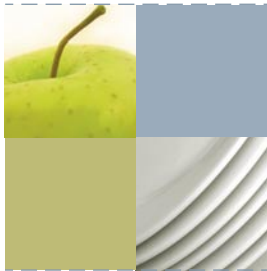




# FOOD SURVEILLANCE AUSTRALIA NEW ZEALAND

Food Standards Australia New Zealand

Spring/Summer 2002



## Editorial

### Acrylamide in Food – an update

Recent articles appearing in the journal *Nature* (3 October 2002) appear to confirm that acrylamide is formed in high temperature cooking where sugars and proteins in food undergo a Maillard reaction. This reaction is responsible for some of the delicious flavours and golden brown colours associated with fried, roasted and baked foods. However, model systems used by the authors showed that heating the amino acid asparagine with glucose at 185°C results in most of the asparagine reacting to form acrylamide.

Acrylamide has not been found in raw food, or food cooked at boiling temperatures.

The above mentioned research follows findings earlier this year from the Swedish National Food Administration that the chemical, acrylamide, could be found in

starch-containing foods cooked at high temperatures, such as fried or roasted potato products and bread. The presence of this chemical in food was not known previously. The Swedish data were subsequently been confirmed by studies in the UK.

In June 2002 the World Health Organization (WHO) held an expert consultation on acrylamide in food. The consultation identified a lack of data on the safety of acrylamide and the need for more information on the mode of formation and levels of acrylamide in foods. The consultation called for an international effort to share information as part of the ongoing investigations. The consultation also advised that to minimise whatever risk exists: one should avoid cooking food excessively; consume fried and fatty foods in moderate amounts; and eat a balanced and varied diet. A summary report of this consultation

can be found on the WHO website (<http://www.who.int/fsf/AcrylamidSummaryreport.pdf>).

Like everywhere else in the world there are few data available on the levels of acrylamide in food both in Australia and New Zealand. Methods of analysis have been developed to determine acrylamide in foods and Australian based surveys have commenced.

FSANZ is reviewing the available safety data on acrylamide to determine if any risk management measures are appropriate. FSANZ is also continuing to monitor international developments in relation to acrylamide in food.

### Further information can be found on the FSANZ website at:

<http://www.foodstandards.gov.au/mediarelease/asespublications/factsheets/factsheets2002/index.cfm>

### Improved Website

In our last newsletter we mentioned a new and improved website associated with the launch of FSANZ. Even though the contents may be new and improved we are aware that the site has had slow access times and that visitors are having difficulties downloading documents – The ANZ Food Surveillance Newsletter included.

We apologise for these problems and understand the frustration being experienced by our readers. FSANZ staff have been working to improve access to the FSANZ website since July this year. A permanent solution is in place via broadband cabling using a bandwidth of 20 megabytes.



We expect this to mean fast, easy and reliable web access from now on. What a far cry from the original 128-kilobyte line!



### Farewell to Tony Johnson

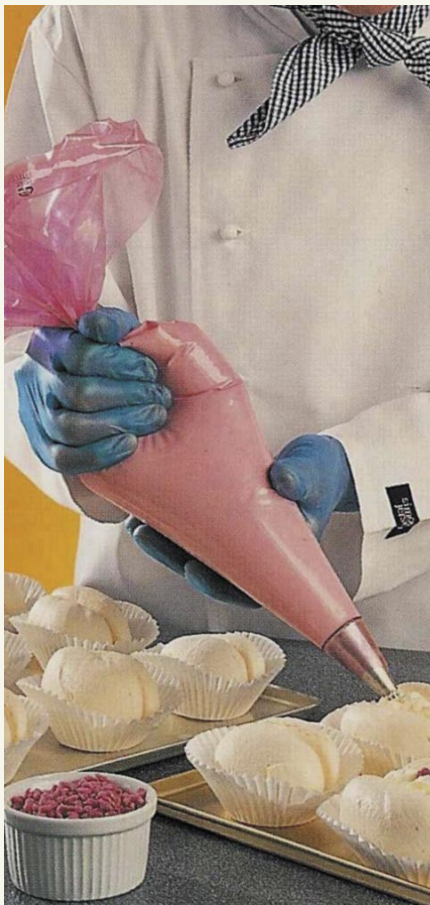
The end of October 2002 has seen Tony Johnson depart - not only from his role as editor of the Australia New Zealand Food Surveillance

Newsletter but as an active officer of FSANZ. His enthusiasm, hard work and wonderful sense of humour will be sorely missed but we wish him well for his future in retirement.

Finally, on behalf of all the members of the Bi-national Surveillance and Enforcement Strategy Working Group, I would like to wish all our readers and their families a happy and safe festive season.

# Piping Bags and Food Safety

## - A Pilot Study on the Potential Microbial Hazard of Reusable Piping Bags in the Food Industry.



Good food hygiene practices not only extend from good personal hygiene, but also to the cleanliness of food preparation areas and equipment, as well as handling practices that reduce the risk of contamination.

In recent times, food poisoning incidents have been traced back to the improper use of piping bags within food premises within Australia<sup>1</sup> and the United Kingdom<sup>2</sup>. Piping bags are used widely throughout the food and catering industry. The potential risk of foodborne illness due to possible microbial contamination of piping bags is of concern.

Piping bags are used in the food industry for a large number of applications ranging from cake decorating to filling sausage rolls. Typical food products piped through the bags include jams, creams, meats and pastries. Piping bags are normally manufactured from a fabric material such as nylon or cotton, and designed to be cleaned, sanitised and reused. Disposable (single use) piping bags that are sterile may be used, however the cost of replacement is an obvious disincentive to their use.

Queensland Health, in conjunction with Logan City Council, undertook a pilot study to examine the microbiological safety and potential food safety risks of reusable piping bags used within local food businesses. Piping bag samples were collected from ten food premises located within the Brisbane South Metropolitan area and analysed for microbial pathogens. Each piping bag was rinsed with 200mL buffered peptone water and inoculated onto suitable culture media. Information was also collected on the type of products used in the piping bags, as well as the cleaning and storage methods used on the piping bags by each outlet.

## Summary of Results

The analytical work measured the presence, or the level of the following microbiological parameters in the rinse fluid:

*Salmonella* (detect/non-detect);

Coagulase Positive *Staphylococci* (detect/non-detect, per mL);

*Bacillus cereus* (detect/non-detect, per mL);

the amount of *E. coli* (per mL);

the amount of Coliforms (per mL); and

Standard Plate Count (per mL).

No samples tested positive for the presence of *Salmonella* spp and *E.coli* levels were below detection limits in all samples. Coliforms were not detected in 8 of 10 samples and low in the remaining two samples. One sample recorded a Standard Plate Count of over  $1.0 \times 10^6$  cfu/mL while the remaining results ranged between  $1.0 \times 10^2$  and  $2.8 \times 10^5$  cfu/mL of rinse fluid.

While rinse fluids contained  $<10$  cfu/mL *Bacillus cereus* and Coagulase Positive *Staphylococcus*, the detection method found 9 of 10 and 4 out of 10 samples to be positive for *Bacillus cereus* and Coagulase Positive *Staphylococcus* respectively.

Walk-through inspection of food preparation premises together with discussions with food handlers conducted at the same time as the microbiological samples were collected, also highlighted the practice of:

- inadequate replacement of bags i.e. repeated use of piping bags beyond the factory recommendation of 15 washes; and
- the washing and re-use of disposable piping bags that are designed for one-use applications and not for repeated use.

## Discussion of Results and Conclusions

The sample size was very small. Nevertheless, the presence of *Bacillus cereus* and *Staphylococcus* within piping bag samples is indicative of poor cleaning and sanitising methods. These results suggest that those who consume food that has been prepared using piping bags may be at increased risk of infection from foodborne pathogens. This is of particular concern in nursing home facilities.

Current handling practices also indicate that piping bags (disposable or reusable) are not being replaced as recommended and food businesses are reusing their piping bags well after the recommended replacement period. Such practices could potentially cause foodborne illness, as the cleaning of piping bags becomes more difficult and less efficient as the piping bag deteriorates with time.

## Recommendations

The report included the following recommendations as a result of the pilot study:

- Separate piping bags should be used for different food applications to reduce cross contamination.
- Disposable piping bags should be used.
- Environmental Health Officers should ensure adequate cleaning, sanitising and timely replacement of piping bags is undertaken within food premises as part of inspections.
- Food business operators and Environmental Health Officers should note the potential microbial hazards associated with piping bag use and note the importance of good food hygiene practices associated with the use of piping bags in the food and catering industry.

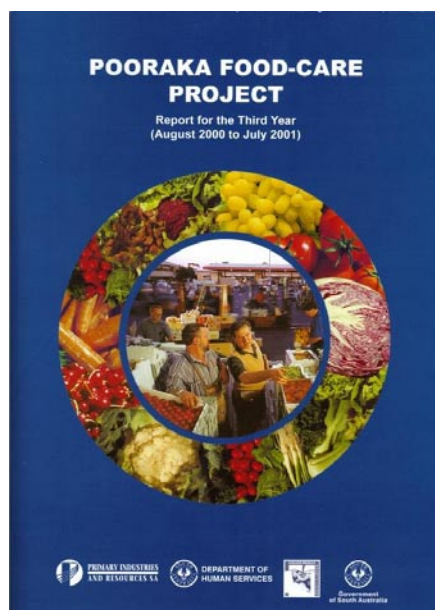
**For more information** please contact Robert Bell Research Officer (OzFoodNet) from the Brisbane Southside Public Health Unit by phone: (07) 3000 9103 or by email: Robert.J\_Bell@health.qld.gov.au

### References:

- Milazzo, A and Rose, N (2001) 'An outbreak of Salmonella Typhimurium phage type 126 linked to a cake shop in South Australia', *Communicable Diseases Network Australia*, Australian Department of Health and Aged Care.
- Dinsdale S (enquiry card 8309) 'The Microbiology of Reusable Savoy Bags', *International Food Hygiene*, Positive Actions Publications Ltd, UK.

# Pooraka Food Care Project

## – Pesticide residue monitoring of fresh produce in South Australia



The Pooraka Food Care Project combines the joint expertise of Primary Industries and Resources South Australia (PIRSA), the Adelaide Produce Markets Ltd (APML) and the Department of Human Services (DHS) in a program of pesticide monitoring of fresh produce from the wholesale fruit and vegetable market at Pooraka, South Australia. The Pooraka Market is the major wholesale market supplying fresh produce to the majority of metropolitan and

regional areas in South Australia. The State Government groups involved are the Rural Chemicals, Fruit, Vegetable and Ornamental Industries and Rural Solutions SA Programs of PIRSA and the Environmental Health Branch of the DHS.

The project commenced in March 1998 and incorporates a survey over a twelve-month period of pesticide residues in a large range of fresh fruit and vegetables grown in SA and sold at the Pooraka Market.

The resources of the individual groups have been successfully utilised in the Project and the costs associated with the analysis of the samples have been shared. This has enabled the DHS to sample a wider range of produce.

The objectives of the project are to:

- Ensure the supply of safe produce to the SA public.
- Support and encourage best management practice in horticultural production by improving the selection and use of chemicals through feedback and extension to growers.
- Protect and promote the clean and green image of SA horticultural produce and enhance local, interstate and overseas markets.

The third year of the project was completed in July 2001. During the third year, August 2000 to July 2001, a total of 139 samples

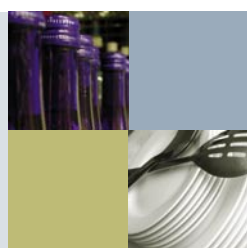
were taken for analysis and each sample was tested for 72 pesticides (compared to 38 pesticides the previous year).

- 98.9% of vegetable samples (99.98% of the total tests) had no detectable residues or contained pesticide residues less than the Maximum Residue Limit (MRL).
- 98.0% of fruit samples (99.97% of the total tests) had no detectable residues or contained residues less than the MRL.

MRLs are not direct health measures. However, responsible growers and authorities act to ensure that pesticide levels in food are below the MRL. Where residues greater than half the MRL were reported, South Australia's policy requires that a Government Field Officer (GFO) is notified of the result. The GFO instigates trace-back measures to investigate the cause of these levels and provides corrective advice to ensure that the previous results are not repeated.

Reports detailing results for the first, second and third year of the project are available on-line at [www.safoodonline.com/food\\_biz/pages/business/reports](http://www.safoodonline.com/food_biz/pages/business/reports)

The fourth year of the project commenced in September 2001. The project continues to prove worthwhile and the results demonstrate a responsible attitude to the management of chemicals used for the control of pests and disease in fruit and vegetable produce in South Australia.



## Food Safety in the Australian Capital Territory (ACT)

The Health Protection Service (HPS) of ACT Health is the agency responsible for ensuring the safety of food in the ACT. The HPS Food Sampling Working Group (FSWG) is responsible for development, overall implementation and co-ordination of the Food Survey Program (Program). The working group's membership consists of officers from the various sections of the HPS involved with food and water related matters.

Each year a number of microbiological food survey proposals are put forward for consideration by way of a Survey Proposal

Form. The FSWG considers the proposals on their merits and the Program is developed and submitted to management for approval. Once approved the program is implemented and identified food samples are collected by the Environmental Health Officers and submitted to the Microbiology Unit of the ACT Government Analytical Laboratory for analysis.

The analysis results are addressed as they are produced with a comprehensive report written at the completion of each survey. These reports are submitted to management for approval before being published on the ACT

Health website (<http://www.health.act.gov.au/publications/foodsurvey/1999-2000/index.html>).

The most recent survey reports appearing on the website include the *Microbiological Quality of Seed Sprouts; and Microbiological Quality of Quick Cooked Foods*. The reports are also used to identify trends in the microbiological quality of the analysed foods and as background data for future surveys.

# Update on the information gathering activities underpinning the FSANZ Evaluation Strategy

Food Standards Australia New Zealand (FSANZ) has initiated a scientific and technical evaluation to measure the impact of implementing the new joint *Australia New Zealand Food Standards Code* (the Code). The FSANZ Evaluation Strategy 2001-03 was developed in 2001 after an extensive consultation process and was published on the FSANZ website in June 2002. (<http://www.foodstandards.gov.au/mediareleasespublications/publications/evaluationstrategy201585.cfm>).

This Strategy provided the framework for an outcome evaluation of the Code and identified key regulatory changes, such as the Australian National Food Safety Standards, general labelling standards in Australia and New Zealand and the food additive standard in Australia and New Zealand as priorities for evaluation.

As part of its evaluation strategy FSANZ has undertaken several activities to co-ordinate the collection of baseline data. These activities have been targeted to fill in some of the information gaps recognised during the initial development of the FSANZ Evaluation Strategy.

The following summarises the progress of the 6 activities being undertaken to gather information that will be used to assess the impact of introducing the new Code:

**Food Safety Survey**, also known as the National Food Handling Benchmark survey, documented the awareness and knowledge of safe food handling practices and the actual food handling practices by food businesses within Australia. It has been completed and the report on this survey is available on the FSANZ website (<http://www.foodstandards.gov.au/mediareleasespublications/publications/nationalfoodhandling1315.cfm>) and in hard copy.

**Intense sweetener intake survey** is a comparative quantitative survey commissioned by FSANZ to assess consumption patterns of intense sweeteners in the Australian population, using the National Food Authority 1994-95 sweetener survey as baseline data. The survey will also be extended to New Zealand to gather baseline data on the current consumption patterns within their population.

A pilot study has been successfully completed. Fieldwork for both Australia and New Zealand should be finished by early December 2002.

**Allergy labelling survey** will allow FSANZ to evaluate the impact of the new labelling standards for foods containing potential allergens. It will collect baseline data from 'at risk' consumers and their carers on their awareness and knowledge of allergens in foods, their ability to identify foods likely to contain allergens and their behaviour towards food selection.

The contractor has been assigned and questionnaires are being developed.

**Labelling survey for consumers** has been done in two parts. Initial work consisted of qualitative research that assessed the awareness, knowledge and behaviour of consumers in relation to food labelling issues. This report is available on the FSANZ website (<http://www.foodstandards.gov.au/mediareleasespublications/publications/foodlabellingissuesconsumerresearchdecember2001/index.cfm>) and in hard copy.

A follow-up quantitative survey will be used to benchmark any potential changes for consumers that may occur after implementing the new regulatory measures.

The pilot and fieldwork for the quantitative labelling survey have been successfully completed in Australia and New Zealand, with the final report due by February 2003.

**Labelling issues for stakeholder groups other than consumers** consisted of qualitative research being conducted with large and small food industries on their level of awareness, knowledge and understanding of the existing labelling provisions, the impending changes to these provisions, their progress towards compliance with the new labelling requirements, and potential cost/benefit impact to the industry for meeting these new requirements. The research also included discussions with government enforcement officers and health professionals on the impact of implementing the new standards on their work.

The final report on labelling issues for stakeholders is available on the FSANZ website: <http://www.foodstandards.gov.au/mediareleasespublications/publications/foodlabellingissues1583.cfm> and in hard copy.

**Monitoring of labels project** will be used to track label changes over time, in particular to monitor food label elements in the food categories of interest on a periodic basis and measure changes made in food labels due to food suppliers changing from the old standards to the new Joint Code. The pilot has been completed and fieldwork has commenced on the first stage of data collection.

**For more information on the FSANZ Evaluation Strategy**

Phone: Janis Baines 02 6271 2234

Email: [janis.baines@foodstandards.gov.au](mailto:janis.baines@foodstandards.gov.au)

In the pipeline....

**Future surveys are planned or underway for a number of food additives, contaminants and hygiene practices including:**

## Hygiene in high risk food premises

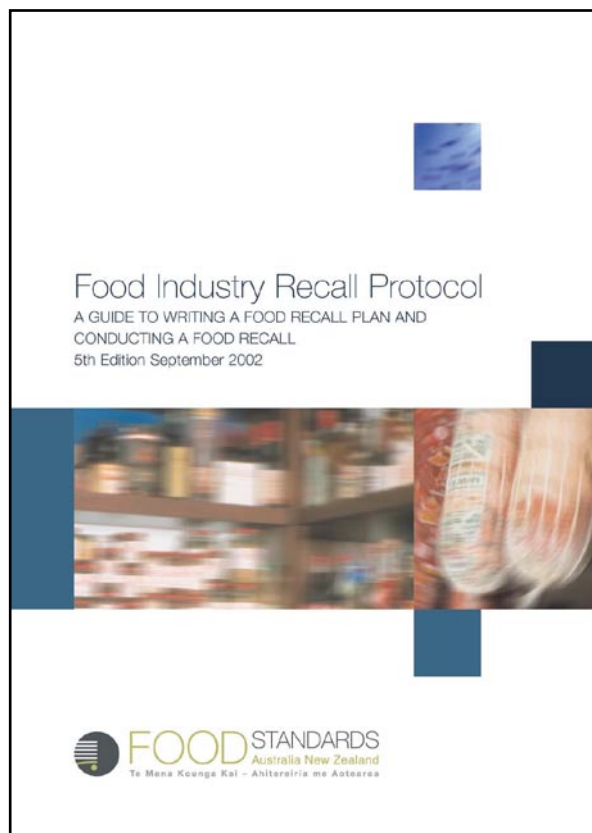
NSW Health has undertaken a survey to determine the current level of hygiene and safe food handling practices within high-risk food businesses in NSW. 400 food businesses were randomly selected and included food services, institutions, and some retailers. Please look out for a summary of this report in the next edition of the Food Surveillance newsletter.

## Listeria in cooked prawns

As mentioned in the previous newsletter FSANZ has completed a survey of *Listeria monocytogenes* in ready-to-eat cooked prawns. In this survey close to 400 samples of cooked prawns were purchased in four cities – Brisbane, Sydney, Melbourne and Perth, and tested to determine the frequency of occurrence and, for positive samples, the level of *L. monocytogenes*. We plan to report the results of the survey in the next edition of the Food Surveillance newsletter.

# Food Industry Recall Protocol

## 5<sup>th</sup> Edition, September 2002



The new revised Food Industry Recall Protocol (5<sup>th</sup> Edition) is now available. In addition to providing a guide on how to conduct a food recall it also includes a new section to help food businesses prepare a written recall plan.

This new section is targeted to food businesses engaged in the wholesale supply, manufacture or importation of food to help them comply with Food Safety Standard 3.2.2. This standard applies in Australia only and it requires this type of food business to have a written recall procedure in place that ensures the effective recall of unsafe food.

The new Protocol also explains the roles and responsibilities of businesses and government when a food recall is necessary.

Copies of the new *Food Industry Recall Protocol*, 5th Edition September 2002 can be obtained directly from FSANZ by phone 02 6271 2222, fax 02 6271 2278 or from the FSANZ website:

<http://www.foodstandards.gov.au/recallsurveillance/foodindustryrecallpr1765.cfm>

## New Subscribers

Food Surveillance newsletter is published electronically on the FSANZ website. It is NOT available in hard copy. As soon as it is published on the website, an email announcing its publication is sent to subscribers on the Food Surveillance newsletter database, maintained by FSANZ. The email includes a direct link to the newsletter on the FSANZ website.

FSANZ has recently established a facility that will enable new subscribers to register via our website, to receive the Food Surveillance newsletter email. It will also enable existing subscribers to access the records to update the existing information that we hold.

To be added to our email list for notification when subsequent editions are published, or to update information, such as a change to your email address, all you have to do is follow a few simple steps:

1. Log on to FSANZ's website [www.foodstandards.gov.au](http://www.foodstandards.gov.au) or [www.foodstandards.govt.nz](http://www.foodstandards.govt.nz)
2. Click on 'Information Service' under Quick links on the left hand side of the front page.
3. New subscribers can register by following the prompts.
4. Existing subscribers can update their information by entering their personal User ID (email address) to obtain a password and then check and amend any information, such as address, subscription list for other FSANZ publications, areas of interest etc.

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Food Surveillance newsletter welcomes your enquiries and suggestions. Please contact Ann Naco, Monitoring and Evaluation

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