

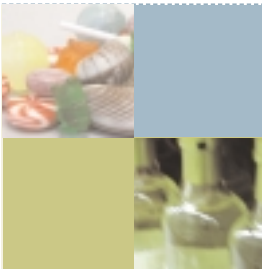


# FOOD SURVEILLANCE

## AUSTRALIA NEW ZEALAND

Food Standards Australia New Zealand

Winter 2002



## Editorial

### Food Surveillance undertaken by Public Health Units and Local Government

Previous editions of Food Surveillance newsletter have included reports on food surveys conducted by Public Health Units and local government. This edition includes an article from the Brisbane Northside Public Health Unit on the compliance of imported confectionery products with the provisions of the *Food Standards Code*.

Monitoring the compliance of packaged shelf-stable food products with the provisions of the *Food Standards Code* is an important, but less visible function of Public Health Units and Local government. Although this is not high priority consumer safety work, it does contribute to the general enforcement of the Code, which helps maintain consumer confidence in the food supply as well as confidence in our State, Territory and New Zealand food regulatory agencies in their ability to enforce all aspects of the Code. Where products are imported, it can also be seen as a measure of the effectiveness of

enforcement of the Code at the border by the Australian Quarantine and Inspection Service.

### ANZFA changes to Food Standards Australia New Zealand

The new food agency, Food Standards Australia New Zealand (FSANZ), was launched on 1 July 2002. FSANZ replaces the Australia New Zealand Food Authority. It is a bi-national independent statutory authority that develops food standards for composition, labelling and contaminants, including microbiological limits, that apply to all foods produced or imported for sale in Australia and New Zealand.

FSANZ has the same contact details as for ANZFA, but a new web address: ([www.foodstandards.gov.au](http://www.foodstandards.gov.au) and [www.foodstandards.govt.nz](http://www.foodstandards.govt.nz)) and email addresses [firstname.lastname@foodstandards.gov.au](mailto:firstname.lastname@foodstandards.gov.au) (for staff in Australia) or [firstname.lastname@foodstandards.govt.nz](mailto:firstname.lastname@foodstandards.govt.nz) (for staff in New Zealand).

The Board and staff of FSANZ are working with Commonwealth, State, Territory and New Zealand jurisdictions and stakeholders to develop and implement the new joint Food Standards Code for Australia and New Zealand.

The two-year transition period for the new Code will come to an end in December 2002 and FSANZ, like ANZFA, is keen to ensure that the food industry has the information and support necessary to ensure a smooth change to the new Code.

FSANZ has a new and improved website where businesses and consumers can continue to find detailed information about these changes and the other work that will be undertaken by FSANZ. The industry advice line (Australia 1 300 652 166 or New Zealand 0 800 441 571) is still available for businesses to find out more about the Code and what they need to do to ensure their products can be sold lawfully after December 2002.

## Kebabs and Food Safety

Kebabs are a traditional Middle Eastern meat dish made by stacking layers of meat such as chicken, beef and lamb, which is seasoned, marinated, and sliced or minced, onto a vertical skewer to form a cone or cylinder shape. The skewer rotates in front of a heat source and as the outer layer of meat is cooked, it is carved off in slices. The meat is then served in flat bread together with salads and dips.

Following a number of cases of illness that had circumstantial links to the consumption of kebabs, a survey was conducted in October 2001 to assess the microbiological safety and quality of raw and cooked meat (chicken, lamb and beef) from vertical spits. The survey was coordinated by Food Safety Victoria and involved Environmental Health

Officers (EHOs) from ten Local Government Authorities from the Northern, Western and Southern Metropolitan Regions of Melbourne.

The aim of the survey was to document the current range of food handling practices in the kebab industry and to establish whether or not pathogens can be transmitted through kebab meats.

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# Kebabs and Food Safety



EHOs randomly selected and sampled meat from food businesses selling meat cooked on a vertical rotating spit. The samples were submitted for analysis to a NATA registered public analyst. The EHOs also completed a questionnaire for each premises at the time of sampling. The questionnaire was used to identify and record selected control points. The control points surveyed were, the internal and surface temperature of the meat on the spit, whether the meat is subsequently cooked prior to serving, what happens to leftover meat from the spit, and any observation of pink/raw meat being cut and served. A total of thirty one (31) food businesses participated in this survey.

The meat samples were tested for the presence of the following organisms:

*Clostridium perfringens*  
*Escherichia coli*  
Coliforms  
*Salmonella* species

A total of seventy six (76) samples of cooked meat were tested for these organisms: 36 chicken, 34 lamb and 6 beef. The survey results showed that 2 samples of Chicken (5.6%) were contaminated with *E.coli*.

3 samples of Lamb (8.8%) were contaminated with potential pathogens – 2 samples were found to contain *E.coli*, and one sample was contaminated with *Clostridium perfringens*. Of the beef samples none contained any of the organisms listed above.

Of the 12 samples of meat taken from drip trays beneath the spits, 4 were contaminated. One lamb sample was contaminated with *Clostridium perfringens*, another lamb sample contained *E.coli*, and two chicken samples were also found to contain *E.coli*.

Rotating spits use heat from the burners and the rotation of the spit to cook the meat. The system cooks the meat from the outside to the inside, so the system's temperature needs to be high to ensure all pathogenic bacteria are killed.

The survey found that 89% of the kebabs had a deep internal temperature of less than 75°C. These temperatures do not contravene food regulations, as the meat theoretically is still cooking, however it does pose a potential risk of contamination of raw meat with cooked meat when slicing meat off the skewer. Only 59% of the meat kebabs reached a surface temperature of more than 75°C.

Pink or raw meat was observed being cut off the spit in 23% of the premises. More than half (65%) of the businesses surveyed did not cook the meat further, after it was sliced off the vertical spit prior to serving. However, 80% of the proprietors discarded their left over meat.

## Report Recommendations

Businesses handling kebab meat are encouraged to:

use thinner cuts of meat on the skewer;

measure the internal temperature of the meat with a probe thermometer to ensure meat reaches temperatures of above 75°C; and

use a secondary cooking step for the meat.

This can be done on a hot plate/grill after it is sliced off the spit, and prior to serving, in order to destroy pathogenic bacteria that may have survived the first cook step. (NB: Secondary cooking will not destroy bacterial toxins).

## Conclusion

The conclusion that can be drawn from this survey is that the food handling practices observed in some businesses that sell kebab meat, together with the bacterial contamination found in some kebab meat samples has the potential to result in food borne illness.

Food Safety Victoria has produced a guide to 'Food Handling for Businesses selling Kebab Meat'. The guide includes a second cook step that is necessary in order to destroy pathogenic bacteria that may have survived the first cook step.

**For more information** please contact Environmental Health Officer Violette Lazanas of the Food & Health Development Unit, Public Health Section, Department of Human Services, Victoria via email: [violette.lazanas@dhs.vic.gov.au](mailto:violette.lazanas@dhs.vic.gov.au).

Further information about food poisoning outbreaks attributed to kebabs as well as other food borne disease occurrences can be found in the Department of Health and Aged Care - Communicable Diseases Intelligence Quarterly Report, (Vol 25, Number 3, August 2001) [www.health.gov.au/pubhlth/cdi/cdi2001.htm#august](http://www.health.gov.au/pubhlth/cdi/cdi2001.htm#august)

# Sulphites in foods

Sulphites, including bisulphites, metabisulphites and sulphur dioxide are permitted food additives in specified foods in the *Australia New Zealand Food Standards Code* (the Code). The major functions that sulphites perform in foods are microbial preservation and inhibition of both enzymatic and non-enzymatic type browning reactions. Sulphites are widely used in foods that include dried fruits and vegetables, wine, cordials, juices and meat products such as sausages and frankfurts.

The States, Territories and New Zealand enforce the provisions in the Code and one of the ways this is done is through their compliance monitoring programs. Over the years a great many food samples have been tested to determine their sulphite concentrations through these programs. The results from the programs are used to enforce the sulphite permissions in the Code. These sulphite concentration results have been stored as historical data.

As one of its first projects, the Bi-national Surveillance and Enforcement Strategy (BSES) Working Group agreed to add value to existing data on sulphite concentrations by collating all available information and undertaking further analysis of these data. The aims of the project were firstly to obtain a broad picture on the level of compliance with the food additive permissions in the Code and second, if the data was considered appropriate, to estimate the exposure of Australians and New Zealanders to sulphite through their diets.

In 2001 the Working Group collated all available analytical data on sulphite concentrations in foods collected through the State, Territory and New Zealand compliance monitoring programs. Over 30,000 individual test results were collated, from the years 1986 to 2001.

<sup>1</sup> The Acceptable Daily Intake for humans is defined as an estimate of the amount of a chemical that can be ingested daily over a lifetime without appreciable risk to health.

The sulphite monitoring data collected were summarised to determine the extent to which the results were compliant with the food additive standard (Standard 1.3.1 of the Code). In summary, for some of the food groups that are permitted to contain sulphites, some of the foods analysed had concentrations that exceeded the maximum permitted level (MPL). In addition, some foods in groups that are not permitted to contain sulphites were found to contain sulphite residues.

For example, in Australia, the data showed that some sausages and sausage meat samples tested exceeded the MPL of 500mg/kg and a number of cordial samples tested exceeded the MPL of 115mg/kg. Food groups to which sulphites are not permitted to be added, but which were found to contain sulphite included raw meat products such as mince meat and some processed fruit and vegetable products. The results of the testing program in New Zealand were comparable, but generally there was a greater level of compliance.

It is important to note that the data described above were the result of compliance monitoring programs undertaken by a range of jurisdictions. As such, the State, Territory and New Zealand agencies would have undertaken appropriate enforcement action at the time of the testing program.

The second aim of the sulphites project was to estimate dietary exposure to sulphites. Unfortunately, however, the concentration data for sulphites collated through the sulphites monitoring project may be quite misleading and unrepresentative of the levels of sulphites which may be found or consumed.

This is because, firstly, the data provided by jurisdictions were for foods as purchased, for example, on raw sausages and uncooked vegetables. This does not reflect the level of sulphites in foods that Australians and New Zealanders actually consume since significant losses of sulphites occur on cooking. Additionally, the jurisdictions' compliance testing programs do not reflect average levels of sulphites in foods as the sampling is often targeted towards foods and businesses that have had compliance problems in the past or have known high use of sulphites. These shortcomings do not allow an accurate estimate of the dietary exposure to sulphites to be determined using these data from the sulphites monitoring project.

In order to gain current and accurate concentration data on actual sulphite consumption levels to allow an accurate estimate of dietary exposure to be made, FSANZ has initiated a total diet survey of sulphites in foods that are prepared ready for consumption. The survey is being co-ordinated through the BSES Working Group and will be funded by FSANZ from its 2002-2003 total diet survey budget. Results from the survey will allow an accurate estimate of dietary exposure to be made for sulphites. The survey and subsequent dietary exposure estimates should be completed and available for publication by mid 2003. In the last total diet survey for sulphites, conducted in 1994, estimated dietary exposures were 22% and 13% of the Acceptable Daily Intake<sup>1</sup> (ADI) for mean adult male and female consumers respectively.

## For more information on the proposed total diet survey of sulphites in foods

Phone: Tony Johnson 02 6271 2262  
Email: [tony.johnson@foodstandards.gov.au](mailto:tony.johnson@foodstandards.gov.au)

*Editorial Note: Sulphite intolerance and the labelling of foods containing added sulphites were discussed in an article by FSANZ's Chief Scientist, Dr Marion Healy, in Food Standard News 38, July 2002.*

## In the pipeline

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

### Total Diet Surveys for 2002/2003

FSANZ has commenced the planning process for the total diet surveys to be undertaken in 2002/2003. For this year the program will focus on food additives, including sulphites. The surveys will determine the concentration of specific food additives in a range of foods that represent the total diet. The concentration data will be used to estimate the dietary exposure to the food additives in question.

### Listeria in cooked prawns

FSANZ has almost completed a survey of *Listeria monocytogenes* in ready-to-eat cooked prawns. In this survey close to 400 samples of cooked prawn have been 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*. It is planned to include a report of the survey in the next edition of the Food Surveillance newsletter.

# Compliance of Imported Confectionery with the Food Standards Code

In the latter part of 2001, the Brisbane Northside Public Health Unit undertook a survey to investigate the compliance of imported confectionery products with the provisions of the Food Standards Code.

Annual testing of confectionery items for sale in showbags at the Royal Queensland Show, had detected non-compliance with the Food Standards Code in terms of additives such as colours and antioxidants, as well as non-compliance with labelling requirements. These confectionery items were imported from countries such as India, Pakistan, Brazil, Spain, and Indonesia.

The Brisbane Northside Public Health Unit undertook the survey to investigate similar confectionery items sold in small chain stores and discount stores that also import confectionery from the above-mentioned countries. The survey focused on the following two compliance areas:

compositional requirements, namely the presence of any non-permitted food additives such as colours, flavours, antioxidants and intense sweeteners; and

labelling issues, in particular the accuracy of information provided on the labels.

A total of thirty imported confectionery products were purchased from small chain and discount stores within the Brisbane Northside area (excluding Pine Rivers, Redcliffe and Caboolture).

Overall findings of the survey revealed that the majority of products complied with the Food Standards Code.

## Compositional Requirements

Only one product of the thirty sampled (i.e. 3%) contained non-permitted additives. These were butylated hydroxyanisole and butylated hydroxytoluene, which were not declared on the label of the product. Five out of thirty products (17%) contained permitted additives i.e. colours (102), (122), (132), (133) and antioxidant butylated hydroxytoluene, that were not declared on the label of the product.



## Labelling Issues

Assessment of the labels revealed three major areas where products did not comply with the provisions of the Food Standards Code:

six out of thirty products (20%) did not state an accurate list of ingredients on the label of the product;

seven out of thirty products (23%) did not include date marking; and

fifteen out of thirty products (50%) did not include a batch number/lot identification number on the label of the product.

Although these results show that imported confectionery products generally comply with the provisions under the Food Standards Code, there is room to improve the level of compliance especially with the labelling requirements of the *Food Standards Code*.

### For more information please contact

Environmental Health Officer Janelle Gordon from the Brisbane Northside Public Health Unit by phone: (07) 3250 8509 or by email: [Janelle\\_Gordon@health.qld.gov.au](mailto:Janelle_Gordon@health.qld.gov.au)

*Editorial Note: Labelling requirements of the Food Standards Code are rigorously enforced by the Australian Quarantine and Inspection Service (AQIS) at the border. However confectionery is a type of food that is considered to pose a low inherent risk to public health and is only routinely referred to AQIS for inspection at a rate of 5% of all imported consignments.*

*Of imported food commodities inspected and analysed by AQIS, an average of just over 6 per cent fail to comply with the relevant standards. Non-compliant labelling is the most common cause of failure (44 per cent), followed by excessive pesticide residues or non-permitted residues, excessive or non-permitted additives and unacceptable levels of microbiological contamination.*

*The most common labelling failures are caused by the absence of information such as: the name of the food; labels in languages other than English; importer or vendor details; manufacturer or packer identification; lot code; and country of origin.*

*When AQIS fails a food on inspection, the importer or owner of that food cannot distribute that commodity but has the option of treating the food, downgrading the food for a purpose other than human consumption, re-export or destruction. AQIS does allow importers to relabel or correct non-compliant labels before the food is inspected.*

*For more information on requirements for importing food into Australia, visit the AQIS web site at [www.aqis.gov.au](http://www.aqis.gov.au).*

# Monitoring the composition of Australian foods

Monitoring the composition and quality of Australian foods is one of the important activities of FSANZ's Monitoring & Evaluation Program. The Program has a particular focus on collection, evaluation and publication of data on the nutrient content of Australian foods.

The Program operates the Australian Nutrient Data Bank (ANDB), an electronic database of foods and nutrients. The ANDB holds a collection of analysed, calculated and imputed data for around 6,500 foods. The range of nutrients included has grown over time and now covers a large number of vitamins and minerals, as well as proximate nutrients, fatty acids and cholesterol.

Data in ANDB are published in a range of formats, including paper publications such as Nutritional Values of Australian Foods and electronic products such as AUSNUT 1999 (the AUstralian food and NUTrient database). AUSNUT is based on the technical support files used to code and analyse the 1995 National Nutrition Survey, which is a major public health monitoring tool. Food composition data are also used in another monitoring tool – the Australian Institute of Health and Welfare's Apparent Consumption of Nutrients Australia 1997-98, which estimates the amount of key nutrients available in the Australian food supply per head of population.

Food composition data are important for purposes besides monitoring nutrient supply. For example, FSANZ uses food composition

data when undertaking dietary exposure assessments to assess the impact of proposed changes to the Food Standards Code.

Most recently, FSANZ has released its on-line Nutrition Panel Calculator (NPC) to assist food businesses to calculate nutrition information panels for their food labels. The NPC uses AUSNUT Special Edition (a revised version of AUSNUT) containing information on the energy, protein, carbohydrate, sugars, fat, saturated fat and sodium contents of over 4,000 commonly used foods, food ingredients and food additives. The NPC is a free service for food businesses. It allows the user to enter the recipe and related information and a nutrition information panel will be calculated. However, businesses should be aware that there are inherent limitations in using the NPC and should recognise that in general the most accurate method of determining the nutritional composition of products is from analysis of representative samples of those products. The NPC may be accessed from FSANZ's website [www.foodstandards.gov.au](http://www.foodstandards.gov.au).

## Further information on FSANZ's food composition activities is available from

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