HACCP AUSTRALIA FOOD SAFETY PROGRAMME CERTIFICATION

HACCP AUSTRALIA

FOOD SAFETY BULLETIN

ISSUE 12 2010

STAINLESS STEEL MOTORS
A new debate

KITCHEN EXHAUST SYSTEMS
Halton shows us that it's more than just hot air

ALLERGENS
Practical control methods

THE GLOVES ARE ON
Food safety issues surrounding handling practices

Produced by HACCP Australia, the country's leading provider of food safety services - www.haccp.com.au

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CCP FOOD SAFETY

Welcome

to the twelfth edition of our food safety bulletin

We know of many glossy magazines that never got to a dozen issues! So, we are very pleased to welcome you to the (slightly less glossy) twelfth HACCP Australia Food Safety Bulletin. Food over fashion - every time! The design has changed over the last few years and our first attempt, of which we were so proud, now looks decidedly dated.

The intention is still the same however. These bulletins are designed to bring together opinions, facts and information about products, techniques and food safety issues from Australia and around the world. Editorially, we address a wide range of food safety issues and trust you find the bulletin useful whether it be used as background, research, a product index or just a lunch time catch-up.

Products advertised or discussed herein have been closely examined by our skilled team against stiff criteria and are all particularly appropriate to food handling and processing and this is addressed in more detail in the article below.

We hope you find this edition enjoyable and interesting.

Clive Withinshaw, HACCP Australia

COMMENT

Non-food products and services come under the microscope

The 'fitness for purpose' of non-food materials is best identified through recognised 3rd party certification.

HACCP based food safety programmes are now common place and a pre-requisite to supply in most international markets. As well as being implemented within the facilities of food manufacturers and handlers, they are now commonly found in associated processes such as ingredient manufacture, packaging and logistics.

Eliminating food safety risk from these sources has been vital to ensuring a safe supply chain. It is now recognised that non-food products and services that have a significant interface with food processing and handling also need to be addressed in terms of risk.

> 'non-food products and services that have a significant interface with food processing and handling also need to be addressed in terms of risk'

Equipment, consumables, and non-food materials have long been identified as a source of risk - and some with a high profile! Often manufactured for a variety of uses or general application, it is important the food industry can identify those products that are particularly appropriate and meet the 'fitness for purpose' requirements of the food industry.

All food processors are now conscious of their food safety responsibilities and need assurance as to the suitability of products that are introduced to their facilities and procedures. Lighting, pneumatics, cleaning and cleaning materials, pest control, flooring and fit out are all good examples of items with a high risk profile that should be identified as 'fit for purpose' prior to use.

In recognition of this, The British Retail Consortium's 'Global Standard for Food Safety – Issue 5' now requires food handlers that operate to that standard to have in place a process that ensures all items of equipment in direct contact with food have "Certificates of Conformity" (COC) or other evidence to indicate suitability for use. In reality, this process of due diligence must extend to any product or service that has a significant interface with food processing and handling. Indeed, any HACCP plan meeting international standards requires the food processor to ensure that such risks are addressed.

The HACCP Australia mark is well recognised in this regard

3rd party food safety certification for such products and services is increasingly used to demonstrate conformity in respect of key food market products. The HACCP Australia certification mark is well recognised in this regard offering manufacturers, distributors and, importantly, their food industry customers, a 3rd party assessment and COC, issued by an independent organisation of food safety experts.

We don't like singling out examples too often but recently we have had quite a number of enquires about dishwashers and their conformance. As food handlers are required to meet higher food safety standards, dishwashers have become a subject of focus – especially in terms of rinse temperature. **Eswood's** range of commercial appliances are excellent and a number carry HACCP Australia's certification mark. They meet high standards in terms of food safety including those important temperature requirements. **For more details call Eswood 02 9604 7333.**

HACCP AUSTRALIA FOOD SAFETY PROGRAMME CERTIFICATION

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

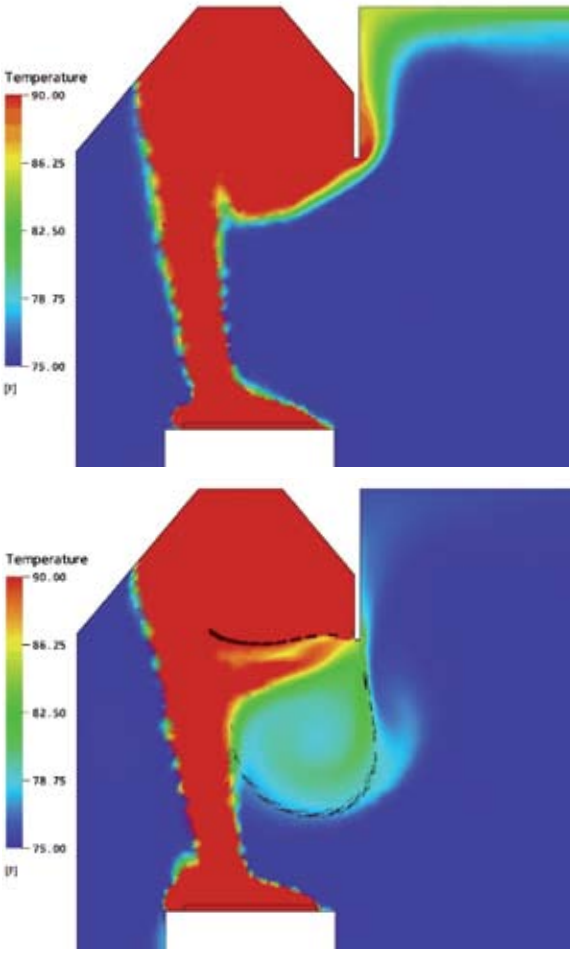
For more information on HACCP Australia's range of services, please email to : info@haccp.com.au

The Impact of Exhaust Ventilation on the Commercial Kitchen, Food Safety and HACCP

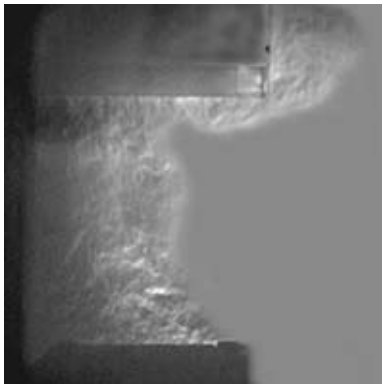
Although commercial exhaust systems are commonplace in foodservice establishments, it is easy to overlook the role they play in food safety. Exhaust systems that do not capture and contain cooking effluent allow grease and contaminants to accumulate on surrounding surfaces and floors, creating unhygienic conditions and safety issues like slips and falls.

Balance of Supply and Exhaust:

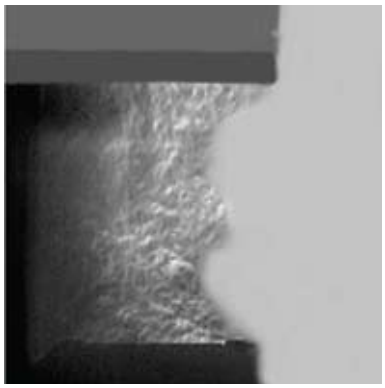
Supply side air flow in a commercial establishment is based on the amount of exhaust required to remove effluent from the commercial cooking process. This amount of exhaust air is predicated on the type of cooking equipment utilized by the establishment, the volume of food produced by the establishment, and the efficiency of the commercial exhaust system utilized in the application. Not all exhaust hoods are created equal. Some systems capture and contain cooking effluent at lower flow rates than others. The design of the exhaust hood is an important factor in this capture efficiency.



High efficiency hood (bottom panel) improves the capture and contaminant compared to standard exhaust hood (top panel).



Standard hood heat spilling into kitchen environment.



High efficiency hood capture and containment.

(Photos taken with a Schlieren camera)

In the USA, exhaust hood system efficiency can be tested by using the American Standard Test Method (ASTM) 1704. This method presents a standardized challenge to exhaust equipment and verifies the capture and containment capabilities of different systems at given air flow rates.

The determination of exhaust volume for a commercial exhaust hood begins with the type of cooking equipment being used by the establishment. A gas char-broiler (griller or barbeque plate) demands higher exhaust flow rates than an electric broiler and an establishment specializing in beef will have higher flow rates than one specializing in chicken or fish. Many companies offer commercial software to determine the flow rate required for capture and containment based on the cooking equipment utilized due to the menu selection of the establishment.

A properly balanced restaurant will strive for neutral conditions. This means that the building is neither under positive nor negative pressure. Replacement air should be introduced to the kitchen area in combination with transfer air from the dining room. Proper balance in the kitchen will produce an approximately 10% negative pressure with surrounding spaces to insure that odor does not migrate to those spaces. Demand control systems mounted within the commercial kitchen hood system can sense the position of cooking equipment and vary the exhaust and supply rates of the systems, yielding energy reductions, thus reducing carbon footprint for the establishment.

In establishments with poor replacement air ratios, negative pressure makes it hard to open outside doors. However, when these doors are open, air rushes in, bringing contaminants that can affect the safety of the food processing zone.

Air Temperature Impacts Safety, Productivity and Bottom Line

Temperature control of facilities is critical in certain operations for food safety and always important for operator comfort. It has been estimated that a 2.2°C/4.0°F temperature increase in a commercial food service establishment reduces worker productivity by 10%. That loss in worker productivity can be traced right to the establishments' bottom line. Increased turnover impacts training costs, while warm dining areas impacts the patron's length of stay. The proper sizing of air conditioning units depends on the outside design degree data, the amount of air being exhausted from the building, and the space requirements of the establishment. In warm climates un-tempered (not cooled) replacement air strategies for kitchens are strongly discouraged. Air intakes, placed on the roof of the building can be as much as 11°C/20°F hotter than surrounding air, pumping this hot air into the kitchen, resulting in uncomfortable working conditions and warm environments which support bacterial growth, as humidity is pumped in along with the hot air.

The Importance of Maintenance

Commercial exhaust systems are made to remove grease and particulates from the exhaust air stream. The amount of particulates removed depends upon the efficiency of the hood's filtration system. The amount of maintenance required for the system depends on the volume produced by the establishment. For every 1000lbs/450kgs of beef cooked on an under-fired gas char-broiler, 55lbs/25kgs of grease is emitted (33lbs/15kgs of particulate and 22lbs/10kgs of vapour). Grease particulates greater than 20 microns in size fall from the exhaust air stream. Of the 55lbs/25kgs of grease emitted, 14lbs/6kgs is greater than 20 microns in diameter. This data is based on hamburger patties weighing .33lbs/150g, 5in/12.5cms in diameter and with a fat content of 20%. If weight, diameter, or fat content increase, grease emitted from the cooking process also increases. Therefore, the frequency of wipe-down of the hood interior and maintenance of the grease collection vessel to mitigate the risk of bacterial cross contamination is based upon the fat content and medium utilized in the cooking process, and the volume of product cooked within the establishment. Filtration efficiency and differing methods of grease removal are a subject for an article unto themselves, however, there are test methods available to determine the extraction efficiency of mechanical grease extractors, and reliable manufacturers should have data available for those interested when purchasing an exhaust system.

The above are just a few critical factors to consider when designing a commercial kitchen ventilation system to achieve food safety and ensure HACCP food safety programmes are not compromised. Designers and end-users should question and ascertain manufacturer's expertise in these areas during the selection process for a successful foodservice installation.

Halton's Ventilation system has been endorsed by HACCP certification, Halton can be contacted through Stoddart Manufacturing 07 3344 2444.

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HACCP Australia endorses Tork Premium Colour Coded Cloths as food-safe cleaning aids for use in food manufacturing and handling facilities that operate in accordance with a HACCP based Food Safety Programme.

To find out more about Tork Premium Colour Coded Cloths, simply call 1800 234 613 or visit www.tork.com.au/ccc

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Shrouds on standard motors versus Stainless Steel Motors

A NEW DEBATE

Background

Motors used in food production areas - especially 'wet' areas that are hosed down regularly – pose a special problem. Typically, at the end of the shift, the machines are turned off, and then cleaned with a high pressure cleaner using a caustic solution. This is great for cleaning machinery, but poses a constant potential problem with electric motors. Water entering a motor will inevitably lead to failure – and downtime. The majority of standard motors are rated IP55, that is, weatherproof, and totally unsuitable if it is the target of a high pressure jet of water.

Traditionally, standard motors – either of aluminium or cast iron construction – have been used in the food industry, and covered with a stainless steel shroud. The shroud offers protection from the direct effect of the water blast, and gives the appearance of a 'clean' machine. Up until recently, there has been no real alternative. But for some years now Stainless Steel motors have been available off the shelf, and have been designed specifically for the food industry. There are several issues to consider.

Safety

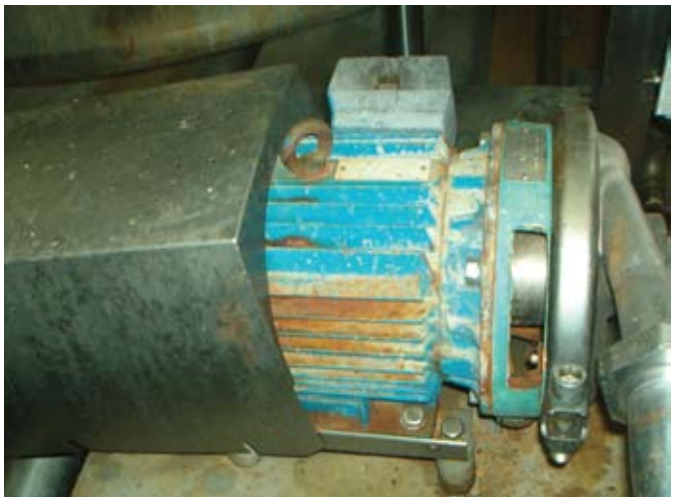
When a shroud is used, the motor is completely hidden from view. This can be dangerous. I am aware of at least one case where a shroud was removed, only to find that the caustic cleaning solution had, over time, eaten completely through the aluminium housing of the electric motor. A large opening had completely exposed the windings of the motor, which was situated on a damp floor area. An OHS inspection did not identify the serious safety risk – simply because it could not be seen.

With Stainless Steel motors, the motors are out in the open, and easy to inspect. Stainless Steel is also much more resistant to caustic solutions.

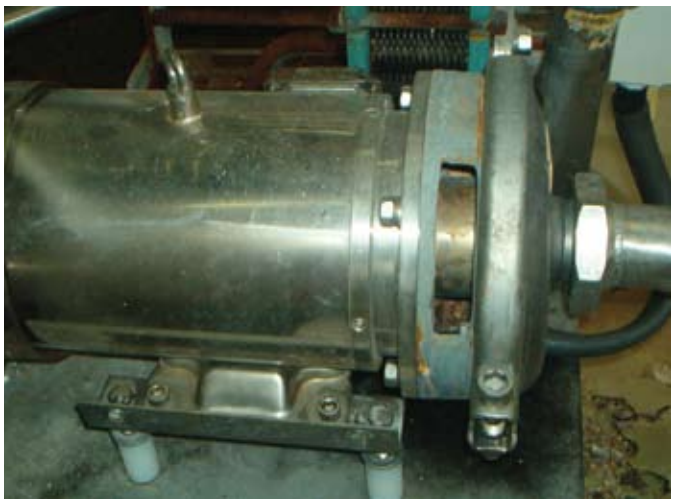
Hygiene

The importance of hygiene is becoming more critical every day. The worst event a food company can have is a recall of product due to a foreign object being found in packaged food. The damage and loss involved is enormous. There is a loss of respect in the market place, a potential loss of sales, a loss of revenue from recalled items, a large cost in the actual recall and disposal of suspect product. With health inspections, it is vital a machine is perfectly clean.

When shrouds are used over standard motors, the motors are hidden from view. Also, standard motors have cast cooling fins all over the body. With the effect of jets of cleaning solution being directed around the motor, food particles, dirt and grime is often deflected off the floor and onto the motor, and often collects between the fins. From there it is difficult to dislodge. If the shroud is not removed periodically and the motor cleaned directly, a potential build-up of grime can occur. Even worse, when this does happen, sometimes vermin are attracted to this area. There is an enclosed space, food particles, and even heat from the motor.



CIP Pump – old
A standard motor mounted under a shroud. Note corrosion on the aluminium terminal box.



CIP Pump – new
Standard motor replaced with a stainless steel motor.

CONTINUED ON PAGE 08

Stainless steel motor driving a conveyor, no shroud necessary.

With Stainless Steel motors, a shroud is completely unnecessary. The motor is mounted in the open, and cleaners can direct a jet from the cleaning machine all over the motor, as they are IP66, hoseproof. The Stainless motors are completely smooth all over (no fins), and have a highly polished stainless steel finish. This makes them very easy to clean. Further, the Scorpion Stainless Steel motor has full HACCP Australia certification something standard motors with cooling fins have never achieved.

Reliability

It can be argued there would be little difference in reliability between a standard motor under a shroud, and a Stainless Steel motor, due to the similar internal design. However, over the long term, the improved protection of the Stainless Steel motor is bound to give greater longevity, and therefore more efficient production costs.

Inspections

With inspections, Stainless Steel motors out in the open are visually clean. It can be argued that a Stainless Steel shroud protecting a motor also appears clean. However, current feedback from maintenance staff is that many inspectors feel more confident with 'open' motors, compared to 'covered' motors.

Other Factors

There are some areas where a Stainless Steel motor is preferred because of the environment. For example, in sections of a food factory where salt is prevalent, or seriously corrosive vapours such as chlorine vapour is present. The alternative is to have a standard motor coated with a 'high tech' paint finish, which can be expensive, and even then not as durable.

Cost Comparison

The cost of a standard motor fitted with a stainless steel shroud, compared to the cost of a Stainless Steel motor, is an often asked question. The actual cost depends on the actual quantity required, the brand of the standard motor, the brand of the stainless steel motor, and the size of the motor in kW.

Another point to consider is if the motor is mounted on the floor, or suspended off a machine. Shrouds for motors suspended off a machine are more expensive, as they are of a circular, 'hinged' design, and far more expensive than a simple half-circle shroud.

However, a simple cost analysis is possible, to give an indication. This analysis is based on a standard Aluminium motor manufactured in Europe and fitted with a locally made stainless steel shroud, versus the Scorpion Stainless Steel motor.

For purposes of transparency, actual costs obtained are shown, as follows:

Cost in Australian dollars

Size Motor	Aluminium Motor	+ Shroud =	Total	Stainless Steel
0.18kW	$151	$280	**$431**	**$398**
0.37kW	$230	$301	**$531**	**$489**
0.75kW	$272	$326	**$598**	**$684**
3.0kW	$487	$347	**$834**	**$1092**

Notes

Cost of the shroud is based on a standard semi-circular design, with a 50mm wide flange for mounting onto a bedplate. Cost of the shroud would increase by approximately 50% minimum for a full circular "wrap-around" or hinged design, for motors suspended off machinery. Shroud quotation based on 1.2mm thick grade 304 Stainless Steel sheet. Price of the Stainless Steel motor is based on a 'quantity' enquiry, of more than 5 motors. It can be seen that for ratings less than 0.75kW, there is actually a saving in initial cost by specifying a stainless steel motor, compared to a standard aluminium motor with a shroud. Above 0.75kW, there is a marginal difference in initial cost

Disadvantages of using Stainless Steel motors

From a logic perspective, there is a disadvantage of using Stainless Steel motors. In a very few limited applications, the extra weight of a stainless steel motor needs to be considered, especially if it is used as a counterweight.

Conclusion

There is an increasing trend to install Stainless Steel motors and 'dump' the shrouds in many factories. Some factories have a "replace with Stainless Motor" as existing motors fail.

In some critical areas, for example, where exposed food product is situated directly underneath a motor, there is in some factories a trend to "replace with stainless" when that motor becomes due for cleaning and repainting.

The extra advantages of the Stainless Steel motor over 'covered' motors in hygiene, safety, and reliability speak for themselves. As one maintenance supervisor said, "With stainless motors, it is out in the open; I don't have to worry about what is hiding in there."

Images courtesy of Phil Spencer, Melbourne

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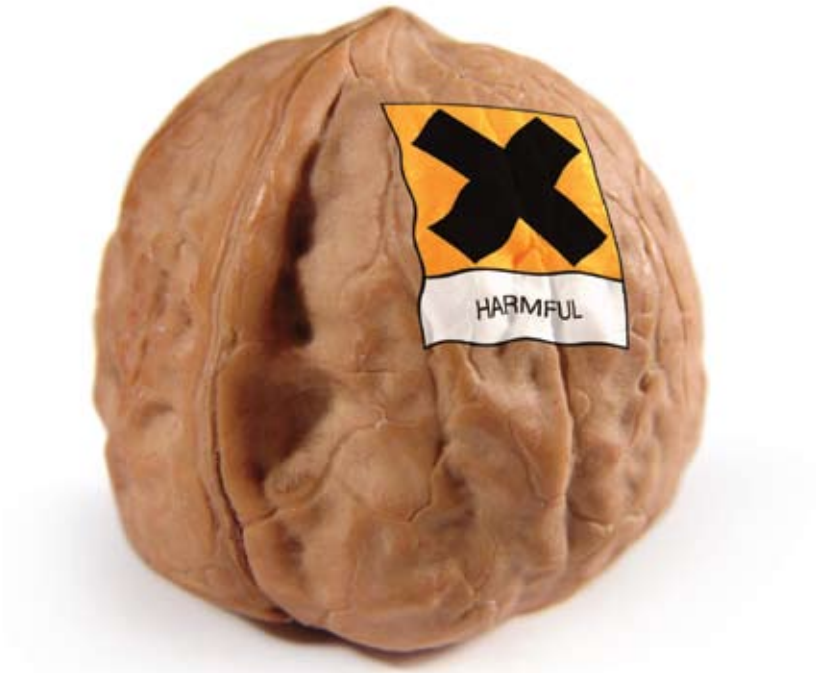
For information contact Scorpion Motors (03) 9546 7515 or visit our website www.scorpionstainless.com.au



Allergens – Practical Control Measures

by Richard Mallett, European Director of HACCP International

Some facts and figures

Look closely at the food safety alerts released on the U.K.'s Food Standard Agency's website. Close to 100 alerts were issued in total in 2009, of which over 50% were specifically allergy alerts! The allergy alerts are issued when foods have to be withdrawn or recalled if there is a risk to consumers because the allergy labelling is missing, is incorrect or there is some other food allergy risk. The figures are perhaps surprising considering the legislative pressure that has been applied to food processors by the European Union, requiring, back in 2005, the mandatory labelling of 12 specified food allergens. That list has now extended to 14 and more are potentially on the horizon.

In 2006 it was estimated that over 1.5 million people in the U.K. alone were intolerant or allergic to one or more food types. It can be no wonder that the enforcement authorities throughout Europe take this issue very seriously and that a food processor's allergen management programme comes under close scrutiny during inspections. The issue is also tackled by the major European food safety technical standards including the British Retail Consortium's (BRC) Global Standard for Food Safety, adopted by nearly 10,000 food processors worldwide. Within that Standard there are stringent, mandatory clauses requiring a processor to perform risk assessment and adopt controls to ensure allergen control. The aim is to reduce the number of allergen related incidents that require withdrawal or recall from the market. Loss of allergen control can arise from three main failures: In 2006 Food Standards Agency figures demonstrated that 56% of all U.K. recalls arose from food incorrectly labelled, 28% arose from allergen cross contamination and 16% from use of the wrong label or packaging.

Practical allergen controls

A HACCP based allergen risk assessment programme is key to allergen management and control. As an example of this approach the BRC Global Standard for Food Safety requires risk assessment to establish the presence and likelihood of contamination by allergens, with systems implemented to ensure integrity and compliance with specification throughout the supply chain. The following areas, managed as HACCP pre-requisite procedures, can all help to reduce the potential for allergen misinformation or contamination:

1. **Supplier and ingredient control** requires the review and management of supplier ingredient specifications to identify those which intentionally contain allergens. One of the potential pitfalls here is reformulation of the ingredient by the supplier without the provision of amended and updated specifications. Knowledge of the supplier's allergen management procedures is also a factor and can be facilitated by something as simple as an allergen management questionnaire to determine allergen control procedures on the supplier's site and therefore the overall risk of allergen cross contamination by the supplier. This can be followed, as necessary, or where information is scarce, by a formal on-site allergen audit.

2. **Controlled on site food storage** by the processor requires segregation or other validated control to ensure contamination of non allergenic foodstuffs or ingredients by allergens is eliminated or reduced to a safe level. For very high risk, low threshold allergens such as nuts this might require entirely separate storage areas. For foodstuffs more likely to be allergens is eliminated or reduced to a safe level. For very high risk, low threshold allergens such as nuts this might require entirely separate storage areas. For foodstuffs more likely to be the cause of intolerance, rather than severe anaphylactic shock, such as gluten containing foods, it may be sufficient to use separate shelves or racks, within common storage areas.

3. Segregated handling or processing of foods, during production, may require entirely separate processing halls or even factories, especially in the case of high risk allergens such as nuts. Otherwise, and where risk assessment allows, the processor can employ time separation so that allergen containing foods are made at the end of the production day and this activity can be followed by a deep "allergen clean down" which might not be possible during shorter, between-batch production breaks. Test kits and methods are being developed now to measure residual allergen traces following clean down and to help with validation of this control.

4. Staff awareness and staff movement control is a key area to consider. Higher risk allergens such as nuts may have to be handled, not only in separate areas, but by separate, visibly identifiable staff, wearing specific, often colour coded protective clothing. Staff training should always now encompass an element of allergen awareness and competence with regard to allergen management procedures. This training must be provided before food handling duties commence. Staff should be made aware of the types of food allergens that exist and that are legislated for. They should be made aware of potential sources of allergen cross control and misinformation such as use of the wrong labels or packaging.

5. The control of labels and packaging, especially during product change-over, can prevent a foodstuff entering the market with incorrect or absent allergen warnings. This is a supervisory issue requiring a check that labels and packaging have been correctly changed over when a new product is being packed. The information that must be placed on labels and packaging, with regard to allergens, is a technical management and new product development issue. Common pitfalls are the use of a new or reformulated ingredient, new allergens being handled on site, new equipment being used, new layouts implemented, new production schedules drawn up or new cleaning regimes being put in place. Just as in Principle 6 of Codex HACCP, a review of the allergen risk assessment is crucial to ensure that changes to the allergen status of a product is identified and reflected on the label and packaging.

6. Allergen audits can be implemented as part of the internal auditing process. The audit should ideally pick a final, packaged product and trace back through all storage, formulation, processing and packaging steps to the ingredients used, ingredient specifications held and the information supplied by the supplier in regard of their allergen controls. In this way the risk of allergen contamination and inclusion of intentional allergens can be validated against the allergen declaration and "may contain" information provided on the label or packaging for your chosen product.

7. Equipment selection and use, together with materials of construction and design of surfaces such as floors and walls is often overlooked, even when all other allergen management controls are in place. Yet this control is just as key as the others. For instance, as a rough guide, the higher the IP rating on equipment the less likely it will be for particles of food, some of which may be allergenic of course, to become trapped. In more general terms equipment and materials selection must be influenced by cleanability and accessibility. Ask yourself the following question – Can I access all surfaces easily and are they designed to facilitate a deep "allergen clean down" to prevent them becoming a source of allergen cross contamination? The same principle extends to cleaning equipment. In general, those surfaces and pieces of equipment, which can be cleaned and then disinfected to reduce to safe levels bacteria such as Listeria monocytogenes, should be at minimal risk of being a source of allergen contamination.

The future

It is clear that properly assessed and controlled allergen management can drastically reduce the chance of allergen related incidents. What can we expect next? Well, the European Food Safety Authority has for some while being directing research into allergen threshold levels. The results of this will drive forward the application of allergen thresholds to allergen management guidelines and even labelling legislation. Almost certainly this will require a review of current allergen risk assessments. Look at EC Regulation 41/2009 which applies from 1st January 2012. Foods that have been especially processed to reduce gluten content shall not contain gluten exceeding a level of 100mg/kg as sold to the consumer. They will be required to be labelled and advertised as "very low gluten" foods unless the gluten level is less than 20mg/kg in which case they may be labelled and advertised as "gluten free". These quantified units must be considered as part of the risk assessment. This, and future threshold developments may well have some consumer and industry benefits. For the allergic or intolerant consumer a reduction in unnecessary "may contain" warning statements will increase choice. For industry, some clear, quantified guidelines will undoubtedly help in the quest to devise sensible risk assessments and control pitfalls these include the use of a new or reformulated ingredient, new allergens being handled on site, new equipment being used, new layouts implemented, new production schedules drawn up or new cleaning regimes being put in place. Just as in Principle 6 of Codex HACCP, a review of the allergen risk assessment is crucial to ensure that changes to the allergen status of a product is identified and reflected on the label and packaging.

HACCP Australia NEWS

Pictured above during a break in the day at Sydney's Watson's Bay, are from left to right: Nikkolie Zantiotis, Colin Clarke, Nikki McMahon, Vivien Leung, Martin Stone, Deborah Rien, Clive Withinshaw, Michelle Warton, Rachel Harris, Bill Simos, Karen Constable, Richard Mallett, David Haberfield, Camila Bridge. Absent from this picture are Lee Nelson, David Harvey and Harry Kelly.

HACCP Australia Convention

Earlier this year, the staff from HACCP Australia gathered in Sydney for three days to attend its annual conference, convened to share ideas, discuss technical issues and develop systems, strategies and solutions for our, and our client's businesses. It focused on the variety of tasks with which HACCP Australia is faced in assisting food companies to improve performance, safety and technical competence. A number of excellent and worthwhile initiatives always come from these sessions and these help the business to continually improve the offering to the marketplace.

During proceedings, thesquad entered a quiz night at a local hotel but, despite the overwhelming amount of scientific brain power gathered in the HACCP Australia team, it, needed one more point to overhaul a large local team of i-phone equipped know-alls in a race to the winner's podium.

We have moved... but not far!

HACCP Australia has relocated its head office to Ridge Street in North Sydney, only 200 meters from the old office. After considering options to renovate and split operations between floors, Directors Clive Withinshaw and Martin Stone decided to move to the modern terrace. "We were bursting at the seams and when this building became available, we snapped it up", says Clive. "The new facility will also allow us to conduct workshops and training in a much more comfortable environment", Martin adds, "our team loves it too and look forward to you visiting us at No 3 Ridgewest Building, 1 Ridge Street North Sydney.

First NSW Regulatory Food Safety Auditors appointed

Dr Michelle Warton from the Sydney office became the first auditor approved under the NSW Food Authority's regulatory food safety auditor system. Camila Bridge, also from the Sydney office, was the second, being approved shortly afterwards.

Having successfully completed the training, assessment and auditing

Michelle receives her auditor approval from John Fallon, Senior Food Safety Officer with the NSW Food Authority

elements of the application process. Michelle and Camila are now approved to perform regulatory food safety audits and report their findings to the Authority. Michelle and Camila are listed on the Authority's website. Businesses which have been approved to move to the 'NSW Regulatory Food Safety Auditor System' may now use Michelle or Camila to conduct their audits.

HACCP Australia is the first organisation to have staff approved as auditors in each of NSW, Queensland and Victoria and most of our staff are approved in more than one state.

Congratulations to Michelle and Camila.

Everything HACCP at our new website!

We have just launched our new website with updated information, useful materials for downloads and a great supplier search function. The new website is designed to support our food science and consultancy operations providing information about HACCP Australia as well as offering clients and visitors a really useful resource for their food safety needs. **www.haccp.com.au**

Recent endorsements and certification of non-food products by HACCP Australia.

Edco clean up

Edco, a company that have a wide range of cleaning materials has identified certain products that are particularly suited to the food industry. A range of buckets, mops, wipes and brushes have all proved to be very appropriate, particularly in term of their functionality, material, design and cleanability. Edco can be contacted on 02 95574411 and details of distributors will be made available to callers.

Halton's Kitchen Ventilation - food safe and energy efficient

Kitchen ventilation plays an active role in controlling risks in a production kitchen. Halton's new integral designed ventilation canopies and ventilated ceilings are equipped with innovative features that capture contaminants and grease with lower air flow. Temperature is better controlled and maintenance cost are reduced in a 'food safe and energy efficient 'design. For more details Halton can be contacted through Stoddart Manufacturing 07 3344 2444

SOME GUIDELINES FOR HACCP PROGRAMME VALIDATION

Operators often misunderstand the process of validation in HACCP Programs. These guidelines might help clarify the process.

Definition

Validation is the process of demonstrating via scientific or technical data that the HACCP system, when properly implemented, is capable of adequately controlling the identified hazards in order to produce a safe product.

The scientific or technical justification may be:

> an article from a scientific journal
> a documented challenge study
> In-house data e.g. observations, measurements, test results that demonstrate the process is capable of meeting the scientifically documented parameters.

The documentation should identify the hazard, including the level of hazard prevention and identify which processing steps will achieve this.

Who Validates the HACCP Plan?

> The HACCP Team
> Any qualified individual (relevant training and/or experience)

What to Consider When Carrying Out the Validation?

> Do the identified CCP's control the hazards?
> Are the Critical Limits appropriate?
> Do the monitoring methods and frequency provide adequate control?
> Do the Corrective Actions properly address the affected product/process and correct the deviation from the critical limit?
> Review of consumer complaints?

When Should the HACCP Plan be Validated?

> When the HACCP Plan is first developed
> Changes in product description e.g. intended use or consumer
> Changes in process flow
> Changes in raw materials, including the source
> Changes in product formulation
> Changes in processing methods
> Changes in packaging
> Changes in finished product distribution systems
> Recent industry recalls of similar product
> New or emerging hazards
> Recurring deviations
> Food safety consumer complaints
> Regulatory agency recommendations

THE GLOVES ARE ON....

HACCP Australia's Karen Constable discusses the pros and cons for wearing gloves in relation to food safety and worker protection.

Gloves have two main purposes in the food industry; to protect food from contamination from human hands and to protect workers from occupational hazards, such as microorganisms, cuts, chemical burns and thermal shocks. In some instances a glove performs both of these roles at the same time.

Gloves purchased for protecting food are usually single-use or disposable gloves, whereas gloves for personal protection purposes are more likely to be re-useable. When choosing gloves, factors to consider include thickness, durability, elasticity, exterior texture, coatings, antibacterial additives and interior linings or treatments.

Disposable gloves are commonly made from latex, vinyl, nitrile or polyethylene co-polymer, with vinyl and polyethylene gloves being the cheaper options. Polyethylene (PE) gloves are very loose fitting, easy to tear and not suitable for applications involving heat. Vinyl (PVC) gloves provide a snugger fit, which improves dexterity; however they also have low durability. Nitrile and latex gloves are more durable and have good elasticity, which provides comfort and dexterity. Each of these different glove types has different chemical resistance properties, with PE and vinyl gloves showing little resistance to alcohol, and latex unsuitable for use with animal fats and oils.

Re-usable gloves for food contact applications are most commonly made from natural rubber. Nitrile re-usable gloves are a more expensive option, but provide added advantages, such as better strength, cut resistance and chemical resistance.

While the use of gloves can provide benefits to both food safety and occupational safety, there are potential food safety risks associated with their use. The foremost risk is one of cross-contamination from a dirty glove surface. Most consumers are familiar with the sight of a gloved food handler collecting cash at the sandwich counter. A common phrase among food safety experts is 'a clean hand is better than a dirty glove'.

The second risk to food safety is that of physical contamination of food by whole gloves or pieces of broken glove. Blue coloured gloves are a good choice for processing applications where gloves could get into mixers, vats or conveying systems.

The third risk to food safety is that of chemical contamination caused by migration of chemicals from the gloves into the food that they contact. Due to the nature of the compounds found in gloves, migration is more likely to occur when gloves are in contact with fatty, acidic or alcoholic foods for more than a few seconds.

Control of microbial and physical contamination hazards from gloves is easily achieved using good hygiene systems, food handler training, and GMP protocols. However, hazards arising from chemical contamination are not generally well understood.

Food safety laws state that equipment for food contact must be 'made of material that will not contaminate food', however more detailed requirements are not described in the legislation. In practice, most glove suppliers use the requirements of the US FDA as a guide to choosing materials which are acceptable for food contact use. The US FDA's Code of Federal Regulations provides long lists of materials which are permitted for use in food contact articles, including gloves. Additives used during glove manufacture, such as plasticizers, vulcanizing agents and accelerators are also regulated. Plasticizers used in the production of PVC items have attracted much negative attention lately, with a commonly used plasticizer now classified as a toxicant by the EU.

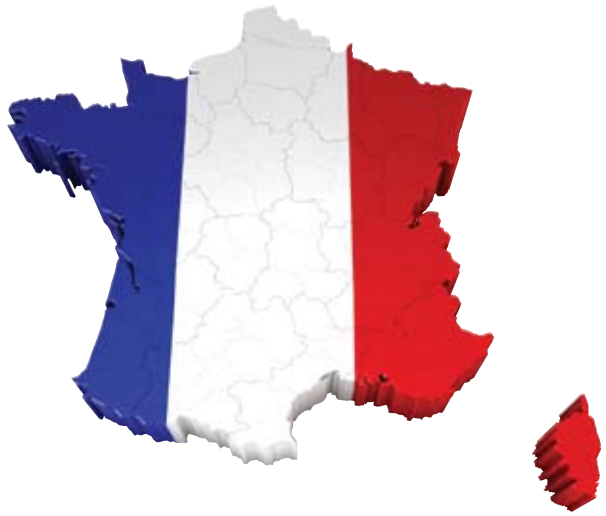
The Code of Federal Regulations and directives of the European Union also define acceptable migration limits for food contact materials. Migration tests typically involve immersing the material in a solvent or a food simulant for given times and temperatures and measuring the level(s) of extractives.

Choosing gloves which meet the requirements of the US FDA or the appropriate EU directives can provide assurance that chemical migration will be minimised. However, when inspecting marketing material for gloves, be aware that many of the standards, directives and regulations pertaining to gloves are specific only to parameters such as physical performance, dimensions, tensile strength and dermatological reaction risks. It is possible to purchase gloves which conform with many quality and performance standards but which are not compliant with chemical migration regulations.

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 France

France follows Denmark and Canada in BPA baby bottle ban



A ban on manufacturing, importing, exporting and selling baby bottles made of BPA-based products has been approved in France by the National Assembly this week.

The ban, already adopted by the French Senate at the end of March, was endorsed by the French 'deputies'

The continued safe use of BPA in food packaging is currently being scrutinised by both the US Food and Drug Administration and the European Food Safety Authority (EFSA). Until now, Canada and Denmark were the only two countries to have banned its use in food containers or packaging for children aged 0-3.

Last month, the French Food Safety Agency (AFSSA) recommended that consumers should be alerted to the presence of bisphenol A (BPA) in packaging via "systematic labelling".

Giving an update on its ongoing research into BPA, AFSSA, director general Marc Mortureux said labelling would allow consumers to avoid excessively heating containers that contain the chemical, as heating has been shown to accentuate the migration of BPA from food contact materials into food and drink.

The French food safety body highlighted recent studies indicating that BPA exposure below the Tolerable Daily Intake (TDI) among pregnant women could have toxic effects.

Meanwhile, The European Food Safety Authority (EFSA) has announced a delay in delivering its verdict on bisphenol A (BPA) because it needs more time to review the vast body of research on the chemical.

The food safety watchdog said it would now present its opinion to the European Commission (EC) later in the year. Once that advice is delivered, it will be up to the EC to decide whether to implement a ban or not.

The additional time will give experts from the body's CEF panel on food contact materials extra time to consider hundreds of studies in its review and analyse the most recent scientific investigations. Panel members gather two days a month and, while they are said to be in regular contact between meetings, have indicated more time was needed to assess and discuss the huge volume of research material.

Stump study

EFSA confirmed its updated opinion would also include an evaluation of the Stump study on the potential neurodevelopmental effects of BPA, as well as a review of the material provided by Denmark supporting its ban on use of the substance in infant food contact materials – which was introduced in March. Tim Smith, chief executive at the UK Food Standards Agency (FSA), said at the group's most recent board meeting that if EFSA concurred that the scientific basis for the Danish action was sound, it would have to impose a Europe-wide ban on BPA.

BPA is used mainly in polycarbonate baby bottles, infant cups and the epoxy lining of food and drink cans. Mounting consumer, political and even scientific anxiety over its continued use in food packaging has led to the US Food and Drug Administration (FDA) and EFSA to re-examine their positions that the substance poses no health threat at current exposure levels.

From Australia

CSIRO Food and Nutritional Sciences has released a book – **Make It Safe: A Guide to Food Safety** – which provides small scale food manufacturers with a practical guide to controlling food safety hazards.

The Leader of CSIRO's Enhanced Food Benefit and Safety Theme, Dr Kari Gobius, says the book translates sometimes complex descriptions of food safety practices and requirements into simple, easy-to-understand English.

"Those already operating a small business will develop a better understanding of key food safety systems, while those who are in the 'start-up' phase will gain knowledge essential to providing their businesses with a solid food safety foundation," Dr Gobius says. "It also contains a handy reference guide to the relevant Australian regulations."

Small businesses make up around two-thirds of all business in Australia's food and beverage manufacturing industry. *Make It Safe* should also prove useful to tertiary students studying food technology or hospitality industry courses.

> "*Make It Safe* provides a platform for even greater levels of food safety in Australia, reinforcing our position as a source of quality food products." says Dr Kari Gobius.

All people involved with the preparation of food for commercial or retail markets need a sound understanding of the food safety risks associated with their specsific products and, importantly, how to control these risks. Failure to control food safety hazards can have devastating consequences for not only the consumer, but also the food manufacturer.

"The Australian food industry has an excellent reputation for manufacturing safe food products," Dr Gobius says.

Make It Safe, *A Guide to Food Safety* is available at all good bookstores and through CSIRO Publishing.

Image credit - CSIRO

From the USA

Michelle Obama urges industry to 'move faster, go farther'

By Caroline Scott-Thomas, (foodqualitynews.com)

Speaking at a Grocery Manufacturers Association (GMA) earlier this year, Michelle Obama has urged industry to work faster on reformulating products to make them healthier for kids.

Mrs Obama launched the Let's Move campaign to try and improve the health of American children, it encompassing making healthy foods available to children and parents, nutrition education, and an increased focus on physical activity. The First Lady praised GMA members for the progress they have made so far on reformulation and initiatives to reduce marketing of unhealthy foods to children.

"But I'm here today to urge all of you to move faster and to go farther, because the truth is we don't have a moment to waste – because a baby born today could be less than a decade away from showing the first signs of high cholesterol, high blood pressure, Type II diabetes, if he or she is obese as a child," she said.

Chairman of the GMA, Richard Wolford said that the food industry is "an enthusiastic supporter" of the 'Let's Move' campaign and that GMA members have already made strides to make children's products healthier.

He said in a statement: "In recent years, our companies have

reduced calories, sugar, fat and sodium in more than 10,000 products. They have also enhanced the nutritional profile of many products with the addition of whole grains, fiber or other nutrients and created the informative and convenient 100-calorie pack.

"Food and beverage companies have changed the way they advertise and market their products – children under 12 now see significantly fewer food, beverage and restaurant ads on television. And at the same time, they are seeing more ads for soup, juice, fruit and vegetables."

Addressing the GMA Science Forum, Obama said: "We need you not just to tweak around the edges, but to entirely rethink the products that you're offering, the information that you provide about these products, and how you market those products to our children.

"That starts with revamping or ramping up your efforts to reformulate your products, particularly those aimed at kids, so that they have less fat, salt, and sugar, and more of the nutrients that our kids need."

Childhood obesity is at record levels, with 32 percent of US children and adolescents overweight or obese, according to statistics from the Centers for Disease Control and Prevention.

From the UK

Battery egg fraudster jailed

By Jess Halliday, (foodqualitynews.com)

The perpetrator of a scam to sell some 36 million battery eggs as free range in the UK has been jailed for three years and ordered to pay

CONTINUED ON PAGE 18

hefty fines. The case has prompted the introduction of more stringent traceability measures.

Keith Owen, boss of egg-packing firm Heart of England Eggs, was prosecuted by the Department of the Environment, Food and Rural Affairs (Defra) after an investigation showed he was importing battery eggs from France, Ireland, the Netherlands and Germany and passing them off as British, free-range, and organic.

The scam ran between June 2004 and May 2006 and according to reports some 36 million eggs were falsely sold to supermarkets and other retailers as free range over this time.

It is not thought that the eggs were sold to food ingredient suppliers and manufacturers, but to consumers directly. The issue shows up the importance of traceability at all levels in the food supply chain. UK retailers have stopping or phasing out the sale of battery eggs for a number of years, ahead of a ban due to come into force in 2012.

Guilty plea

Owen pleaded guilty to fraud, which Defra has said is the largest it has ever encountered. A Worcester Crown Court Judge Toby Hooper QC said the 44-year-old defendant had abused the ''well-intentioned'' trust of the public. In addition to the jail sentence, Owen was ordered to pay £250,000 in costs and a £3 million confiscation order. He has 12 months to pay the latter or face a six-and-a-half years more in prison.

Case cracked

Owen sought to cover up the rotten trick by creating a false paper trail of documents and invoices. But he was found out after a number of people reported their suspicions – including some lorry drivers who picked up loads of eggs from the company.

WHAT IS A FOOD SAFE FLOOR?

By Karen Constable, HACCP Australia

Food safe flooring material is inert, impervious, non-absorbing and easy to clean. A food safe floor also has appropriate gradients, drainage systems, seals, joints and coving. The requirements of the Australian Food Standards Code are met as long as the floor is cleanable, non-absorbing, laid so that there is no ponding of water and unable to provide harbourage for pests. Other food industry standards have requirements for coving, and smooth solid coving of at least 75mm height is recommended.

In addition to this, a flooring material that is 'food safe', is one that can be installed such that dust and volatile chemicals from the installation and curing processes do not have an adverse impact on the safety of the food.

> Be particularly aware of the potential for tainting of food products during the installation of fast-curing floor systems.

Resin-based flooring systems, such as epoxy resin and polyurethane-cement floors are very popular in the food industry. For these types of floors, both the product chosen and the installation process are critical to the quality and performance of the finished product. When choosing a flooring product, be sure to make sure that the supplier has appropriate expertise to recommend correct products for your specific food industry application. Floors in food handling areas are exposed to cleaning chemicals, corrosive food products and stream, which can render some flooring products unsuitable. The thermal properties of different flooring products should be well understood by the sales staff. A good flooring supplier will be able to provide information about the chemical resistance properties of the floor product against weak acids, strong acids, caustic materials, oils, and temperature fluctuations.

Expertise in installation is another area where your choice of supplier is critical. A poorly installed floor will result in drainage issues, coving problems and cracks, and each of these problems in turn can lead to harbourage of harmful bacteria in your facility. The installation process itself also has the potential to introduce contaminants to your food premises. Installation personnel, equipment, dust, aggregates, solvents and curing agents can become potential sources of contamination.

Choose a flooring installer who has experience in food facilities. Your installer should be able to give you detailed information about the expected duration of the installation service, the hazards to food safety from dust, grit and solvents - and where applicable a description of the containment and extraction methods used to control these hazards; requirements for cleaning following the installation; and exclusion/curing periods.

When the installation is due to start, spend some time with the installation supervisor, to explain any site protocols such as hand-washing, hair nets and foot baths. Identify work areas, and help to identify a path between work areas and vehicles which the workmen can take which avoids food handling areas if possible.

Be particularly aware of the potential for tainting of food products during the installation of fast-curing floor systems.

Fast curing resin-based flooring systems are commonly chosen for repairs and resurfacing of floors when installation time is critical. These floor types can accept traffic after just one hour, unlike standard epoxy systems which can take up to seven days to properly cure. Fast curing resin floors are commonly based on methyl methacrylate resins (MMA). Methacrylates are highly volatile with a strong smell, and have been known to cause tainting problems in foods. A well-publicised and very large recall of meat products in Australia in 2008 was attributed to tainting by methacrylates.

Smooth and impervious flooring provides no harbourage for harmful bacteria

One flooring installation company which has a very good understanding of tainting is Bethell Flooring, based in Queensland. Shane Bethell describes his company's procedure for controlling the risk of tainting:

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Drains and coving are important elements of a 'foodsafe' floor

"We are dealing with chemicals, and controls need to be put into place to eliminate the risk of food products being contaminated. With the fast curing systems, they have a strong odour which can be absorbed into some food stuffs - it's mainly fatty foods which are susceptible. That risk is only present during the installation of the flooring, and after that it's simply a matter of changing the air and removing the fumes from the area. Firstly, before the service begins, move the susceptible foods out of harm's way, so they are not exposed to the fumes. Then it's a matter of installing extraction systems so that fumes are extracted to outside. Then bring in fresh air from outside after the installation is complete. We do that by creating an enclosed area, containing the work and controlling the air flow. We use air extraction systems and physical barriers, which range from temporary polythene sheeting to building temporary sandwich panel walls."

Shane and his team of experienced technicians are trained in best practice procedures for installations in food premises. Combine this expertise with a knowledgeable sales team, extensive food industry experience and a wide range of resin-based products to offer, and Bethell Flooring are well-equipped to deliver the perfect floor for any facility.

Resin-based flooring systems are excellent choices for food handling facilities. They are inert, impervious and they look fantastic. Be sure to choose a product which has the correct degree of chemical and thermal resistance, and an installer who can deliver a great finished floor without compromising your operations. HACCP Australia endorses a number of suppliers of food safe floors: Deflecta Crete Seals, BASF - UCRETE Industrial Flooring, and Roxset Australia supply resin-based flooring systems. Altro APAC also provides a range of non-resin based food safe flooring products. See page 28 for contact details.

For more information on Bethell Flooring please contact Shane Bethell on 07 3865 3255 or visit www.bethellflooring.com.au

Managing Pests; Rodents, Insects and Birds

By Karen Constable, HACCP Australia

How do you manage pests in your facility? Firstly your food safety programme should have a comprehensive pest management system. This is designed to control hazards from pests at every operational step of the food handling process, including biological hazards such Salmonella. Last year in the USA there was a large outbreak of Salmonellosis caused by contaminated peanut products. Nine people died and at least 691 people became sick. The source of the outbreak was found to be a peanut processing plant in Georgia, which was reported to have live and dead rodents, cockroaches and birds in the production areas. Consumption of peanut products has dropped by nearly 25% in the US since the outbreak.

Your pest management system will contain elements to control hazards from the pests themselves; particularly the hazard of cross-contamination, such as the microbiological contamination described above. The system will also contain elements to control the risk of chemical contamination from pesticides. Finally, as in all formalised food safety systems, there will be requirements for monitoring and reporting. The pest management system is the responsibility of the food manufacturer, although some of the components will be outsourced to a professional pest control company.

The first priority of any pest management system should be to keep the pests outside. This means proofing your facility. Proofing is perhaps the most overlooked aspect of pest management in food facilities. It is common to find smaller manufacturing facilities with numerous holes in food store walls and rodent bait stations scattered around the floor. Proofing can be overlooked because it is not usually part of the service provided by professional pest controllers. In addition, site maintenance is usually managed by personnel who are 'outside the loop' when it comes to food safety and quality issues.

Proofing against the ingress of flying insects and birds is arguably the easiest to achieve; screens, strip curtains, air curtains, swing doors and rapid-closing doors are all simple to install on windows and doors. If you choose a rapid closing door for your facility, make sure that it is capable of operating at the speed and frequency that your operation demands. The biggest problem with rapid closing doors is they are so often left open.

Proofing against crawling insects is more difficult, partly because they can fit through the tiniest of gaps, but also because they commonly breed inside a facility. Rats and mice can also fit though very small openings, but rodent proofing is achievable, especially in purpose-built premises.

While proofing is important in keeping the pests outside, pest-free raw materials are also required. Stored product pests, cockroach nymphs and even rodents can get into your facility in shipments of raw materials. Again, this is a job for you to manage, not your pest control company.

Another high priority in managing pests is removing food sources. Housekeeping is the key here. Food sources, moisture, warmth and shelter all need to be considered, both inside and outside the premises. Don't forget plant rooms and garden beds.

If proofing, raw materials and housekeeping are the responsibility of the food company, then conventional pest management operations are the responsibility of the pest control company, right? Wrong! Pest management systems only work effectively when the food company takes responsibility for the system as a whole.

This means following the advice of your pest control technician, particularly when it comes to proofing and housekeeping issues. Be prepared to pay for an appropriate level of service; monthly servicing is recommended for most food businesses.

Richard Doyle, National Operations Manager for Rentokil.

"Rentokil the leading commercial pest management company recommends that the food industry always maintains the highest level of pest management to protect their stock, customers and their reputation". *Richard Doyle*

CONTINUED ON PAGE 22

Rentokil technician in warehouse with client.

Choose your pest control company with care, make sure the company understand the needs of food facilities in general, and be sure to communicate any special needs of your operation. The pest controller's service agreement should clearly list the pesticides which will be used on site, along with the types of treatments, and specific locations to be treated.

When it comes to pest control documentation for food safety audits, it pays to be well informed of your auditor's requirements. Many pest control companies are certified and a good pest control company will know what documentation is needed for a basic HACCP-based food safety programme, but do not expect them to know the special requirements of an AIB or BRC certification. Common points of contention between food safety auditors and pest control providers are the format of MSDSs - paper or soft copies; recording of pesticide batch numbers and positioning of rodent bait stations. These issues are best tackled before your audit. If you know, for example, that your food safety auditor will expect to see paper copies of MSDSs, then be sure to check that your pest control company can provide them in this format, or take the time to print them yourself before your audit.

Finally, remember that no matter how good your pest control provider is, your facility will never be free of pests unless you are willing to pay for the right level of service, and manage your proofing and house-keeping effectively.

For more information on Rentokil please call 1300 736 865 or visit www.rentokil.com.au

Photos courtesy of Rentokil

FACTERIA
Getting serious about Bacillus Cerus

B. Cereus is a bacteria which forms a toxin when it is allowed to grow in food. When the food is eaten, the toxin will cause illness that will last for 1-2 days. Symptoms such as vomiting and diarrhoea will occur rapidly after eating the food (about 2-6 hours normally) as the toxin begins to affect the body.

The bacterium is widely found in nature, being a natural flora of soil, vegetables, dust, water and cereal crops (from where the name is derived).

From such hosts, one recognises that B. Cereus can be borne by food, water or air borne making elimination from the source very difficult.

Making matters more complicated is this bacterium's ability to form spores that are capable of surviving normal cooking procedures such as boiling.

Rice based meals can be high risk for B.cereus

Foods commonly affected include cornflour based sauces, cereal products and most commonly rice, especially that boiled and eaten cold. A high risk scenario involves the slow cooling of boiled rice and incomplete reheating to acceptable temperatures or long holding periods at room temperature. From a food handling and control point of view the most important factor is the cooling for B. Cereus. Food must be rapidly cooled to below 5°C. FSANZ guidelines are clear on this. From 60° to 21°C in no more than two hours and then down to 5°C and below in no more than a further four hours.

Rockpool introduces Biotek ozonated water disinfection system

"The cornerstone of good cooking is to source the finest produce". Neil Perry - Chef/Owner

Newly crowned Best New Restaurant in the 2010 Sydney Morning Herald Good Food Guide, Rockpool Bar & Grill and the sensational Spice Temple in the basement of the Rockpool complex on the corner of Hunter and Bligh Streets, Sydney have installed the latest Biotek Ozonated Water Generators to take food hygiene and freshness, and environment hygiene to a new level.

The best of East and West fine dining now have the best of Biotek UK and Biotek Taiwan's creation – electrolytic ozonated water generation. Unlike an older technology called corona discharge which is still used by all other ozone equipment manufacturers, Biotek's technology is 100% natural, environmental and safe because it doesn't emit NOx (nitrogen oxide and nitrogen dioxide) as a by-product like the corona discharge method does. Potable water is the only ingredient used to produce ozone inside the patented generator.

Neil Perry prominent Sydney chef and restaurateur

Mr Neil Perry is a prominent Australian chef, restaurateur, author and television presenter. He also is the consultant for Qantas First and Business Class menus worldwide through his company Rockpool Consulting and has a notable food brand "Neil Perry Fresh" available at Woolworths Supermarkets. Given his knowledge of food and the restaurant business, the decision to adopt Biotek's solution was spontaneous.

The flagship model i8200 is installed in Rockpool Bar & Grill's kitchen, and the versatile C7100D is installed in the kitchen of Spice Temple. These machines can generate highly concentrated ozonated water in an instant, it can eliminate more than 99.999% bacteria, viruses and fungus such as MRSA, E-Coli, salmonella and staphylococcus aureus in seconds. Ozone is nature's most effective tool for purification and disinfection, the same element that cleanses the Earth's atmosphere. Ozone

Biotek C7100D
Ozonated Water Generator

molecules are a voracious force for decontamination when it is dissolved in water to become ozonated water. While it's lethal to germs, viruses and microbes, it is perfectly safe on humans and food items it treats. Ozonated water is 3125 times more powerful than chlorine and yet it doesn't require rinsing after use, because of its natural reversion to oxygen and healthy water at the end of its lifecycle.

Biotek Ozone Disinfection Systems are suitable for use in commercial kitchens, food courts, staff canteens, hotels and guesthouses, supermarkets and other food places. They provide businesses with the following functions:

- Hand disinfection preventing cross-contamination between staff members
- Oxidise and decompose viruses, bacteria and agricultural chemical residue on fruits and vegetables
- Remove chlorine and chemical residue in water
- Prolong freshness of raw food materials
- Disinfect various utensils and equipment
- Disinfection on food packaging
- Increase freshness and texture of lettuces and salads
- Effectively remove fishy smell and odour on fish, utensils and workbenches
- Disinfect MRSA, E. Coli, Salmonella, Staphylococcus aureus and all other bacteria, viruses, fungi and moss
- Sanitation on utensils and cutting boards
- Floor, wall, workbench and environment disinfection
- Kitchen towel disinfection and remove odour
- No contamination, safe and environmental friendly
- Meets OSHA standards
- Meets HACCP standards
- Meets Australia and New Zealand Food Standard Code

Rockpool Bar & Grill and Spice Temple are located at 66 Hunter Street, Sydney NSW 2000 Australia, Media Manager Ms Sarah Swan (02) 8248 3803

For more information on Biotek Ozone Disinfection Systems, please contact Mr Willis Kwok at Biotek Ozone on (02) 9966 0555 or email info@biotek-ozone.com.au

QUESTIONS & ANSWERS Q&A

In this section we will answer two commonly asked questions.

Q **We are keen to embark on a HACCP project but we are also thinking about moving...is it a waste to start on HACCP now and then have to start again at our new premises should we move ?**

A HACCP is based on the processes you use and whilst the manufacturing environment plays a part in the final programme, it is the operational steps which a programme is built upon. A HACCP programme developed at one location should be relatively easily transported to a new location as long as the process remains the same. In this case you certainly won't be 'starting again', rather just making some simple modifications based on the new premises. If you are thinking about a relocation, an important tip is to get your HACCP project manager to review the plans of the new operation before you move or even commit. Our staff are skilled in food facility design criteria and a simple review by our technologists can save you the cost and inconvenience of a retro-fit to meet basic design criteria.

Q **HACCP is something we have to do but our facility is old. Can we get HACCP without the expense of a total rebuild?**

A Whilst a new, well designed facility is of course desirable, it is not essential to achieve ultimate certification. HACCP is a risk-based methodology and the risk of environmental contamination from your facility will be taken into account and specific controls designed to manage such risks. The facility should certainly meet basic design criteria as regulated by local government authorities and outlined in Australian Standard AS4674 as a minimum (see HACCP Australia Bulletin Issue 4). In our experience it is rare that major capital works are ever required to achieve certification however the facility should be in a good state of repair. Surfaces must be sound, smooth and cleanable, rust should be removed, holes and cracks filled and the facility should be pest-proofed for example. In regard to HACCP, an older facility in poor condition means more risk of contamination, which in turn translates to increased time and effort to manage those risks.

HOT LINKS

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…

Rude Food
http://rudefoodnames.com
These foods may sell well in their country of origin but probably need a name change if export is considered. Don't look if easily offended….

Food Hacking Lab Foods
http://foodhacking.wordpress.com/
http://www.101cookbooks.com/archives/001366.html
New techniques, new ideas take food a step closer to the laboratory! Try some of these recipes at home (or maybe not since you may need a tub of bubbling liquid nitrogen). And here is a great step by step process to making ice cream in the home using liquid nitrogen….. really impress you food scientist friends at your next dinner party!

The awards you don't want to win
http://health.yahoo.com/experts/eatthis/24416/20-worst-foods-in-america-2009/
The list is out! Is it possible to consume a week's nutritional requirements in a single meal? You bet!

HACCP'S website launch
www.haccp.com.au
Everything HAACP at the new website. Just launched with updated information, useful materials for downloads and a great supplier search function. The new website is designed to support the food science and consultancy operations by providing visitors with a great resource for their food safety needs.

Chinese restaurants adopt CCP Food Safety

Chinese restaurants are often reported as marginal in regard to food safety practices. However, several well known Sydney establishments have recently embarked upon the CCP Food Safety programme and are expected to achieve certification with flying colours and have further progressed to achieve their gold licence with the Restaurant and Catering Association. Restaurants like 'Emperor's Garden Seafood Restaurant' in Sydney's Chinatown district have worked with HACCP Australia's Food Technologist Vivien Leung for the development and implementation of their programme. This establishes the restaurant as having the highest standards of food safety and hygiene. Vivien's multilingual skills are a strong asset in this sector and definitely support the facilitation of the programmes in these operations. Many key documents are written in Chinese for these programmes which enhances understanding and user-friendliness of the CCP Food Safety programme.

Now customers visiting restaurants like "Emperor's Garden Seafood Restaurant" can relax and enjoy the sensational flavours whilst being assured that the establishment complies with an advanced and effective food safety programme.

Emperor's Garden is located at 96-100 Hay St, Haymarket, NSW, and can be contacted on **02 9211 2135 or visit www.emperorsgarden.com.au**

Mr. Stanley Yee OAM, Director of Emperor's Garden Seafood Restaurant.

CCP FOOD SAFETY

For more information on CCP Food Safety Programmes please contact HACCP Australia on 02 9956 6911 or visit www.haccp.com.au

FACT "These products are food safe"

HACCP AUSTRALIA FOOD SAFETY PROGRAMME CERTIFICATION

An introduction to HACCP Australia's certification and endorsement process for products and services supporting the food industry can be found on page 30.

The products and companies listed below are all certified by HACCP Australia

CATERING EQUIPMENT	ESWOOD AUSTRALIA	Manufacturers of industrial dish and glass washers	02 9604 7333
	MACKIES ASIA PACIFIC	Foodsafe bread loaf pans and bakery trays	02 9708 2177
	SEMAK	Manufacturers of chicken rotisseries	03 9796 4583
	TOMKIN AUSTRALIA	Foodsafe kitchen equipment	02 9319 2993
CLEANING EQUIPMENT	AUSSIE RED EQUIPMENT	Aquafortis hot water high pressure clean and capture equip.	1800 804 878
	BAXX AUSTRALIA	Equipment for the elimination of airborne pathogens	02 9939 4900
	EDCO (EDGAR EDMONDSON)	Cleaning aids and equipment	02 9557 4411
	OATES CLEAN	Full range of food grade cleaning equipment	1800 791 099
	SABCO	Scourers, sponges, clothes and cleaning aids	1800 066 522
	STEAMASTER AUSTRALIA PTY LTD	Hot and cold water pressure cleaners	02 9796 3433
CLEANING CHEMICALS	AVANTI CHEMICALS	Cleaning chemicals for food and agri. businesses	07 5549 3666
	BIOTEK AUSTRALASIA PTY LTD	Broad spectrum disinfectant	02 9603 4499
	BIOTEK-OZONE AUSTRALIA & NEW ZEALAND P/L	Ozonated water generators for sanitation	02 9966 0555
	DEB AUSTRALIA	Skin care and hand cleaning soaps for food handlers	1800 090 330
	AUSTRALIAN STEAM CLEANING & MAINTENANCE SYSTEMS	All purpose cleaning and disinfectant products	07 5599 8410
CLEANING AND MAINTENANCE SERVICES TO THE FOOD INDUSTRY	ACE FILTERS	Food grade cooking oil filters	1300 555 204
	AERIS HYGIENE SERVICES PTY LTD	Specialist cool room and cool room motor cleaning services	1300 790 895
	BBK CLEANING	Specialist cool room and cool room motor cleaning services	0418 192 025
	BORG CLEANING	Specialist contract cleaning services for food premises	03 9463 1300
	CHALLENGER CLEANING SERVICES	Specialist contract cleaning services for food premises	02 9993 0562
	ICE CLEAN INDUSTRIES	Residual free dry ice cleaning	0403 044 162
	INTEGRATED PREMISES SERVICES P/L	Specialist contract cleaning services for food premises	02 9432 8000
	ISS HYGIENE SERVICES	Bathroom services for the food industry and premises	02 8644 9704
	METROPOLITAN FILTERS	Filters and filter services for range hoods and food facilities	1300 653 536
	WASH IT AUSTRALIA	Food transport vehicle cleaning and sanitation services	1300 927 448
	OZ TANK	SS deep cleaning tanks and systems for pans and trays	1300 66 88 66
	PINK HYGIENE SOLUTIONS	Bathroom services for the food industry and premises	1300 731 234
	POWERTANK PTY LTD	SS deep cleaning tanks and systems for pans and trays	0411 441 441
CLEANING MATERIALS	3M	Scotchbrite™, cleaning chemicals, scourers and sponges	136 136
	EDCO (EDGAR EDMONDSON)	Disosable cleaning wipes	02 9557 4411
	CHEMPACK SUPPLIES	Food grade bathroom paper and dispensers	02 9542 5822
	CLOROX AUSTRALIA	Chux™, Oso™ and Glad™ range of materials	02 9794 9500
	CONCEPT LABORATORIES PTY LTD	Suppliers of sanitising hand gel and sanitising wipes	07 5493 8433
	DEB AUSTRALIA	Disposable cleaning wipes and cloths	1800 090 330
	LALAN GLOVES SAFETY CARE	Food grade cleaning materials	03 9706 5609
	MEDIVAC	Disposable cleaning wipes for the food industry	03 5436 1100
	OATES CLEANING	Full range of kitchen cleaning materials	1800 791 099
	SABCO	Scourers, sponges, clothes and cleaning aids	1800 066 522
	SCA HYGIENE AUSTRALASIA	Tork premium colour coded specialist cloths	1800 234 613
CLOTHING - DISPOSABLE GLOVES AND PROTECTIVE WEAR	LALAN GLOVES SAFETYCARE	Disposable gloves for the food industry	03 9706 5609
	LIVINGSTONE INTERNATIONAL	Disposable gloves for the food industry	1300 889 822
	PARAMOUNT SAFETY PRODUCTS	Disposable gloves for the food industry	03 9762 2500
	RCR INTERNATIONAL	Gloves and disposable protective wear	03 9558 2020
	STEELDRILL WORKWEAR AND GLOVES	Disposable gloves for the food industry	03 9790 6411
	SCA HYGIENE AUSTRALASIA	Tork premium disposable non woven cloths	03 9550 2999
	YAP TRADING COMPANY	Disposable gloves for the food industry	02 9826 8299
FACILITY FIXTURES AND FIT OUT	ALBANY DOORS	Automatic rapid close doors	1300 666 232
	CARONA GROUP PTY LTD	Coldshield's PVC flexible doors for food premises	1800 462 233
	DMF INTERNATIONAL PTY LTD	Flexible door material for food manufacturing and storage	02 9636 5466
	DYSON APPLIANCES	Suppliers of food safe hand dryer	02 9540 0400
	HALTON INTERNATIONAL	Suppliers of extraction hoods and ventilation devices	0412 702 145
	PHILIPS ELECTRONICS AUSTRALIA LTD	Food safe tube lighting for food handling facilities	02 9947 0000
	THORN LIGHTING	Food safe lighting and fitout solutions for food handling facilities	1300 139 965
FLOORING, WALLS, AND MATTING	3M	Specialist safety matting for food and beverage areas	136 136
	ALTRO APAC	Specialist food premises flooring and wall panels	1800 673 441
	BASF CONSTRUCTION CHEMICALS	UCRETE Flooring System	1800 333 048
	BETHELL FLOORING	Supplier and installers of specialist food premises flooring	07 3865 3255
	BLUESCOPE STEEL	Colorbond® anti-bacterial coolroom panelling products (quote 2222)	1800 022 999
	DEFLECTA CRETE SEALS	Anti-bacterial Flooring Product and Services	03 9318 9315
	DYNAMIC COMPOSITE TECHNOLOGIES	Glassboard Coolroom and Food Transport Panelling Products	1800 051 100
	GENERAL MAT COMPANY (THE)	Specialist safety matting for food and beverage areas	1800 625 388
	PALL MALL MANUFACTURING	Specialist safety matting for food and beverage areas	02 9584 8644
	RAMVEK PTY LTD	Wall panelling for food areas	03 9794 9342
	ROXSET AUSTRALIA	Suppliers and installers of specialist food premises flooring	02 9988 4822
FOOD SERVICE EQUIPMENT AND UTENSILS	AACLAIM QUALITY SALES	Food service and food storage light equipment	02 9525 1049
	FOOD SERVICE EQUIPMENT (FSE)	Juice dispensers and other buffet equipment	1800 673 153
	KENCAN LTD	Kee-seal™ disposable piping bags	07 3273 8111
	SPM DRINK SYSTEMS	Soft serve dispenser machine	0438 837 246
	SYNCHROMETRO	Food grade trays	0433 320 183
	TOMKIN AUSTRALIA PTY LTD	Colour coded catering utensils, catering equipent and piping bags	02 9319 2993
FOREIGN BODY IDENTIFICATION	SMITH HEIMANN AUSTRALIA	X-ray inspection and foreign object detection equipment	02 9597 6833
	WJB ENGINEERING	Magnetic separation technology and services	1800 835 858
HAND SOAPS AND BARRIER CREAM	CONCEPT LABORATORIES	Food Grade hand soaps	07 5493 8433
	DEB AUSTRALIA	Food Grade hand soaps	1800 090 330
	PROARMA (SKIN SURE)	Antibacterial protection hand cream	1300 889 280

ICE MACHINES	ICE MASTER SYSTEMS PTY LTD	Ice machines for hotels, restaurants and catering outlets	03 9455 2300
ICE MACHINES CONT.	HOSHIZAKI LANCER PTY LTD	Ice machines for hotels, restaurants and catering outlets	08 8268 1388
KITCHEN CONSUMABLES	3M	Scotchbrite™, cleaning chemicals, scourers	136 136
	CLOROX	Glad™, Chux™ and Oso™ range of materials	02 9794 9500
	EDCO (EDGAR EDMONDSON)	Supplier of food grade kitchen consumables	02 9557 4411
	OATES CLEANING	Full range of kitchen consumables	1800 791 099
	RCR INTERNATIONAL	Food grade pallet and crate covers	03 9558 2020
LABELS - FOOD GRADE	OMEGA LABELS PTY LTD	Beverage packing material and labels	1800 028 924
	P & I PTY LTD	Supplying paperboard packaging and labels	02 8707 7109
	PURBRICK HEALTHPRINT	Labels for the food and pharmaceutical industries	03 9751 7100
	W W WEDDERBURN	Food safe labels for food products and food retail	02 9797 0111
LUBRICANTS - FOOD GRADE	LANOTEC AUSTRALIA	Suppliers of food grade lubricants	07 3373 3700
MANUFACTURING EQUIPMENT AND COMPONENTS	BSC MOTION TECHNOLOGY	Food grade bearings and housings	03 9560 3222
	ENMIN PTY LTD	Manufacturers of food grade feeder equipment	03 9753 3633
	FCR MOTION	Manufactures of food grade geared motors and inverter	03 9362 6800
	FESTO PTY LTD	Pneumatics and valves for food manufacturing equipment	1300 889 696
	HARRINGTON MOTORS/SCORPION	Stainless steel electric motors for food processors	03 9546 7515
	SICK PTY LTD	Food safe switches, sensors and sensor solutions	03 9497 4100
	SMC PNEUMATICS	Suppliers of pneumatics and valves for food manufacturing	02 9354 8222
	SPECIALTY AIR	Compressed air piping system in food manufacturing processes	1300 1300 24
PACKAGING MATERIAL AND EQUIPMENT	AC FOUNDATION	Repacking of consumables and food products	02 9809 0254
	ASTECH PLASTICS	Supplier of food safe pails and lids	1300 133 531
	DALTON PACKAGING	Manufacturers of paper bags and products for the food industry	02 9774 3233
	MICROPAK PTY LTD	Manufacturers of food grade packaging materials	02 9646 3666
	NETPAK	Suppliers of food grade netting to small goods manufacturers	02 9604 4950
PEST CONTROL EQUIPMENT AND MATERIALS	AGSERV QLD PTY LTD	Suppliers of "Brandenburg" flying insect control	07 3255 5572
	BELL LABORATORIES INC	Suppliers of rodent control materials and stations	0427 802 844
	EKO SOLUTIONS	Distributors of the 'ecomille rodent eradication equipment	1800 612 212
	(BASF) GOLIATH COCKROACH GEL	Food industry cockroach control gel	1800 333 048
	PEST FREE AUSTRALIA PTY LTD	Specialist electronic vermin elimination devices	02 4969 5515
	STARKEY PRODUCTS PTY LTD	Range of insect control devices	08 9302 2088
	(BASF) STRATAGEM	Suppliers of rodent and cockroach control materials	1800 006 393
	WEEPA PRODUCTS PTY LTD	Weep hole protection devices for new or retro application	07 3844 3744
PEST CONTROLLERS (ALL STATES)	RENTOKIL	National pest control services for the food industry	1300 736 865
	SCIENTIFIC PEST MANAGEMENT	National pest control services for the food industry	1300 139 840
PEST CONTROLLERS (NSW)	AEROBEAM PROFESSIONAL PEST MGNT.	Secialist food premises pest management	02 9636 5840
	AMALGAMATED PEST CONTROL	Specialist pest control services for the food industry	13 19 61
	ANT-EATER ENVIRONMENTAL SERVICES	Specialist pest control services for the food industry	1300 551 333
	CPM PEST & HYGIENE SERVICES	Specialist pest control services for the food industry	02 9674 5499
	CORPORATE PEST MANAGEMENT	Specialist pest control services for the food industry	02 9311 1234
	EAGLE PEST CONTROL	Specialist pest control services for the food industry	02 9748 0066
	ECOLAB PTY LTD	Specialist pest control services for the food industry	02 9748 0066
	HACCP PEST MANAGEMENT	Specialist food premises pest management services	02 9922 3743
	ISS PEST CONTROL	Specialist pest control services for the food industry	13 14 40
	STOP CREEP PEST CONTROL	Regional pest control services for the food industry	02 9371 3911
	TERMIMESH PEST MANAGEMENT	Specialist pest control services for the food industry	02 4351 0482
PEST CONTROLLERS (QLD)	AMALGAMATED PEST CONTROL	Specialist pest control services for the food industry	13 19 61
	ARREST-A-PEST	Specialist pest control services for the food industry	07 3279 1199
	ECOLAB PEST CONTROL	Specialist pest control services for the food industry	02 9017 7655
	GOODE PEST CONTROL	Specialist pest control services for the food industry	1300 13 12 14
	ISS PEST CONTROL	Specialist pest control services for the food industry	07 3815 6600
PEST CONTROLLERS (VIC)	AMALGAMATED PEST CONTROL	Specialist pest control services for the food industry	13 19 61
	DAWSON'S AUSTRALIA	Specialist pest control services for the food industry	0411 131 650
	ISS PEST CONTROL	Specialist pest control services for the food industry	13 14 40
	PESTAWAY AUSTRALIA PTY LTD	Specialist pest control services for the food industry	03 9850 3777
	PROTECH PEST CONTROL	Specialist pest control services for the food industry	0438 780 980
	STATEWIDE PEST	Specialist pest control services for food industry	1800 136 200
	TRAPS PEST CONTROL PTY LTD	Specialist pest control services for the food industry	03 9390 6998
PEST CONTROLLERS (WA)	ISS PEST CONTROL	Specialist pest control services for the food industry	13 14 40
	TERMIMESH PEST MANAGEMENT	Specialist pest control services for the food industry	02 4351 0482
REFRIGERATION - GOVERNORS, EQUIPMENT AND DATA	CAREL	Temperature controllers and supervisors for refrigeration	02 8762 9200
	DANFOSS	M2 alarm and monitoring system	02 8845 1813
	DIGINOL	Data loggers and data services for temperature control	07 3206 3079
	HEATCRAFT AUSTRALIA PTY LTD	HACCP specification cool room thermostats and alarms	13 23 50
	PHASEFALE	Temperature controllers for refrigerated storage	03 9553 0800
REFRIGERATORS AND REFRIGERATION SERVICES	AERIS HYGIENE SERVICES PTY LTD	Specialist cool room and cool room motor cleaning services	1300 790 895
	MELBOURNE REFRIGERATION SERVICES	Refrigeration installation and repair	03 8761 6395
	REJUVENATORS (THE)	Specialist cool room cleaning and rejuvenation services	0407 292 826
STAFF RECRUITMENT AND HUMAN RESOURCES	SKILLED GROUP	Specialist HACCP trained workforce solutions for the food industry	1300 366 606
STORAGE, SHELVING AND RACKING	ARMACEL TECHNOLOGY GROUP	Food storage containers, food grade shelving	02 9450 0900
	SYNCHROMETRO	Distributors of food grade shelving	0433 320 183
MANAGEMENT SYSTEMS AND REPORTING	SHADOW ORGANISATION PTY LTD	Audit, compliance and monitoring systems	02 8448 2090
	SPECIALITY AIR	Specialist compressed air servicesfor the food industry	1300 1300 24
THERMOMETERS, PH METERS AND DATA LOGGERS	3M	TL 20 Temperature logger for logistics	136 136
	FLUKE THERMOMETERS	Digital thermometers and pH meters for the food industry	08 8231 3455
	TESTO PTY LTD	Specialist thermometers for use in the food industry	03 8761 6108
	TRIPLE POINT CALIBRATION	Thermometer sales, calibration and service	08 8231 3455
TRANSPORT CONTAINERS AND PALLETS	ARMACEL TECHNOLOGY GROUP	Manufacturers of food grade pallets and storage solutions	02 9450 0900
	HILLS INDUSTRIES	Food safe pallets and storage solutions	07 3212 9588
	SCHUETZ DSL (AUSTRALIA) PTY LTD	Food safe storage and transportation palletcons	1800 336 228
	VIP PACKAGING	Food grade intermediate bulk containers	02 9728 8999
WALL & CEILING PAINT	LAMAL GROUP PTY LTD	Range of food facility paints with antimicrobial additive	1300 394 307

These products are food safe

HACCP AUSTRALIA FOOD SAFETY PROGRAMME CERTIFICATION

The HACCP Australia certification and endorsement process supports organisations achieving food safety excellence in non-food products and services that are commonly used in the food industry. The HACCP endorsement is particularly aimed at those organisations that are required to supply 'food safe', 'compliant' or 'HACCP approved' products and services to their food safety conscious customers. This independent assessment and verification of fitness for purpose offers assurance to the buyer or user that HACCP food safety protocols will not be compromised in using such a product or service correctly and that such a product is 'fit for purpose' in the food industry.

Compliant or endorsed products are rigorously reviewed by HACCP Australia'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 all 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.

The companies listed on pages 28-29 carry a range of excellent food safe products or services certified and endorsed by HACCP Australia.

Call 02 9956 6911 for more details.

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HACCP AUSTRALIA

FOOD SAFE PRODUCTS AND SERVICES

- Are your non-food products, equipment and materials FOOD SAFE?
- Are your service suppliers FOOD SAFE and HACCP compliant?

Be sure, be FOOD SAFE

Look for the food safety mark

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Looking for food safe products or services? Call us on 02 9956 6911
or visit the 'Endorsed Suppliers' page on our website.

HACCP AUSTRALIA

Only products that carry HACCP Australia endorsement are advertised in this bulletin. They have been thoroughly examined by food technologists to assess their suitability in terms of food safety for use in food operations employing a HACCP based safety programme.