the coriander plant and numerous health benefits have been associated with using this herb over the centuries. These include pain relief, ease of cramps and convulsions, cure of nausea, aid of digestion and treatment of fungal infections.

This study not only shows that coriander oil also has an antibacterial effect, but provides an explanation for how it works, which was not previously understood. "The results indicate that coriander oil damages the membrane surrounding the bacterial cell. This disrupts the barrier between the cell and its environment and inhibits essential processes including respiration, which ultimately leads to death of the bacterial cell," explained Dr Fernanda Domingues who led the study.



The researchers suggest that coriander oil could have important applications in the food and medical industries. "In developed countries, up to 30% of the population suffers from food-borne illness each year. This research encourages the design of new food additives containing coriander oil that would combat food-borne pathogens and prevent bacterial spoilage," said Dr Domingues. "Coriander oil could also become a natural alternative to common antibiotics. We envisage the use of coriander in clinical drugs in the form of lotions, mouth rinses and even pills; to fight multidrug-resistant bacterial infections that otherwise could not be treated. This would significantly improve people's quality of life."



From the USA



## US and Canada compromise on organic equivalency for certain meats, dairy

By Caroline Scott-Thomas, 02-Feb-2012

The United States and Canada have taken another step toward organic equivalency, with US organic standards for dairy, beef, sheep, goat and bison now considered equivalent to Canadian requirements.

To qualify as organic in the US, ruminants must receive 30% of their feed during the grazing season from organic pasture, and must be out on pasture at least 120 days per year, with year-round access to the outdoors and living conditions that allow for natural livestock behavior.

In order to streamline organic trade, the two countries have agreed to scrap an additional requirement for US ruminants regarding stocking rates, or how many animals are allowed in a given area. Deputy administrator of the USDA National Organic Program Miles McEvoy said in a statement: "The USDA organic regulations hold ruminant producers to strict standards. We

are pleased that Canada agrees that these requirements meet or exceed its standards."

Products for non-ruminant animals, such as poultry and swine, are not included under this latest agreement. Such



products must still be verified under Canadian rules on stocking rates in order to qualify as organic.

This latest change is part of ongoing efforts in both countries to harmonise organic standards. The USDA and Canadian Food Inspection Agency came to an agreement on organic equivalency standards in June 2009, in order to expand organic trade opportunities. It allowed for both the USDA Organic seal and the Canada Organic Biologique logo to be used on certified products in either country.

There had been concerns about differences between Canada's organic certification standards and American organic regulation, with one of the major ones being that some US organic farms allow the use of sodium nitrate in soil, while it is not permitted on Canadian organic farms.

The countries came to a compromise, allowing products that have been certified as organic under US rules to stay on the market, but this has since been phased out. Since July 2009, agricultural products produced with the use of sodium nitrate are not allowed to be sold or marketed as organic in Canada. ■



<http://www.foodnavigator-usa.com>

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## "Food safety misconceptions?"

Recently the Technical Coordinator of Hoshizaki, global manufacturer of ice machines, featured elsewhere in this bulletin, came face to face with a common misconception regarding 'fitness for purpose' for food handling. We found this interesting as it supports our efforts in establishing HACCP International Certification as a global tool for eliminating risk from non food products and services used by the food industry.

Says Roy Bates of Hoshizaki, "Recently, I had cause to be part of an email conversation from end-user, through supplier, through company salesman and the equipment manufacturer, entitled "Pseudomonas bacteria". This was a conversation which originated from a UK, NHS facility rightly concerned about contamination and health.



Roy Bates of Hoshizaki

The end-user was demanding a piece of evidence to prove that ice from our machines protected patients from bacterial infection. The evidence he demanded actually had nothing to do with microbiological protection of the consumer, but was in fact a demand for evidence of compliance with a voluntary standard, called WRAS (Water Regulations Advisory Scheme) - designed to protect the interests of the water authorities. From the WRAS website you can find some of the aims of the scheme listed as:

- To develop criteria for testing materials and fittings to assess their compliance with the Regulators' Specifications for approved products in accordance with the Water Regulations.
- To assess the results of the testing of materials and fittings to determine their compliance with the Regulators' Specifications and to publish up-to-date lists of satisfactory materials and fittings in the Scheme's Water Fittings and Materials Directory.

The code of practice is primarily designed to ensure that precautions are in place to prevent contamination of mains drinking water from, for instance, materials or backflow into the supply point.

This set me thinking – how widespread is the misunderstanding of these various "compliances" and if

the manufacturer had proved compliance as demanded – would the end user be satisfied and install the equipment? I am not suggesting the equipment was in any way unsafe, but a certificate to prove that the equipment can be safely connected to a water supply has very little to do with what comes out of the dispensing nozzle of an ice making machine!

It is a little worrying if my assumption is fact. Could outbreaks of bacterial epidemics be more prevalent because of a widespread misunderstanding of the safety "certificates", or is this an isolated incident?

After reading and digesting HSE information sheet "Hygienic design of machinery in the food and drink industry", I found no mention of this particular "certificate" being a requirement – or even desirable, but what I did find is guidelines and requirements which exactly matched what HACCP International could offer through their assessment and certification scheme.

I sincerely believe the some customers can be misinformed or misguided and need the expert support and advice of someone like HACCP International, to ensure that real food-grade standards are achieved and upheld. ■

## The Tricorder

Letter to the Editor from Dan Flynn of Food Safety News - Feb 2012

Next to the Star Trek transporter, which could free us from both traffic jams and airport security lines, the Star Fleet tool we most need now is the tricorder.



We all remember the hand-held device that could scan, analyse and record, telling Captain Kirk in seconds about any new substance the Trekkers happened across on a distant planet.

The very name of the device came from its three primary scanning functions -

geological, meteorological and biological.

There were even medical and engineering upgrades to the standard tricorder.

The X Prize Foundation is offering a \$10 million prize to anyone who invents a real life version of the tricorder, the Huffington Post reported late last month.

CONTINUED ON PAGE 24

Huffpo quoted Dr. Peter H. Diamandis, chairman and CEO of the X-Prize, as saying such a device would “empower the consumer.”

It certainly would empower the consumer when it comes to food safety, would it not?

All those parents hyped up about arsenic in apple juice could just run a sample from their own bottle under the scanner and find out if it contains less than 10 parts per billion (ppb) of arsenic or not.

As long as it was not any bigger than a large microwave, we’d readily accept a larger box version of the tricorder just to get started. TV crime labs must already have working models of these devices, printing out reports on stomach contents or the results from environmental swabs.

“So, while I might be among those who don’t worry about a little arsenic, I understand why many others do!”

With one of these devices in every kitchen, we could take a half dozen hamburger patties and run them through a test for all strains of pathogenic E. coli. If they test positive, we could mail them to the American Meat Institute for further analysis.

We want our tricorder to be able to tell if the food we are testing really is organic or if it contains any ingredients from genetically modified organisms. Used widely, this device would change what we eat and it would dramatically change the food industry.

Until the X-Prize is awarded, we will have to manage to get along without it. It is inevitable, however, that technology will be developed to tell us what we really want to know.

People want to know what they are eating and drinking, and we all pretty much know that right now we do not know enough. Yes, you can read nutrition and ingredient labels, but then what?

How can parents not be confused when they read about arsenic, lead and orange juice chemicals from Brazil? They are told 10 ppb is the limit for arsenic in drinking water, 5 ppb for bottled water, but 23 ppb is OK for apple juice. Excuse me?

Almost everyone in the West has consumed more arsenic from water than the presently allowed levels. In the decade since EPA lowered the limit from 50 ppb to 10 ppb, and came through with a boatload of federal money for communities to improve water treatment, our exposure in many cases has been cut to zero.

So while I might be among those who don’t worry about a little arsenic, I understand why many others do. They do not want to hear someone from FDA say something that can cause harm is “generally safe.” They want to know how to avoid it. Period.

So whether it is arsenic or lead or various chemicals, the faster we empower consumers to do their own testing the better.

That day might be far in the future, but if I were in the food industry, I’d plan on it happening tomorrow and adjust my transparency practices accordingly. We are watching you now and we are only going to get better. ■

# HOT LINKS



## Chamber of horrors

<http://www.fda.gov/AboutFDA/WhatWeDo/History/ProductRegulation/ucm132791.htm>

In the early days of food legislation (1920s) the FDA in the US put together an exhibition showing why legislation needed to be amended. Some of these things on the market would cheat you, some would kill you!

## Big bad bugs

<http://www.giantmicrobes.com/>

Purchase stuffed toys in the shape of....you guessed it....bacteria! Choose leading species from a variety of human illnesses including food poisoning! E. coli is on my Christmas list!

## Wax Food in Japan

<http://nagao185.web.infoseek.co.jp/tennpura.wmv>

Wax food displays are used all over Japan in restaurant windows and provide ignorant foreigners with the opportunity to point and order. They look yummy and have zero calories! Learn how to make wax tempura with this video.

## Picture this

<http://content.photojojo.com/tips/food-photography-tips/>

Want to photograph food? Check this site out for 10 great tips for taking cool food photos. Grab a camera and start snapping but forget about shooting brown sauce...

## British Retail Consortium – Food Safety Standards

[www.brc.org.uk](http://www.brc.org.uk)

The British Retail Consortium is a leading trade association representing a wide range of retailers from the large multiples and department stores through to independents. Commonly referred to as ‘The BRC’, this organisation has various food safety standards which are commonly adopted by food companies all over the world. HACCP International offers auditing services to BRC standards.

## Undercover Boss

<http://www.dailymail.co.uk/news/article-2104085>

Watch a fast food CEO in action and under cover in the USA as he shuts down a burger restaurant on the spot! ‘Actually, I DO know something about this business’ ■



# NOBLE IDEAS FOR NOBLE KITCHENS



follows HACCP standards



The tailor-made, highly efficient systems from Hidria GIF represent a complete system for large catering establishments which is flawless in terms of ventilation, air-conditioning and hygiene.

Insufficient ventilation and air-conditioning, poor room air quality or insufficient structural conditions can lead to contamination of food products in the same way as insufficient cleaning of the kitchen equipment or dirty cooking appliances and cooking equipment.

The Hidria GIF system supports the HACCP standards providing 100% hygiene by cleaning the interchangeable system components (active cassettes) in the dishwasher. All elements can be inspected and are made of high-quality and durable AISI stainless steel.



The large-scale, uniform capture of exhaust air with only a small proportion of inactive areas enables the best possible discharge of contaminated air and, as a result, prevents fat and harmful substances from being deposited.

The fresh air is supplied on a large scale and uniformly due to the principle of layered flow. In this way, it is possible to ensure the best possible ventilation without draughts.

**As part of the entire kitchen fittings the HACCP-certified GIF Modular Ventilated Ceiling provides you with the opportunity to design your entire kitchen according to HACCP standards!**

Hidria GIF – Modular Ventilated Ceilings made in Germany as part of a system:

- **Modular ventilated ceilings**
- **Sound absorption ceilings**
- **Individual lighting**

All processes are geared to the HACCP concept, i.e. from purchasing to manufacture to installation and operation / after sales service. Any risks are therefore systematically avoided.

**Hidria GIF GmbH**  
Company of Hidria Corporation

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# FACT

## This product is food safe



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 reviewed 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:

- 1** *Materials and specifications*
- 2** *Toxicity*
- 3** *Contamination risks*
- 4** *Ease of cleaning*
- 5** *Operating instructions*
- 6** *Consequences of error*
- 7** *Batch and process controls*
- 8** *Claims*
- 9** *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 27 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](http://www.haccp-international.com) or email [info@haccp-international.com](mailto:info@haccp-international.com). The contact numbers for our regional offices can be found on the back cover of this bulletin. ■

## [www.haccp-international.com](http://www.haccp-international.com)



<b>CATERING AND FOOD SERVICE EQUIPMENT</b>	BREMA - ICE MASTER SYSTEMS HOSHIZAKI (I) KENCAN LTD MACKIES ASIA PACIFIC (I) S.P.M. DRINK SYSTEMS S.r.l. (I) TOMKIN	<b>FACILITY FIXTURES, FLOORING AND FIT OUT</b>	THORN LIGHTING (I) UNIVERSAL FOOD SERVICE DESIGN
<b>CLEANING EQUIPMENT</b>	CARLISLE CLEANING EQUIPMENT CHAMPION MACHINERY HK LTD (I) ESWOOD GLOBAL CHAMPION (Shanghai) LTD (I) OATES CLEAN SABCO STEAMASTER AUSTRALIA	<b>FOOD INDUSTRY SERVICES</b>	SHADOW GROUP SKILLED GROUP
<b>CLEANING CHEMICALS KITCHEN MATERIALS AND SANITATION PRODUCTS</b>	3M (I) ACTIVEION (I) BUNZL CHAMPION CHEMICALS LTD CLOROX CONCEPT LABORATORIES DEB GROUP EDCO (EDGAR EDMONDSON) KIMBERLY-CLARK (I) LALAN SAFETY CARE OATES CLEANING TORK	<b>FOREIGN BODY IDENTIFICATION</b>	SMITH HEINMANN WJB ENGINEERING (I)
<b>CLEANING &amp; MAINTENANCE SERVICES TO THE FOOD INDUSTRY</b>	ACE FILTERS AERIS HYGIENE SERVICES (I) BORG CLEANING CHALLENGER CLEANING SERVICES ICE CLEAN INDUSTRIES INTEGRATED PREMISES SERVICES ISS HYGIENE SERVICES METROPOLITAN FILTERS OZ TANK PINK HYGIENE SOLUTIONS	<b>LABELS - FOOD GRADE</b>	OMEGA LABELS W W WEDDERBURN
<b>CLOTHING, DISPOSABLE GLOVES AND PROTECTIVE WEAR</b>	LALAN GLOVES SAFETYCARE LIVINGSTONE INTERNATIONAL PARAMOUNT SAFETY PRODUCTS RCR INTERNATIONAL STEELDRILL WORKWEAR & GLOVES SCA HYGIENE	<b>MANUFACTURING EQUIPMENT COMPONENTS &amp; CONSUMABLES</b>	BIOCOTE (I) BSC MOTION TECHNOLOGY ENMIN (I) FCR MOTION HARRINGTON ELECTRICAL MOTORS (I) ITW POLYMERS & FLUIDS LANOTEC (I) SICK SMC PNEUMATICS (I)
<b>FACILITY FIXTURES, FLOORING AND FIT OUT</b>	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 HALTON (I) HIDRIA GIF (I) MANTOVA PALL MALL MANUFACTURING PHILIPS LIGHTING ROXSET	<b>PEST CONTROL EQUIPMENT AND MATERIALS</b>	BASF (I) BAYER (I) BELL LABORATORIES INC (I) EKORODENT PEST FREE AUSTRALIA (I) STARKEY PRODUCTS (I) WEEPA PRODUCTS
		<b>PEST CONTROL SERVICES</b>	AMALGAMATED PEST CONTROL ARREST-A-PEST CPM PEST & HYGIENE SERVICES ECOLAB ISS ORIGIN EXTERMINATORS RENTOKIL SCIENTIFIC PEST MANAGEMENT
		<b>REFRIGERATION GOVERNORS, EQUIPMENT AND DATA SYSTEMS</b>	AERIS HYGIENE SERVICES (I) CAREL DIGINOL (I) REJUVENATORS
		<b>STORAGE EQUIPMENT &amp; PACKING MATERIAL</b>	ACHIEVE AUSTRALIA CONFOIL DALTON PACKAGING HILLS INDUSTRIES NETPAK RCR INTERNATIONAL SCHUETZ DSL
		<b>THERMOMETERS, PH METERS AND DATA LOGGERS</b>	3M FLUKE 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

## WHAT ALL THE BEST, FOOD SAFE EQUIPMENT IS WEARING



For more information on the non food product  
certification scheme and its benefits  
or  
to find food safe products, materials and equipment  
that best support the food industry, visit :

**[www.haccp-international.com](http://www.haccp-international.com)**

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**HACCP INTERNATIONAL**  
eliminate the hazard - reduce the risk