

FOOD SAFE DRAINAGE PRODUCTS Design ideas from Blucher

R&D SURVEY New products are top priority in USA

FOOD INDUSTRY PEST CONTROL New HACCP Australia standard in 2014

SCREENING FOR ALLERGENS Dr Tony Treloar – ELISA Systems

FOOD AWARDS Nomination time approaches





ISSUE 19 2014



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Welcome

to the 19th HACCP Australia Food Safety Bulletin.

While Australia has been warned by some economic forecasters not to pin its hopes for continued national economic prosperity on a food export boom to replace mining-generated wealth, 2014 commences with a lower Australian dollar and some brighter prospects for a number of our food industry sectors than perhaps we saw this time last year. A recent HSBC report said that "despite its diminutive size, there would be opportunities for Australian agriculture and exports as Asian middle-class incomes rise, diets change and demand for food grows as the per capita income of 3.2 billion people in Asia rises to tip them into the mushrooming middle class by 2030". The HSBC paper went on to say that "protein consumption would grow, boosting demand." We have the expertise, technology and quality and are very well regarded and so key sectors, particularly beef and dairy look set for a brighter future.

It is heartening that a market such as the USA can present export opportunities for food technology and food safety services.

In terms of development, HACCP Australia has some exciting plans for the coming year too. Our business continues to grow both domestically and overseas and the first half of 2014 will see us opening an agency office in the USA. While mining tends to dominate all export news, it is heartening that a market such as the USA can present export opportunities for Australian food technology and food safety services. This new office joins those established in The UK and Hong Kong in recent years and represents an important pillar to our global plans. The working relationship that we have now established in the USA not only gives us a foothold in that market but brings with it a significant technical resource from the USA which we are sure can benefit our customers here in Australia.

Nearer to home, but of equal importance to us, is the establishment of a branch in Fiji. Fiji is making significant efforts to improve its food safety in line with its industry development plans and we, at HACCP Australia, will be glad to be part of that in the years ahead.

We might bemoan Australian education systems and industry development schemes, (and on occasions rightly so), but we still manage to find and develop the very best food scientists and technicians and export their services. Our team at HACCP Australia is proof of that and we are proud not only of their expertise but also their source.

Our food safety certification scheme for food safe equipment, material and services continues to grow, fully meeting the due diligence needs of the world's leading food safety schemes. The very best and safest products carry our mark both here and overseas. This bulletin's cover features drainage products from Blucher. A number of products in Blucher's range are exceptionally well-designed and manufactured. Food facility specifiers and designers should take note of Blucher's unique features and the food safety characteristics of their products. (see p5 for more detail).

In issue 18, we focused on the services offered by our sister company, GMO-ID Australia. Genetic Modification is a very important issue in Australia, particularly in Tasmania which has unique regulations as well natural protection. This was highlighted in a recent ABC radio programme and attracted a lot of comment. Since then the Tasmanian government have extended its ban on GMO indefinitely (see page 16). Regardless of the debate surrounding this subject, consumers continue to call for information and demand for certification in this sector is now beginning to increase as manufacturers and retailers respond to market needs both here and overseas. Please feel free to call us if you are looking for more information.

Once again, HACCP Australia will be a sponsor of Food Magazine's 'Food Awards' in 2014. There are many innovative food safe products here in Australia and they deserve recognition. I do encourage all manufacturers to consider entering. Australia is a world leader in food technology and this is an excellent platform to demonstrate it.

We look forward to being of service to many of you in 2014. Thanks for subscribing.



Clive Withinshaw, HACCP Australia



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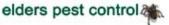
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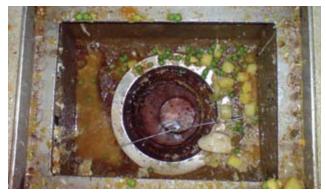


How to Avoid Drain Pain Specifying food-safe drainage solutions

By Adam Hopkins, BLUCHER Australia

A recent increase in poor drain selection has highlighted the importance of specifying the correct drain for the application, especially in the hygiene conscious food processing industry.

In the past twelve months, we've seen an increase in requests for assistance with drainage from food processors as a result of food safety audits, particularly from those with concerns about the performance of floor drains and the inability of cleaners to clean quickly to a required standard. With some recent projects requiring upwards of ninety drains for their processing area alone, a small problem can become substantial if something as seemingly small as a floor drain begins affecting operations as a repeating and persistent issue.



A high maintenance floor drain – Substantial product build-up, sharp corners and difficult to clean surfaces increase the risk for major bacteria issues.

Drainage is often viewed from above as a small hole where production waste is hosed away, however as the wash-down water helps clear the processing area the real effects occur below. Besides the main role of collecting large amounts of water, floor drains are often points for collecting washed solids and preventing contaminated sewer gases from entering hygienic areas. Recent regulations require primary and secondary screening before discharge to sewer, creating a situation where regular clearing of filter baskets and waste build-up is required to prevent a blockage.

This will possibly lead to an increase in the rate of clearing solids. Some Australian states, such as South Australia, have now moved to implement regulations for a fixed secondary strainer with a maximum 2 mm hole opening size for all drains connected to trade waste sewer.

Often, when drain problems are investigated, the problem is found to arise from missing or damaged filter screens that allow bulk solids to enter and block drainage pipework. Blockages often arise during processing and highlight the importance of regular cleaning, education and maintenance practices for food processors. Stopping production to clear pipes because the floor is pooling with backed up water is not desired by anyone, least of all the maintenance team and food safety officers. This gives rise to risk and a costly time and financial burden. It raises a substantial point to specifiers and installers and their liability for products installed without the necessary approvals such as WaterMark. In many cases, the drainage installed into concrete floors is very difficult to rectify or replace without substantial production downtime, equipment relocation or construction work. Maintenance staff are often omitted from the drainage selection process and left to resolve problems when drains are installed by others without adequate thought to the requirements of day to day operations.

We prefer to work with consultants, owners and maintenance managers to prevent these problems before they occur; at the design stage. Selecting a high performance floor drain depends on a few key factors including the expected amount of water, the amount of solids, load rating required, for example forklift traffic, cleanliness, material and temperature.

Primary considerations for hygienic design are minimising or eliminating corners and horizontal surfaces that can trap deposits of solids and harbour bacteria in these hard to clean parts of a drain bowl. Laps, crevices and corners are all undesirable attributes when it comes to drain bowl cleanliness. Managing bacteria is much easier when surfaces are smooth, easy to clean, self-draining and impervious, such as stainless steel. Outside the bowl it is important to fill voids such as those under under the drain top or folded edges with a permanent bacteria resistant material. The material also needs to be suitable for harsh cleaning practices, with stainless steel resistant to many cleaning chemicals and suitable for high temperature water washdown.



Self draining, continuous smooth surface and easy clean, replaceable components of a Blucher Industrial Drain.

Ideally the filter basket should be a snug fit within the drain bowl, directing all solids into it and preventing overspill into the drain below when it is removed for emptying. Secondary strainers are required as a backup and designed to catch overspill, but can CONTINUED ON PAGE 06



What lies beneath. Floor drains can all look the same until you look inside for the clean or grim truth.

be less accessible and harder to clear, especially during production. We've supplied oversized baskets to reduce emptying frequency for high solids content waste and for production waste with unusual solid shapes and sizes.

Another successful design solution that Blucher have employed is a removable water trap. These are fitted within the drain bowl and serve to prevent sewer odours but can be removed for maintenance and allow unimpeded access to the pipework beyond. This feature is preferred to installing additional inspection points when each drain can act as both drain, clear-out and can be used without a traditional P-Trap.

Using removable items such as filter baskets and water traps allows for replacement should damage occur without affecting the fixed drain bowl and this extends the service life of the drain considerably. The grate of the drain should also be replaceable and in our experience can save expense when production area layouts are changed, such as when pedestrian areas become heavy forklift traffic areas. Replaceable grates make these changes to layout easier and guicker.

Blucher's practical experience of more than 21 years in the industry has led to these design features being incorporated into best practice solutions for commercial and industrial drainage and becoming standard in an increasing number of large project specifications and plant upgrades. Whether it is a single drain bowl or a solution incorporating industrial floor drains, channel linear drainage, stainless steel drainage pipework and custom kettle discharge pit, we've been able to supply products that are installed permanently, reliable and offer a long service life as part of the building.

Locally designed and manufactured channels, some over 100 metres in length, use these same hygiene and performance standards as other Blucher products which we're proud to supply across Australia, New Zealand and South East Asia to leading food processors.

Understanding the implications of poor drainage selection and the ongoing benefits of good choices for building design, are often only discovered when they're not performing properly but are crucial for an efficient and hygienic food production facility.

contact BLUCHER Australia 08 8374 3426 - blucher@blucher.com.au www.blucher.com.au



Blucher's drainage products have been certified as food safe by HACCP Australia.



VEGETABLES



Are they the meat of the food related illness problem? A US study points the finger

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Red meat was once seen as one of the leading sources of food poisoning, partly because of a deadly outbreak of E. coli associated with hamburger. But Griffin and Doyle said there have been significant safety improvements in beef handling. In the study, beef was the source of fewer than 4 percent of food-related deaths and fewer than 7 percent of illnesses. *Credit: Centers for Disease Control and Prevention www.cdc.gov/eid/*

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

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

Why Is There A Need For Ice Machine Sanitation?

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

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

Factors that can promote slime growth:

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

Why Should We Care About Proper Ice Machine Sanitation?

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

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



An extreme but not uncommon sight in ice machines servicing

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

What Are The Impediments to Adequate Ice Sanitation?

Cleaning ice equipment is an inherently difficult undertaking. As compact equipment has been shrunken down to reduce valuable floor footprint, many areas inside of ice machines and ice bins have become less accessible as a result. Often, a pressure washer is necessary to access difficult to reach areas inside of ice equipment and that usually requires complete disassembly of the equipment and relocation to an area where CONTINUED ON PAGE 10 the pressure washer can be operated without disrupting kitchen service. Ice machine cleaning can sometimes take up to 4 hours to complete, depending on the make and model and the condition of the machine.

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

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

What Alternatives Exist to Traditional Equipment Sanitation?

Automated ice machine sanitation systems are now available as factory installed options on many models of new ice makers. These systems are ultraviolet light-based devices that convert air and water from inside the ice machine into powerful oxidants that are distributed throughout ice equipment, targeting vulnerable areas prone to slime buildup and extending the interval in between required cleanings. These chemical-free systems typically are priced around the cost of 2-3 ice machine cleanings, meaning that in most settings the return on investment can be realised in less than one year.

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

Conclusion

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

Adam Anthony BS, MBA, is Chief Operating Officer of BioZone Scientific International, manufacturer of IceZone[®] - the only HACCP certified ice machine sanitation platform.

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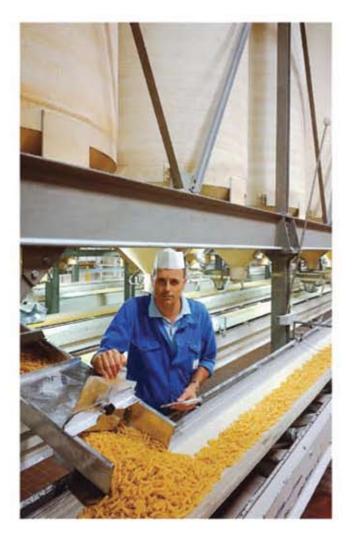


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2013 R&D Survey: New Products are a top priority for North America in 2013 Food Processing Magazine's 42nd annual R&D Survey reveals new products as a top priority for food manufacturers in 2013 - one more indication companies are ready to resume aggressive growth.

By Dave Fusaro, Editor in Chief, Food Processing – reprinted with permission.

"Get ready for an onslaught of truly new products – not safe line extensions or just "cleaned-up" products – from your product development team... as well as the R&D departments of your competitors".

At least, that's what the numbers seem to indicate in Food Processing's 42nd annual R&D Survey. The 48 percent of respondents who voted truly new products as their top priority for 2013 was up 8 percentage points from last year and was the highest number for that subject since the 2010 survey, and, it's hoped, is one more indication that the nasty recession is behind us and food companies are ready to resume aggressive growth.

"Improving existing products is always mandatory, but new products are our focus," as one respondent put it. Another wrote: "We will continue to look for cost-saving ideas through our research, but this year we will focus more on expanding in a new direction to achieve future growth."

The Food Processing annual Top 100© list shows that, every year, food and beverage processors never stopped making money, undoubtedly because American and Canadian consumers never stopped eating! Maybe it wasn't enough money or maybe things just seemed too dicey to invest, but R&D departments have had to suck it in over the past couple of years. Which doesn't mean the corporate suite is throwing money at your team in 2013. One of the questions we ask every year is, "What's happened to your R&D department's budget this year?" While those answering "It's been increased" went down 2 percentage points from last year, respondents saying "It's been cut" also dropped, by 3 points (meaning more than half said "It's about the same").

So, net, maybe you've got the same amount of funding to work with, but at least you'll be spending it on truly new products. New products as a priority took 2 points away from "cleaning up" current products (10 percent). Improving existing products gained a little (18 percent, up 4 percentage points), while cost control was flat, at 13 percent. Product line extensions dropped the most, down 7 points to 8.6 percent.

Actually, they're all priorities, aren't they? "Although my main focus within the department is new product development, I still spend time on product improvement, cleaner product decs, ingredient consolidation and line extensions," said Teresa Kloch, a food technologist at Perry's Ice Cream, Akron, N.Y. "Continued improvement should never be short changed; you must find ways to service your customer needs without increasing their cost," wrote a guy at a poultry company. Cleaned-up or simplified ingredient statements were mentioned by several respondents. "Our No. 1 goal is clean labeling; another is reducing carbon footprint," said one respondent in the write-in portion of our first group of questions. "We need to convey the simplicity of our products' ingredients. We have narrowed them down well, we just need to get the word out," said another. "We've had noticeable and worthwhile success with R&D in 2012, which helped us to decide to push it further in 2013," wrote one optimist. Perhaps the real answer to what your priorities are was written-in by No. 391: "It depends on how busy we are."

Before it is forgotten, this year, saw 514 responses to the survey, quite an increase over last year's 409 responses, and the highest number since we went direct to the R&D people, rather than to company spokespeople, in 2006.

Priorities for the year

There's a tiny contradiction in our survey answers – maybe it's the way it was constructed - when it comes to "cost control." While that answer stayed flat in our "prioritise" question, it made a strong showing as No. 2 (behind food safety, see fig. 1) in another question that asks, "How strongly will the following impact your R&D strategy this year?"

FIGURE 1

What will have the most impact on your R&D strategy this year?

	First-Place Votes	Total Score*
Food safety	47%	2805
Contributing to cost reduction	23%	2399
Organic/Natural	10%	2004
Dietary guidelines	7.3%	1837
Palliative health	6.1%	1556
Preventive health	4.0%	1368
Sustainable/Eco-Friendly/Fair Trade	1.6%	1748

*Total score applies 7 points for a first place vote, 1 point for 7th place, etc.

Food safety does tend to overwhelm any discussion of operational priorities. At least in one case, Figure 1 also shows

how a subject (Sustainable/Eco-friendly/Fair trade) can draw fewer first-place votes than other subjects but score higher than them in second- and third-place voting – that's what our "total score" column is about.

As for bigger-picture issues that will impact product development teams beyond the current year, there were two significant changes this year: more concern over staffing and less concern over going global.

.....

FIGURE 2

How long does it take to get your products from concept to shelf?

	This Year	Last Year
Nearly a year	31%	38%
6 months	31%	24%
3 months	21%	17%
13-23 months	11%	14%
24 months or more	7.1%	6.7%

While healthier/better-for-you foods, following consumer trends and regulatory issues kept their same positions as last year, all around 50 percent (respondents could vote for more than one concern), "personnel/labor issues" shot up from 17 percent in 2012 to nearly 28 percent this year. "Going global" moved in the opposite direction, from 25 percent last year to 18 percent this year.

"Labor costs are of vital concern right now, and an increase in the federal minimum wage will be catastrophic," wrote one man, who earlier indicated cost control was his top priority for the year. "We are adding additional R&D resources, both people and bricks and mortar," commented another. "Our company spent more resources in the R&D function and I got more training and opportunities to develop myself," said one appreciative product developer.

On the other hand, one person mentioned "increasing competition from China" as a concern.

Despite the fact the US's dietary guidelines are two years old, they still have an impact: 18 percent – 1.5 points more than last year – said the guidelines are "huge." But those noting they are "reasonably important" to R&D efforts dropped from 58 percent to 53 percent.

We are adding additional R&D resources, both people and bricks and mortar

As for which ingredients you're most interested in adding or removing, salt/sodium remains public enemy No. 1 with 39 percent – that's 8 points lower than last year, perhaps indicating many of you already have made progress on that front. Reducing sugar was second at 27, about where it was last year. All three suggested additions – fibre, whole grains, fruits and vegetables – scored around 20 percent. "We've already removed transfat and reduced sodium. Other issues aren't a big deal," wrote one respondent.

There were quite a lot of write-ins and "others" for this question. Top add-ins were protein, probiotics and omega oils, while favorite removals were gluten and other allergens.

Who's calling the shots?

Food Processing's readership is pretty evenly split between larger companies (more than 100 employees at the location to which we mail the magazine) and smaller ones. That diversity is apparent in many of the organisational questions.

62 percent of you have a formal product development team, a number that has been shrinking, perhaps insignificantly, in recent years (it was 70 percent in 2011 and 68 percent in last year's survey). (By the way, 7.5 percent say "sort of.")

FIGURE 3

Top issues for the next few years

This Year	Last Year
52%	54%
50%	49%
50%	47%
18%	23%
19%	20%
28%	18%
13%	14%
	52% 50% 50% 18% 19% 28%

Likewise, the dominance of the R&D Dept. on that team shrank a little, too, although it's still powerful at 82 percent. "Who's on that team?" is one of those questions where you can select more than one answer and, ironically, every category except R&D increased. The big gainers were representatives from corporate management (up 12 points), purchasing (up 10), finance (up 7 points) and manufacturing (up 7).

FIGURE 4

Do you have a formal product development team?

	This Year	Last Year
Yes	62%	68%
No	30%	24%
Sort of	7.5%	8.5%

Open innovation is catching on. 23 percent of those surveyed count multiple suppliers as part of food companies development teams (up from 18 percent), and 17 percent include outside consultants (up 6 percentage points).But all the remarkable numbers were merely returns to 2011 levels, so maybe last year's poll was an anomaly.

The same goes for who influences annual goal-setting in product development. The R&D Dept. dropped an insignificant bit, but every other category (top management, mid-level

FIGURE 5

How often do you have formal development meetings?

Weekly or more often	27%
A couple of times a month	20%
Monthly	18%
Less than monthly	11%
Don't have/don't meet	23%
BTW: Most of our meetings are virtual	5.1%

management, and manufacturing/plant operations) made significant gains. Marketing and sales scored the same.

If you have a formal product development team, you've got to have meetings, right? Well, yes, for three-quarters of you. The biggest plurality meets at least weekly (27 percent). 5 percent of you say the meetings are often virtual because of so many offsite folks.

Internal research is still the main element of identifying new product ideas, but here, too, the open door is apparent. 42 percent of you rely somewhat on research provided by suppliers, and 16 percent use an external product development company. 43 percent say you practice open innovation.

So after all the research and meetings and input, how long does it take to get that baby from concept to the grocery

store? Looks like the pace is quickening. The longer wait times dropped, but six months picked up 7 percentage points and three months increased 4 points.

The final question was a catch-all: Is there anything we missed or anything you care to add? A couple of the answers are worth noting:

- Reducing product lead times.
- Communicating and measuring performance once the product is commercialised.
- Switching to natural colors and flavors.
- On the manufacturing side, reducing SKUs saves us on changeover times and waste and saves potential customers on cost.
- Self reliance on green power we're looking at self generation, i.e., solar.
- Instead of looking for diamonds amongst the stones, we need to polish the stones first. We need to catch up and finish."

And maybe the best advice, from a guy at a North Carolina microbrewer: "Focus on core product and values, and don't get sidetracked."

David Fusaro can be contacted at dfusaro@putman.net Food processing website is www.foodprocessing.com





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

From New Zealand Danone on the warpath after Botulism scare

The French dairy giant, Danone, has recently set out plans to sue New Zealand dairy group, Fonterra, over a false warning that triggered baby milk recalls last summer.

Fonterra warned that some of its products had been infected by a botulism-causing bacteria, prompting Danone, which uses Fonterra ingredients in its milk formulas, to issue recalls in nine countries including China. An investigation found Fonterra's bacteria warning was a false alarm.

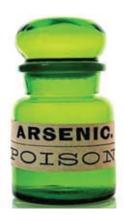
Actimel and Evian-owner Danone now says it is ending its contract with Fonterra as well as suing for compensation for lost sales.Baby food accounts for a fifth of Danone's revenue, second only to its dairy business. China is a key growth area for Danone amid slow demand in economically struggling Europe.

"This affair illustrates serious failings on Fonterra's part in applying the quality standards required in the food industry," Danone said. It previously claimed the recalls had hit sales to the tune of 350 million (£290 million). Fonterra said it "will vigorously defend any proceedings".

From South Australia Bugs and slime to clean water of Arsenic

.

Australian scientists have developed a way to clean up the potentially deadly arsenic that pollutes the drinking water of tens of millions of people around the world.



A new type of water filter that combines microalgae with bacteria taken from soil contaminated with heavy metals could prove an effective, cheap and safe way to rid drinking water of arsenic.

"Known as the 'king of poisons', arsenic has harmed humans more than any other toxic chemical in history," says Mr Bahar, of CRC CARE and the University of South Australia.

"It contaminates groundwater in more than 70 countries, including Bangladesh, India, the USA, South America, China,

Thailand and Taiwan. Around 137 million people are poisoned daily by arsenic in their drinking water and food."

Arsenic poisoning causes vomiting, diarrhoea, and long-term exposure can lead to cancer, diabetes, heart disease and death. Also, once polluted,

the groundwater is difficult and expensive to clean up.

To help save lives and improve global water security, Mr Bahar and his CRC CARE research team have developed a technology that uses different types of tenacious bacteria and microalgae to filter the water.

"Two forms of arsenic are commonly found in the environment: arsenic (III) and arsenic (V). Arsenic III is 60 times more toxic than the other form and is highly soluble, which makes it more difficult to remove, as it travels everywhere," says Professor Megh Mallavarapu of CRC CARE and UniSA, the principal supervisor of the research.

"The solution then is to convert arsenic (III) into the less toxic and less soluble form, making it easier to extract from the water," Prof. Mallavarapu explains.

Now, CRC CARE researchers have found kinds of bacteria and microalgae that can sustain each other. "We found these bacteria in soil that has been contaminated with heavy metals," Mr Bahar said. "To survive, the bacteria have developed special abilities to defeat the toxicity, including converting arsenic into its less harmful form." He went on to say "The next step was to find a way to feed the bacteria continuously – and the scientists have found certain microalgae that were ideal. However, when the bacteria break down the organic matter produced by the microalgae as well as from contaminated water, they produce carbon dioxide, which in turn can be used to feed the microalgae. So it's a wonderful partnership.

"Once arsenic (III) is converted to arsenic (V), we can remove it by absorbing it with a cheap and easily accessible material, such as coir pith made from coconut husks. Arsenic poisoning from natural groundwater is one of the most common and horrific forms of contamination in the modern world, and the successful development of a technology with scope to overcome it could well be counted among Australia's major humanitarian contributions," says CRC CARE Managing Director Professor Ravi Naidu.

From Tasmania Tasmania extends GM ban

The Tasmanian government says it will extend its ban on genetically modified organisms (GMOs) for food crops and animals "indefinitely".

In a statement released in January, Deputy Premier Bryan Green said the government's position was to keep an indefinite moratorium on the release of commercial GMOs, in a move the government believes will maintain the integrity of the state's brand and maximise future marketing opportunities.

Mr Green reaffirmed the government's position to maintain the ban which has been in place since 2001, following a review and public submissions on the GMO moratorium.



"There will be no end date specified for the moratorium to provide a positive incentive for Tasmanian businesses to invest in marketing and brand development to maximise potential GMO-free opportunities," Mr Green said.

Mr Green said he was concerned gene technology could impact on Tasmania's ability to market food domestically and internationally. Tasmania's island status and our biosecurity system meant that Tasmania's food and agricultural industries were well-placed to take advantage of the State's GMOfree status.

"The roll out of major irrigation projects around Tasmania is also part of the government's vision to significantly increase agricultural production so we become a major supplier of Australia's premium food products."

Mr Green said the government supported the use GMOs in pharmaceutical poppies not for use as food or feed. "All other genetically modified plants and animals will remain prohibited, except for gene technology used in contained research for human medicines or therapeutics, closed loop industrial processes or animal feeds with non-viable GMO material," he said. "The government is supportive of research into GMOs in Tasmania in contained facilities and controlled trials.

The Tasmanian government says it recognised advancements in gene technology mean that at some point in the future there may be a compelling case to consider the introduction of GMOs into Tasmania.

From China Beijing's food safety priority for 2014

.

In late December, the Chinese government wrapped up the country's Economic Work Conference, an annual meeting of Chinese policymakers where goals and reforms are established for the upcoming year. At the end of closed-door sessions, China has announced the six top priorities for 2014 and food safety is one of the key issues at the top of their list.



Donkey is a popular meat product in certain parts of China

According to news blog 'Shanghaiist', which quotes Bank of America analyst Ting Lu, China's big priorities for 2014 include increased national food security. Coverage of China's rampant food safety issues has been widespread. Among recent issues have been misleadingly labelled meat, such as rat sold as lamb, fox sold as donkey, "gutter oil" reused as cooking oil, and dirty ice in fast-food joints. All of these, of course, followed the baby formula scandal. The other key areas of focus included improving industry structures, control local government debt risks, balance of growth between regions, social welfare and and trade zone investment.

From New South Wales Changes to NSW food safety supervisor law

Local food service businesses who haven't yet trained someone in their business as a Food Safety Supervisor (FSS) are being reminded to do so.

NSW Food Authority CEO, Polly Bennett, said the uptake of the program has been encouraging, however those businesses yet to train a person as an FSS need to make it a priority.

"From 3 January 2014 businesses are no longer required to notify the Authority or their local council of their FSS details.

"The Food Safety Supervisor certificate will still be checked by officers at the time of conducting the regular food safety inspection of retail food premises, however the removal of the notification requirement simplifies and streamlines the process."

Incorrect food handling accounts for more than one third of foodborne illness outbreaks in NSW and is estimated to cost the community more than \$400 million each year.

"Improving food handler skills and knowledge through recognised training is the most logical solution to reducing the risk of food poisoning," Ms Bennett said.

"Having an in-house Food Safety Supervisor to oversee food safety from the front line provides an extra layer of protection for consumers against the risks of food poisoning.

"The changes purely reflect a streamlining of the administration of this program."

From Iceland Hail the 'Whale Ale'

An Icelandic beer company, Steðja Brewery, has caused an outcry amongst many animal rights supporters by developing a beer that includes whale meal – a by-product of processing the animal's meat and oil.



A limited run product has been tied to Iceland's annual mid-winter festival -Thorrablot. The beer, marketed as a drink for "true Vikings," will only be available for the month of the festival It's 5.2 percent alcohol and is supposedly "healthy" by virtue of containing whale, which, according to the brewery, is high protein and low fat.

Iceland doesn't treat cetaceans the way most of the world wants them to be treated. Like Japan and Norway, Iceland has continued to hunt fin and minke whales in defiance of an international moratorium on the practice. Restaurants continue to sell whale dishes in Reykjavík and the marketeers of the product see whale ale as a natural extension.

New standard for 'Delivery of Pest Control Services to the Food Industry' on the way

Pest control has always been – and will continue to be - a difficult task for the food industry and the world's best known food safety standards have, quite rightly, put significant emphasis on this component.

On our planet, with its huge diversity of pests, climate, population density, and geography, pest control is not something that can be addressed with a simple formula. Common symptoms might require radically different solutions which have to be applied in strict adherence to the food safety and toxicity regulations that legislation, guidelines and HACCP programmes demand. However, solutions can be delivered in accordance with a common standard.

Almost all food businesses sub-contract this component of their work to specialist pest controllers. It seems sensible to utilise the skills of expert operators in such exercises. That said, the overriding responsibility for pest control still rests with the facility's owners or managers and not with the pest controller. While operators can sub-contract the work, the same cannot be said of the responsibility that those food companies have to the consumers. This being the case, the selection of the right pest controller for one's food business is an important decision. In relying on the advice of the contractors', facility managers need assurance that such advice and the service is appropriate to the facility, is backed with expert knowledge and in keeping with the requirements of the food safety programme of the site.

The pest control industry is, in many parts of the world, very competitive and there are often many organisations to choose from. In this environment, price is often a driver and, all too often, the quality of advice, expertise, frequency, training and service get less attention than they deserve when it comes to contract award.

First and foremost, the pest controller must have experience of food premises applications in facilities that operate a HACCP programme. The contractor must be able to demonstrate expertise in the task, food safety and the documentation.

The contractor should have Standard Operating Procedures that address HACCP requirements, food safety training as well as all the documentation that a HACCP programme demands. These forms should dovetail perfectly with the HACCP programme of the premises. It might be necessary for the contractor to use the documentation of the food business. This should not present a problem to a qualified and experienced contractor.

The pest control industry has many professional bodies that can act as points of reference for a contractor. Checking registration and the membership criteria might well be of benefit as is referencing work with other food processors. Make sure that the HACCP team is fully involved in the process and where possible, look for an appropriate certification of conformance.

HACCP Australia, has developed a standard for the delivery of pest control services to the food industry. Companies that are certified to this standard can demonstrate their ability to offer a pest control service that is compatible with the requirements of the best international food safety standards. Many pest control companies in Australia and overseas are certified to this current standard however many businesses are unsuccessful in their application and later in this article we look at the reasons for that.

HACCP Australia's Pest Control Standard has attracted a considerable amount of interest and positive feedback from food businesses and quality organisations over the years. The standard is currently under review and a new standard will be issued in 2014. The review process will ensure that it is totally suitable for application in the industry globally and compatible with any recent amendments or reissues of GFSI endorsed food safety standards.

HACCP Australia will begin certifying to the new global pest control standard in 2014

The technical committee that oversees this process comprises individuals that represent the food industry (from processing plants to restaurants and retail), pest control companies, food safety auditors as well as institutional representatives. The committee is encouraging participation and contribution from as many industry sources and countries as possible. If any reader representing the food or pest control industries would like to be kept informed of the developments and cares to make comments or suggestions, these will be very welcome indeed. Please email us using the address below to get more details. Alternatively, developments can be followed on the HACCP Australia website (www.haccp.com.au) or through HACCP International's 'linked-in' site. HACCP Australia and International will begin certifying to this new standard later in 2014.

While there are a number of guidelines in place issued by national bodies, there is currently no comprehensive international standard that precisely meets the need of the food industry and with the release of this standard; we are looking forward to that changing.

We receive many applications for certification to the scheme in its current version. However the scheme makes quite a number of important demands upon the applicant which sees a significant number of companies failing to achieve certification. Let's see why that happens.

Firstly, the nature of the scheme requires applicants to have a specific interest in the food industry and a commitment to meeting particular standards both in general operations and the food industry in particular. Organisations that are not prepared to devote resources and energy to the food industry demands are most unlikely to be successful in their application. This is not for the faint of heart!

Many pest control applicants fail – this is not for those who do not have a real interest in the food industry or for the faint of heart

Those that do not only demonstrate an ability to meet the requirements of the industry in terms of SOPs, documentation, reporting, internal auditing, food safety training, chemical selection and chemical application, but most importantly, have also undergone site audits, at several food industry client locations as well as at their own facilities. These site audits review operations and reporting at sites governed by HACCP programmes to ensure an ability to actually deliver a compliant service. Furthermore, in the case of national or multi branch service providers, multiple audits are conducted to ensure compliance across branches. Certificates of Conformance therefore apply on a branch by branch basis.

The scheme currently has minimum requirements in the following key areas:

- Standard Operating Procedures
- Chemical Handling
- Treatment,
- Site Maps and Monitoring
- Site Specifications
- Pest Sighting and Monitoring
- Service Reports, Recommendations and Housekeeping
- Good Hygiene Practices and Good Manufacturing Practices
- Training both in pest control and food safety
- Licences and Insurances.

The current review will no doubt see the minimum expectations being lifted further in certain key areas in order to meet expectations of the industry globally and 'World's Best Practice'.

To receive further information on the standard and its development, please email: standards@haccp.com.au or visit HACCP International at www.linked-in.com



Campylobacter is a common bacterial infection that causes abdominal pain and diarrhoea. In Australia and many other developed countries, it is the second most common form of food poisoning. Campylobacter gastroenteritis is a type of food poisoning caused by the bacteria Campylobacter jejuni and Campylobacter coli. known simply as Campylobacter. Sensitive population groups such as children and the elderly are more susceptible to Campylobacter infections and the symptoms are usually more serious although it can harm anyone regardless of age or fitness.

The most common symptoms of Campylobacter infection are diarrhoea (often very severe), fever, stomach cramps, nausea and vomiting.

The bacteria is found to have a long gestation period before the onset of illness. It most commonly takes between two and five days before one becomes ill. This can sometimes make tracking and elimination of the cause quite difficult. Furthermore, the time span allows for significant intermediate spread of the disease.

Complications can include meningitis, urinary tract infections, and possibly reactive arthritis (rare and almost always short-term) and occasionally Guillain-Barre syndrome, an unusual type of paralysis. While most people who contract campylobacteriosis recover completely within 2 to 5 days, some Campylobacter infections can be fatal, resulting in a number of deaths each year.

Digestion is the by far the most common way of contracting infection. The Campylobacter bacteria are most commonly found in animals such as poultry, birds, cattle and household pets. Campylobacter bacteria are often present in uncooked meats, particularly poultry and a lack of adequate cooking is the most common reason for illness. Incorrect pastuerisation also presents a high risk as does cross contamination between cooked and uncooked meats.

Sufferers from Campylobacter infection have the bacteria in their faeces and this emphasises the need for the implementation of hygiene policies, especially hand washing, in food and beverage handling facilities. This is especially important as humans and animals can carry Campylobacter in their faeces without displaying any symptoms.

Campylobacter infection must be reported to a doctor immediately to ensure appropriate treatment and further advice in halting the spread of the disease.

Child care workers and health care workers with Campylobacter infection must not work until symptoms have stopped. Remember food handlers who suffer this or any food bourne illness need a medical certificate prior to returning to work.

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The BRC Global Conference and Food Safety Europe 2013

BRC certified sites are now approaching 20,000 worldwide, a 10% increase on last year.

HACCP Australia's sister organisation HACCP International, was delighted to be a major sponsor of the BRC (British Retail Consortium) Certification Body (CB) and Approved Training Provider (ATP) Global Conference and then a break-out session sponsor of the Food Safety Europe Conference that immediately followed in Amsterdam during October.

The CB and ATP conferences are held yearly as the forum for discussing audit best practice, developments to, and the progress of, The BRC Standards, throughout the world, as one of the benchmarked Global Food Safety Initiative standards. The BRC Standards continue to see strong uptake across all global markets with close to 20,000 certificated sites, a growth of 10.3% from the previous year. This means that 20,000 food processors, consumer goods manufacturers, packaging manufacturers and storage and distribution companies are now signed up to the principle of playing their part to ensure food safety throughout the supply chain. The BRC Standards certificates are accepted as proof of this compliance among a wide range of retailers and specifiers, assuring the safety of their suppliers, including quick service restaurant groups, manufacturers seeking 2nd tier raw material suppliers and major hotel brands globally.

A range of very interesting subjects were covered by the BRC Global Standards Team including CEO Mark Proctor, David Brackston, John Figgins, Tessa Kelly, Azin Parsa, Jo Griffiths, Adam Burden, Karen Betts and Geoff Spriegel. We provide below a summary snapshot of some of the most interesting facts and figures to emerge:-

Tessa provided an outline of growth of take up of the different standards. Growth of the BRC Storage and Distribution Standard, percentage wise, is strongest at 26.5%, up to 525 sites with year-end growth projected as 40%, Growth of the Food Safety Standard remains strong at 5.2%, taking an already well established base up to 15,592 sites! Some of the biggest hot spots for growth are Canada, USA, UK, Spain, Italy, Poland, Turkey and China, with some of the key emerging hotspots being Vietnam, Turkey, South Africa, Eastern Europe and Latin America. An interesting opinion to emerge within the food industry is an agreement that Tier 2 suppliers (food suppliers to other food manufacturers) should be certified.

Azin Parsa showed us that there are now 194 approved training providers across 35 countries, with the UK, USA and Canada dominating, mostly being certification bodies but with a strategy to increase the number of independent ATPs. To ensure that ATPs maintain appropriate skills, Azin informed the conference that an examination process is on the way for ATPs.

Joanna Griffiths, in bringing us up to date with the

Packaging Standard, was delighted to tell the conference that the BRC Packaging Standard is the first such standard to be GFSI benchmarked. An interesting bit of news is that the UK retailer, Asda, will require all Storage and Distribution facilities to be BRC certified by December 2014 and parent company Walmart, taking a similar line, requires all S&D facilities to operate to a GFSI benchmarked standard or, in the current absence of a GFSI benchmarked S&D Standard, to a Standard Owner operating another benchmarked standard such as BRC with its Global Food Safety and Packaging, benchmarked standards.



HACCP International's stand was a busy corner at the BRC conference

John Figgins started to bring Day 1 to a close with a look at the top ten Issue 6 non-conformances from audit against the BRC Global Food Safety Standard. Here they are:-

- Section 2: Accuracy, information, review and amendment of the HACCP flow diagram.
- Section 4.4: Building fabric especially door policy, pest proofing and walls.
- Section 4.13: Pest control survey/in depth inspections
- Section 4.11.1: Housekeeping and hygiene poor cleaning methodology and standards of cleaning.
- Section 1: Management commitment, objectives and scheduled meetings.
- Section 4.7: Maintenance schedules and post maintenance sign-off
- Section 4.8: Staff facilities the standard and location of hand washing facilities and segregation of outdoor

CONTINUED ON PAGE 22

- Section 3.4: Internal audits schedule and the recording of non-conformances with actions, to a meaningful timescale
- Section 4.9.3: Glass control the accuracy of the glass register
- Section 3.9: Traceability systems adequacy and rigorous testing

It is interesting to see how many come up from Section 4 of the Standard – which supports the improved focus of audits to Issue 6 of The Standard on the facility, production controls and GMP.

The new pest control standard to which HACCP International will be certifying later in 2014 could be very significant in lowering the high level of non conformance by pest controllers that is reflected in section 4.13(above).

David Brackston finished with some information concerning the timeline and consultation process leading to Issue 7 of the BRC Global Food Safety Standard. Ideas and feedback are being generated now, while, in the latter half of 2014 the documents, guidance and training will be developed with this new version of The Standard 'going live' in July 2015.

During the last 2 days of the conference - Food Safety Europe 2013 – HACCP International presented a 90 minute workshop about the food safety risks and implications from non-food; that is, articles, equipment, materials and services used by the food industry. Clive Withinshaw and Richard Mallett presented data and information to a workshop of over 80 senior figures from certification bodies, food manufacture and retail culminating in a "have a go" risk assessment team table exercise that proved to be much fun! We were delighted



Richard Mallett and Clive Withinshaw present at the BRC conference, Amsterdam.

with the feedback presented to us, in person, by the delegates immediately after this event and now very much look forward to working with the BRC on a forthcoming webinar to take the subject of food safety risk and controls from equipment and materials used in the food room a step further. This industry education programme will be supported in the near future by in-house presentations and workshops, where requested by those who have a vested interest in mitigating the food safety risk from equipment and materials. Anyone within the retail, quick service restaurant, food-service or hotel/catering industry that would like to discuss this option with us should contact us using **info@haccp.com.au** in the first instance.

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Screening for lood alergens by ELISA BEING POSITIVE

Allergic reactions to food are potentially fatal. To protect allergic consumers, FSANZ has prescribed that foods containing any of 10 common allergens must contain mandatory warning statements (Standard 1.2.3). Other jurisdictions have similar requirements which mandate the labelling of some or all of these allergens plus some others. A table summarising the declarable allergens in Australia/New Zealand and some other major export destinations is shown in the table (shown at end of article).



Dr. Tony Treloar Senior Scientist, ELISA Systems

Failure to declare allergens accounts for approximately one third of recalls in Australia and New Zealand. The cost of recalls is high, not just in the loss of stock but also in terms of reputation. Hence, allergen management should be an important part of a food producer's overall HACCP strategy. Part of this management strategy involves the regular testing of final products and ingredients for potential contaminants. It may also involve the testing of wash solutions and surface swabs to determine the efficacy of cleaning regimens.

ELISA is the predominant screening method for the detection of food allergens. This method uses antibodies which bind to marker proteins which are specific for the allergenic foods being tested. ELISAs are also commonly used in medical diagnostic and environmental testing. ELISAs are simple to perform, require little sophisticated equipment and are relatively inexpensive. Samples are easy to prepare and may be assayed in batches allowing for moderately high throughput. With the use of calibrated standards they can be quantified. This makes ELISA an ideal screening assay for food allergens.

Lateral flow assays are becoming increasingly popular for the detection of food allergens. These assays are often referred to as dipstick tests, the most well known example being the home pregnancy test. Like the ELISA, lateral flow assays are immunoassays involving the binding of a protein to an antibody. They are simpler and quicker than an ELISA but only give qualitative results. They are often favoured in an on-site facility where results in real time may be necessary.

PCR assays are also used for food allergen measurement. These are indirect assays as they measure the presence of the DNA of the food in question, while the protein is the allergenic component. PCR assays are suitable for foods where the whole food is used and thus contains the genetic material e.g. peanuts or tree nuts. PCR assays are not available for milk or egg which contain little genetic material and are of limited usefulness for targets such as soy, where protein extracts, which may contain little or no DNA, are commonly used as ingredients.

While testing using lateral flow assay and PCR becomes more common, ELISA remains the predominant method used for food allergen testing. Testing for food allergens by ELISA uses kits which are produced by a number of kit manufacturers. These kits contain all of the reagents prepared for use and are suitable to be used by technicians with limited laboratory skills and experience. Before being released for use these kits undergo extensive development and validation to ensure they are suitable for use with a wide range of foods. However, the diversity and complexity of food is such that it is impossible to guarantee that a kit will yield consistent and reproducible results with all samples.

CONTINUED ON PAGE 24

If practical, testing laboratories should perform validation studies to ensure that the kit works well with the samples they are testing. This is especially recommended for on-site laboratories which routinely test only a limited number of sample types. This involves determining the limit of detection in the sample, and spiking recovery studies. However, this is not always possible for third party testing laboratories which routinely assay samples of many different types, unless they are analysing a sample type on an ongoing basis. In these laboratories it is important to confirm positive results to ensure that they are not false positives.

ELISA is the predominant screening method for the detection of food allergens. This method uses antibodies which bind to marker proteins which are specific for the allergenic foods being tested.

The overwhelming majority of positive results obtained in ELISA are caused by contamination of the food of interest. However, false positive results can be caused by two things: cross-reactivity of the antibodies used in the assay; or nonspecific binding of assay components. Cross-reactivity occurs because the antibodies used in the assays will bind to proteins which are similar to the protein targets in the food of interest. Some examples of cross-reactivity which have been encountered are apricot kernels with almond (these are perhaps surprisingly closely related, both are species of the genus Prunus), goat's milk with cow's milk, and cockroaches with crustaceans. In some instances this protects the allergic consumer as some are also allergic to the cross-reacting food. During kit development kit producers will screen a panel of foods for cross-reactivity concentrating on closely-related foods. This process should limit the instances of false positives due to cross-reactivity to only a few instances in closely related foods.

False positive results can also happen because of nonspecific binding caused by matrix effects. Here, the food being tested exerts a physical effect which causes the binding of assay components without the food of interest being present. Components which bind proteins and plastics are the most likely to cause problems with non-specific binding. An example of this is caramel food colouring. A recently published paper showed that caramel food colouring caused non-specific binding in a range of assays. Caramel food colouring was the likely culprit in the non-specific binding seen in a range of balsamic vinegar samples. In a selection of 8 balsamic vinegar samples which were bought in local supermarkets, all but one tested positive in a number of ELISAs for different foods. The sample which tested negative was much lighter in colour than the other samples as it did not contain caramel food colouring amongst its ingredients.

All positive results should be confirmed before any action is taken. Even when the test has been validated in house, it is still wise to confirm the result using a second test to ensure that the positive result is not due to an error in the performance of the assay or in sampling. If the test hasn't been validated in house, further confirmation assays may be required to rule out a false positive. Confirmation using a PCR assay if available is ideal, otherwise a confirmation ELISA using a kit from a different manufacturer may be performed.

If further confirmation is required then an assay of a dilution series of the positive sample may be warranted. True positive results will show the expected relationship between allergen concentration and dilution, i.e. when the sample concentration is halved the amount of allergen measured is also halved (within error). With false positive samples caused by either cross-reactivity or non-specific binding, the measured allergen levels do not decrease in line with the dilution of the sample. This assay, sometimes referred to as a "dilution to extinction" assay gives a good indication as to whether a measured result is a true or false positive and is often the best (and quickest) confirmation test available.

If false positive results are suspected it is a good idea to contact the kit manufacturer. This allows the kit manufacturer to investigate the cause of the problem and possibly rectify it if it is due to a kit performance issue. It is also valuable information which can be passed on to other kit users who experience similar problems with that sample type.

ELISA remains the primary screening tool for the presence of food allergens due to their sensitivity, specificity and convenience of use. However, while the vast majority of positive results are due to the food of interest being present, false positive results are possible. The consequences of a positive result for an allergen test can be very serious. Hence, it is important that all positive results are confirmed before any action is taken.

Declarable food allergens in 5 major regions worldwide:

	Australia/NZ	USA	Canada	EU	Japan
Egg	1	1	1	1	✓
Milk	1	✓	1	1	1
Fish	1	✓	1	✓	1
Shellfish	1	✓	1	1	
Tree Nuts	1	✓	1	✓	
Peanuts	1	✓	1	✓	1
Wheat	1	✓	1	1	1
Soy	1	✓	1	1	
Celery				✓	
Mustard			1	1	
Sulfites	1		1	1	
Sesame	1		1	1	
Buckwhea	t				1
Lupin				1	
Mollusc				1	





Food Safety Information Council http://www.foodsafety.asn.au/

Food safety information for the consumer and of course, the famous Food Safety Week activities held in November each year. Lots of good information here as the Food Safety message is spread to the public.

Food Safety in China?

http://topics.nytimes.com/top/news/ international/countriesandterritories/china/ food-safety/index.html

The New York Times has an index page with all things China Food Safety (not). From 'gutter oil' to insights how to make duck taste like lamb using urine, the NYT has a wealth of articles guaranteed to make you deeply concerned about the source of some food.

RASFF Portal – EU Food Safety Regulatory Interceptions

http://ec.europa.eu/food/food/rapidalert/ index_en.htm

The Rapid Alert System for Food and Feed (RASFF) was put in place to provide food and feed control authorities with an effective tool to exchange information about measures taken responding to serious risks detected in relation to food or feed in Europe. Check the database and enter a criteria to check detected risks. If you import food, this is an essential tool.

Food Photography Made Easy by Jenn http://jenncuisine.com/resources/tutorialcollection/

Great tips and technical detail on how to take that food photo pic. Create a picture menu, a lasting memento of your culinary skills, shots for a brochure or something to make your friends on instagram envious.....

Food World Records

http://challengers.guinnessworldrecords.com/ challenges?tag=Food+and+Drink

Some of these should not be tried at home....or anywhere for that matter! But records are meant to be broken and here you can find rules and attempts of people doing just that. How fast can you eat a 200g cucumber or how many chocolate bars can be consumed in a minute? Find out and triumph.

Bacteria Comics!

http://www.thecomicstrips.com/subject/The-Bacteria-Comic-Strips.php

Phantom Schmantom! Get the real deal here for any self respecting microbiologist! Why they don't have these in the weekend papers is absolutely beyond me!







www.bayeres.com.au



Every year, Food Magazine hosts the Food Magazine awards to recognise and reward best practise and innovation in food and beverage processing in Australia and New Zealand. The awards culminate in a gala award ceremony and celebrate true excellence in the food industry. For the 2014 awards, HACCP Australia continues its sponsorship of the FOOD SAFETY AND INNOVATION IN NON-FOOD category.

This category of award specifically recognises non-food suppliers to the food industry and the major impact this sector has on food safety. Subscribers to this magazine will already understand the importance of non-food material, equipment and services in regard to the integrity and safety of food. It is hoped that these awards will further raise the profile of these issues and assist the food industry in recognising the benefits of true food safe design and characteristics.

Entries are open to all equipment and services used in the food industry and will be judged upon merits such as design, cleanability, consequence of error and overall contribution to food safety. Whilst not involved in the judging process for this category, HACCP Australia will be keenly following the entries and winners of the non-food excellence awards. In the 2013 awards, a number of truly excellent products were chosen as finalists. The 11 food industry specialist judges decided on the Dyson Airblade Tap over five other finalists and were highly impressed by the level of innovation and technical excellence associated with this product. The other finalists included waste materials handling equipment, waste water treatment systems, food packaging and thermometers.

The entry deadline for the 2014 Food Magazine Awards is Tuesday 1 April 2014, so check www.foodmag.com.au/ awards for details on how to enter.



The Dyson team Chelsea Ford - B2B Manager, Stephanie Jacks - B2B Sales Co-ordinator, Tom Davey - Finance & Operations Director, Kirsten Hamilton - Project Co-ordinator and Charlie Stack - Communications Executive.



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An introduction to HACCP Australia's certification and endorsement process for products and services supporting the food industry can be found on page 30. Below, please find a list of companies supplying products or services certified by HACCP Australia.

Catering Equipment	BOX CORPORATION ED OATES PTY LTD ESWOOD AUSTRALIA MACKIES ASIA PACIFIC SCALE COMPONENTS TOMKIN AUSTRALIA
CLEANING CONSUMABLES	3M BASTION PACIFIC BUNZL CARLISLE FOOD SERVICE PRODUCTS CLOROX AUSTRALIA EDCO (EDGAR EDMONDSON) ED OATES PTY LTD ENVIRO ASSOCIATED PRODUCTS ITW POLYMERS AND FLUIDS KIMBERLY – CLARK PROFESSIONAL MEDIVAC PREMIUM PRODUCT SOLUTIONS PROBIOTIC SOLUTIONS PROVAL SABCO SCA HYGIENE AUSTRALASIA UNITED BONDED FABRICS
CLEANING EQUIPMENT	BAXX AUSTRALIA EDCO (EDGAR EDMONDSON) ED OATES PTY LTD MAGIC TANK OZ TANK PROBIOTIC SOLUTIONS SABCO TERSANO AUSTRALIA
CLEANING AND MAINTENANCE Services to the food industry	ACE FILTERS BORG CLEANING CHALLENGER SERVICES GROUP DELRON CLEANING ECOWIZE IPS CLEANING AUSTRALIA FLICK ANTICIMEX LOTUS FILTERS INITIAL HYGIENE TOTAL EXHAUST CLEANING CONTRACTORS WASH IT AUSTRALIA
CLOTHING - DISPOSABLE GLOVES AND PROTECTIVE WEAR	BASTION PACIFIC BUNZL CLOROX AUSTRALIA KIMBERLY – CLARK PROFESSIONAL LALAN GLOVES SAFETY CARE LIVINGSTONE INTERNATIONAL PARAMOUNT SAFETY PRODUCTS PRO PAC PACKAGING RCR INTERNATIONAL STEELDRILL HEALTH AND SAFETY YAP TRADING COMPANY
Facility fixtures and fit out	ASSA ABLOY ENTRANCE SYSTEMS BLUCHER CARONA GROUP CATER COOL DYSON APPLIANCES HALTON INTERNATIONAL JET DRYER MANTOVA MIKO INDUSTRIES PHILIPS LIGHTING PHOENIKS THORN LIGHTING
Facility design and Operation services	ENERGY AND CARBON SOLUTIONS UNIVERSAL FOOD DESIGN SERVICES
FLOORING WALLS AND MATTING	3M ALTRO SAFETY FLOORING AND WALLING BASF CONSTRUCTION CHEMICALS BETHELL FLOORING BLUESCOPE STEEL CITADEL FLOOR FINISHING SYSTEMS DEFLECTA CRETE SEALS GENERAL MAT COMPANY (THE) MATTEK PROTECT CRETE ROXSET AUSTRALIA
FOOD SERVICE EQUIPMENT AND UTENSILS	AACLAIM QUALITY SALES LANCER BEVERAGE SYSTEMS SIX SIMPLE MACHINES SKANISCO SPM DRINK SYSTEMS THE HUNGRY PRODUCT COMPANY TOMKIN AUSTRALIA

Suppliers of automatic beverage dispensing systems Oates utensils and cookware accessories Manufacturers of industrial dish and glass washers Food safe bread loaf pans and bakery trays Suppliers of food safe weighing equipment Food safe kitchen equipment and serving ware	08 9200 2251 1800 791 099 1800 013 123 02 9708 2177 07 3808 9644 02 8665 4675
Scotch-Brite [™] cleaning chemicals, scourers and sponges Multi-purpose cleaning wipes Kwikmaster range of scourers Food safe brush ware Chux [®] , Astra [®] , OSO [®] and Glad [®] range of materials Disposable cleaning wipes Full range of kitchen cleaning materials Veora disposable cleaning wipes Food safe aerosol cleaner Disposable cleaning wipes and colour coded Microfiber cloths Disposable cleaning wipes for the food industry Multi purpose food safe cleaning products Specialist biological and food safe cleaning chemicals Colour coded wipes Scourers, sponges, cloths and cleaning aids Tork premium colour coded specialist cloths VISTEX colour coded wipes	$\begin{array}{c} 136 \ 136 \\ 02 \ 9714 \ 1110 \\ 03 \ 9590 \ 3000 \\ 0433 \ 946 \ 363 \\ 02 \ 9794 \ 9600 \\ 02 \ 9557 \ 4411 \\ 1800 \ 791 \ 099 \\ 1300 \ 962 \ 888 \\ 1800 \ 063 \ 511 \\ 02 \ 9963 \ 8858 \\ 03 \ 5436 \ 1100 \\ 03 \ 9646 \ 1600 \\ 02 \ 9695 \ 7762 \\ 03 \ 9558 \ 2020 \\ 1800 \ 066 \ 522 \\ 1800 \ 234 \ 613 \\ 0478 \ 473 \ 367 \end{array}$
Equipment for the elimination of airborne pathogens Cleaning aids and equipment Full range of food grade cleaning equipment Soak tank and cleaning solution for catering equipment SS deep cleaning tanks and systems for pans and trays Innovative cleaning solutions Scourers, sponges, cloths and cleaning aids Ozone water equipment for cleaning	02 9939 4900 02 9557 4411 1800 791 099 0421 669 915 1300 668 866 02 4423 2022 1800 066 522 02 9550 5800
Food grade cooking oil filters Specialist contract cleaning services for food premises Specialist contract cleaning services for food premises Specialist contract cleaning services for food premises Hygiene and sanitation service providers to the food industry Specialist contract cleaning services for food premises Washroom services for the food industry and premises Filters and filter services for range hoods and food facilities Bathroom services for the food industry and premises Specialist cool room, hoods and kitchen cleaning services Food transport vehicle cleaning & sanitation services	1300 555 204 03 9463 1300 02 9993 0562 08 9328 3888 02 9805 9200 1800 651 729 1300 656 536 1300 731 234 0418 192 025 1300 927 448
Disposable protective apparel for the food industry Disposable gloves for the food industry Astra® disposable gloves for the food industry Kleenguard disposable gloves for the food Industry Disposable gloves and protective apparel for the food Industry Disposable gloves and protective apparel for the food Industry Disposable gloves for the food industry Disposable gloves for the food industry Disposable and re usable gloves for the food industry Disposable gloves and protective apparel for the food Industry Disposable gloves and protective apparel for the food Industry Disposable gloves and protective apparel for the food Industry Disposable gloves for the food industry Disposable gloves for the food industry	02 9714 1110 03 9590 3000 02 9794 9600 03 9963 8858 03 9706 5609 02 8344 7252 03 9762 2500 02 8781 0600 03 9558 2020 03 9790 6411 02 9826 8299
Automatic rapid close doors Stainless steel drainage hardware Coldshield's thermal doors for food premises Artinox modular shelving systems Suppliers of food safe hand dryers Suppliers of food safe hand dryers Food grade shelving and storage solutions Food safe lighting and fit out solutions for food handling facilities Suppliers of Hidria Gif ventilation systems Food safe lighting and fit out solutions for food handling facilities Suppliers of Hidria Gif ventilation systems Food safe lighting and fit out solutions for food handling facilities	$\begin{array}{c} 1300\ 666\ 232\\ 08\ 8374\ 3426\\ 1800\ 462\ 233\\ 0418\ 354\ 260\\ 02\ 9540\ 0402\\ 1300\ 071\ 041\\ 02\ 9632\ 9853\\ 0451\ 633\ 521\\ 02\ 9947\ 0000\\ 1300\ 405\ 404\\ 1300\ 139\ 965 \end{array}$
Food safe energy efficient solutions Design services for production facilities	1300 130 024 02 4329 0630
Specialist safety matting for food and beverage areas Specialist food premises flooring and wall panels UCRETE® Flooring System Supplier and installers of specialist food premises flooring Colorbond® Anti-bacterial Coolroom Panelling Products (quote 2222) Suppliers and installers of specialist food premises flooring Anti-bacterial flooring product and services Specialist safety matting for food and beverage areas Specialist safety matting for food and beverage areas Food safe concrete treatment systems and vinyl flooring solutions Supplier and installers of specialist food premises flooring	$\begin{array}{c} 136 \ 136 \\ 1800 \ 673 \ 441 \\ 1300 \ 227 \ 300 \\ 07 \ 3865 \ 3255 \\ 1800 \ 022 \ 999 \\ 0409 \ 166 \ 172 \\ 03 \ 9318 \ 9315 \\ 1800 \ 625 \ 388 \\ 1300 \ 305 \ 012 \\ 03 \ 9587 \ 1377 \\ 02 \ 9988 \ 4822 \end{array}$
Food service and food storage light equipment Customised beverage dispensing systems The Juggler - Cafe milk tap system Supplier of Kee-seal TM disposable piping bags Soft serve dispenser machine Suppliers of Moooi and Cool Blue disposable piping bags Colour coded catering utensils, catering equipment and piping bags	02 9525 1049 08 8268 1388 0402 872 940 07 3279 3358 0438 837 246 07 3273 8111 02 8665 4675

HANDCARE CONSUMABLES

ICE MACHINES

KITCHEN CONSUMABLES

LABELS - FOOD GRADE

LUBRICANTS - FOOD GRADE

MAGNETS

MANAGEMENT SYSTEMS

MANUFACTURING EQUIPMENT AND COMPONENTS

PACKAGING MATERIAL AND EQUIPMENT

PEST CONTROL EQUIPMENT AND MATERIALS

PEST CONTROLLERS (ALL STATES)

PEST CONTROLLERS (NSW)

PEST CONTROLLERS (QLD)

PEST CONTROLLERS (VIC/TAS)

PEST CONTROLLERS (WA/SA)

REFRIGERATORS – EQUIPMENT, GOVERNORS AND DATA

REFRIGERATION SERVICES

STAFF RECRUITMENT

THERMOMETERS, MEASURING DEVICES AND SCALES

TRANSPORT CONTAINERS AND PALLETS CHEMPACK SUPPLIES CONCEPT LABORATORIES DEB AUSTRALIA KIMBERLY – CLARK PROFESSIONAL SCA HYGIENE AUSTRALASIA

BIOZONE SCIENTIFIC HOSHIZAKI LANCER KOOLEB ICE

CLOROX AUSTRALIA EDCO (EDGAR EDMONDSON)

LABEL POWER OMEGA LABELS P & I THE VAN DYKE PRESS WEDDERBURN

LANOTEC AUSTRALIA ITW POLYMERS AND FLUIDS

ACTIVE MAGNETIC RESEARCH MAGNATTACK GLOBAL

BRAND M8 SHADOW ORGANISATION ALLIANCE SEALING

COMPAIR AUSTRALASIA ENERGY AND CARBON SOLUTIONS ENMIN LAFERT ELECTRIC MOTORS/ SCORPION

SICK SMC PNEUMATICS ACHIEVE AUSTRALIA A PLUS PLASTICS ASTECH PLASTICS DALTON PACKAGING FLEXPACK MICROPAK NETPACK RCR INTERNATIONAL

BASF CHEMICALS (BASF) GOLIATH, PHANTOM & STRATAGEM BAYER BELL LABORATORIES MAKESAFE PEST FREE AUSTRALIA STARKEYS PRODUCTS SYNGENTA ULTRA VIOLET PRODUCTS WEEPA PRODUCTS

Amalgamated Pest Control Rentokil Scientific Pest Management

AEROBEAM PROFESSIONAL PEST MGNT ANT- EATER ENVRONMENTAL SERVICES CPM PEST & HYGIENE SERVICES CORPORATE PEST MANAGEMENT ECOLAB HACCP PEST MANAGEMENT FLICK ANTICIMEX KNOCK OUT PEST CONTROL STOP CREEP PEST CONTROL TERMIMESH PEST MANAGEMENT

ECOLAB ELDERS PEST CONTROL GOODE PEST CONTROL FLICK ANTICIMEX SIVTECH COMMERCIAL SERVICES

ADAMS PEST CONTROL DAWSON'S AUSTRALIA ECOLAB FLICK ANTICIMEX PESTAWAY AUSTRALIA PROTECH PEST CONTROL STATEWIDE PEST

TRAPS PEST CONTROL ADAMS PEST CONTROL ALL PEST PEST-A-KILL TERMIMESH PEST MANAGEMENT

Carel Diginol Ecube Solutions

Hoshizaki Iglu cold systems (Australia) Misa Onergy

AERIS HYGIENE SERVICES MELBOURNE REFRIGERATION SERVICES REJUVENATORS (THE)

CHANDLER MACLEOD 3M

SCALE COMPONENTS TESTO PACLITE PALLET GROUP SCHUTZ DSL (AUSTRALIA) VIP PACKAGING

ients Group Jstralia)

Food safe storage and transportation palletcons

Food grade intermediate bulk containers

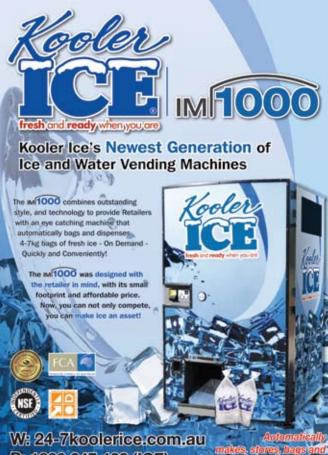
Food grade bathroom paper and dispensers	02 9542 5822
Suppliers of sanitising hand gel	07 5493 8433
Food grade hand soaps	1800 090 330
Food grade hand soap and disposable towelling	02 9963 8858
Tork hand towels and dispensers	1800 234 613
Sanitation system for ice machines	1300 070 040
lee machines for hotels, restaurants and catering outlets	1300 146 744
lce vending machines and Chill and Fill ice dispensers	1800 247 423
Chux [®] , OSO [®] and Glad [®] range of products	02 9794 9600
Suppliers of food grade kitchen consumables	02 9557 4411
Food safe labels for food products and food retail	1300 727 202
Beverage packing material & labels	1800 028 924
Supplying paperboard packaging and labels	02 8707 7109
Food and beverage labels, lidding and packaging for FMCG	02 9938 5666
Food safe labels for food products and food retail	1300 970 111
Suppliers of food grade lubricants	07 3373 3700
Rocol food grade lubricants	1800 063 511
Magnetic separation technology and magnet validation services	02 4272 5756
Food safe magnetic separators for liquids and powders	02 4272 5527
Automated and web-based checklist management systems	03 8645 5500
Audit, compliance and monitoring systems	02 8448 2090
Plastic and rubber sealing components for food processing	02 9947 9259
Servicing and maintenance of compressed air systems	1300 134 952
Compressed air piping systems in food manufacturing processes	1300 1300 24
Manufacturers of food grade feeder equipment	03 9800 6777
Stainless steel electric motors for food processors	03 9546 7515
Food safe switches, sensors & sensor solutions	1800 334 802
Suppliers of pneumatics and valves for food manufacturing	1800 763 862
Repacking of consumables and food products Food transport and storage containers Supplier of food safe pails and lids Manufacturers of paper bags and products for the food industry Manufacturers and printers of film packaging Manufacturers of food grade packaging materials Suppliers of food grade netting to small goods manufacturers Food grade pallet and crate covers	$\begin{array}{c} 1800\ 106\ 661\\ 02\ 9603\ 2085\\ 1300\ 133\ 531\\ 02\ 9774\ 3233\\ 07\ 3217\ 0999\\ 02\ 9646\ 3666\\ 02\ 9604\ 4950\\ 03\ 9558\ 2020\\ \end{array}$
Suppliers of Roguard bait stations Suppliers of rodent and insect control materials Suppliers of rodent and insect control materials Suppliers of rodent control materials and stations BaitSafe [®] rodent bait-station device Specialist electronic vermin elimination devices Range of insect control devices Suppliers of rodent and insect control materials Insect trapper device Weep hole protection devices for new or retro application	$\begin{array}{c} 1800\ 006\ 393\\ 1800\ 006\ 393\\ 03\ 9248\ 6888\\ 0427\ 802\ 844\\ 1300\ 065\ 467\\ 02\ 4969\ 5515\\ 08\ 9302\ 2088\\ 1800\ 022\ 035\\ 1800\ 081\ 880\\ 07\ 3844\ 3744 \end{array}$
Specialist pest control services for the food industry	13 19 61
National pest control services for the food industry	1300 736 865
National pest control services for the food industry	1300 139 840
Specialist food premises pest management Specialist pest control services for the food industry Specialist food premises pest management services Specialist pest control services for the food industry Specialist pest control services for the food industry Regional pest control services for the food industry Specialist pest control services for the food industry Specialist pest control services for the food industry Specialist pest control services for the food industry	$\begin{array}{c} 02\ 9636\ 5840\\ 1300\ 551\ 333\\ 02\ 9674\ 5499\\ 02\ 9311\ 1234\\ 13\ 62\ 33\\ 02\ 9922\ 3743\\ 13\ 14\ 40\\ 1300\ 858\ 140\\ 02\ 9371\ 3911\\ 13\ 73\ 78 \end{array}$
Specialist pest control services for the food industry	13 62 33
Specialist pest control services for the food industry	1800 353 377
Specialist pest control services for the food industry	1300 13 12 14
Specialist pest control services for the food industry	13 14 40
Specialist pest control services for the food industry	1300 723 229
Specialist pest control services for the food industry Specialist pest control services for the food industry	$\begin{matrix} 03 \ 9645 \ 2388 \\ 0411 \ 131 \ 650 \\ 13 \ 62 \ 33 \\ 13 \ 14 \ 40 \\ 1800 \ 33 \ 00 \ 73 \\ 1300 \ 780 \ 980 \\ 1800 \ 136 \ 200 \\ 03 \ 9390 \ 6998 \end{matrix}$
Specialist pest control services for the food industry	08 8297 8000
Specialist pest control services for the food industry	08 9416 0200
Specialist pest control services for the food industry	1800 655 989
Specialist pest control services for the food industry	13 73 78
Temperature controllers and supervisors for refrigeration	02 8762 9200
Data loggers and data services for temperature control	07 3206 3079
eCube Temperature mimicking devices	07 3395 4898
Refrigerators and freezers for hotels, restaurants and catering outlets	1300 146 744
Refrigerators and freezers for hotels, restaurants and catering outlets	02 9119 2515
Modular cool room and freezer room solutions	1800 121 535
Distributors of EndoCube, improving temp monitoring and energy use	03 8844 5557
Specialist cool room and cool room motor cleaning services	1300 790 895
Refrigeration installation and repair	1800 441 718
Specialist cool room cleaning and rejuvenation services	0407 292 826
Specialist HACCP trained workforce solutions for the food industry	0438 196 989
TL 20 Temperature logger for logistics	136 136
Weighing equipment for the food industry	07 3808 9644
Specialist thermometers and oil testers for use in the food industry.	03 8761 6108
Food grade pallets and storage solutions	1300 554 238
Food safe storage and transportation palletcons	1800 336 228

ISSUE 19 2014

1800 336 228

02 9728 8999





P: 1800 247 423 (ICE) dis

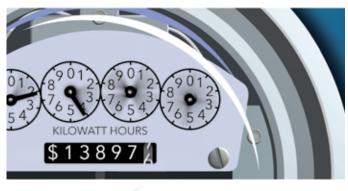
These products are food safe



The HACCP Australia certificate of conformance (often referred to as a 'CoC') 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. 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 Australia certification is designed to meet this. 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'.

Certified products have been 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.

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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.com.au

or call our Sydney office on: 02 9956 6911



Only products that carry HACCP Australia certification 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.