

A snapshot of FSANZ recent survey activities

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Food Standards Australia New Zealand (FSANZ) conducts a range of surveillance activities in order to monitor the safety of the Australian food supply. Analytical food surveys are an essential tool in the monitoring process. The findings are also used internally by FSANZ for the purposes of estimating dietary exposure to the chemical/nutrients and assessing if there are any health and safety concerns. Following the assessment of the survey findings, the data may also be used to inform any risk management strategies, which may include an addition or amendment to the Australia and New Zealand Food Standards Code (the Code) (see FSANZ poster; 'Planning & designing an analytical food survey'). FSANZ survey activities can be part of ongoing surveillance projects that are conducted at regular intervals or can be specifically targeted to current or emerging issues.

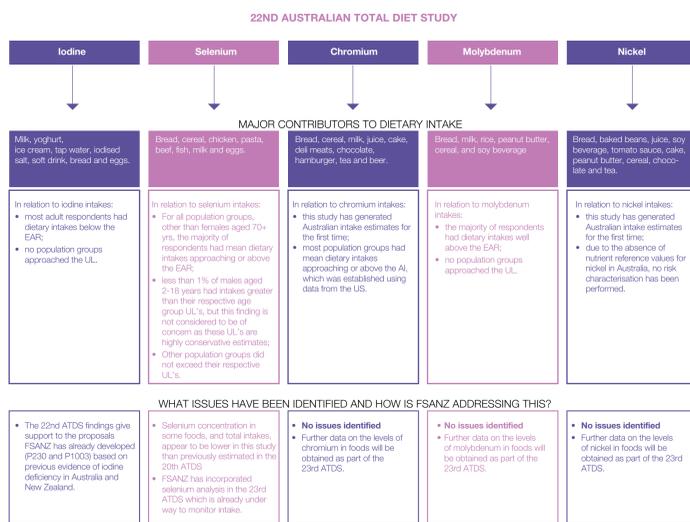
Ongoing Survey Activity

The 22nd Australian Total Diet Study

The 22nd Australian Total Diet Study (ATDS) is an example which demonstrates the usefulness of the ATDS for studying a wider range of food chemicals. This survey focussed exclusively on the levels of nutrients in the diet and included iodine, selenium, chromium, molybdenum and nickel. The survey was funded and co-ordinated by FSANZ, while the food regulatory agencies in the State and Territory governments collected food samples in their region.

A total of 96 types of food were analysed including meat, dairy, oils and spreads, bread and bakery products and vegetables to cover as broad a spectrum of the diet as possible. Foods were sampled in each of the States and Territories in Australia. Overall, 2220 primary samples were purchased and a total of 740 composite samples (each consisting three primary samples) analysed. A summary of the findings from the 22nd ATDS is shown in Figure 1.

Figure 1: The findings of the 22nd ATDS



Targeted Survey Activity

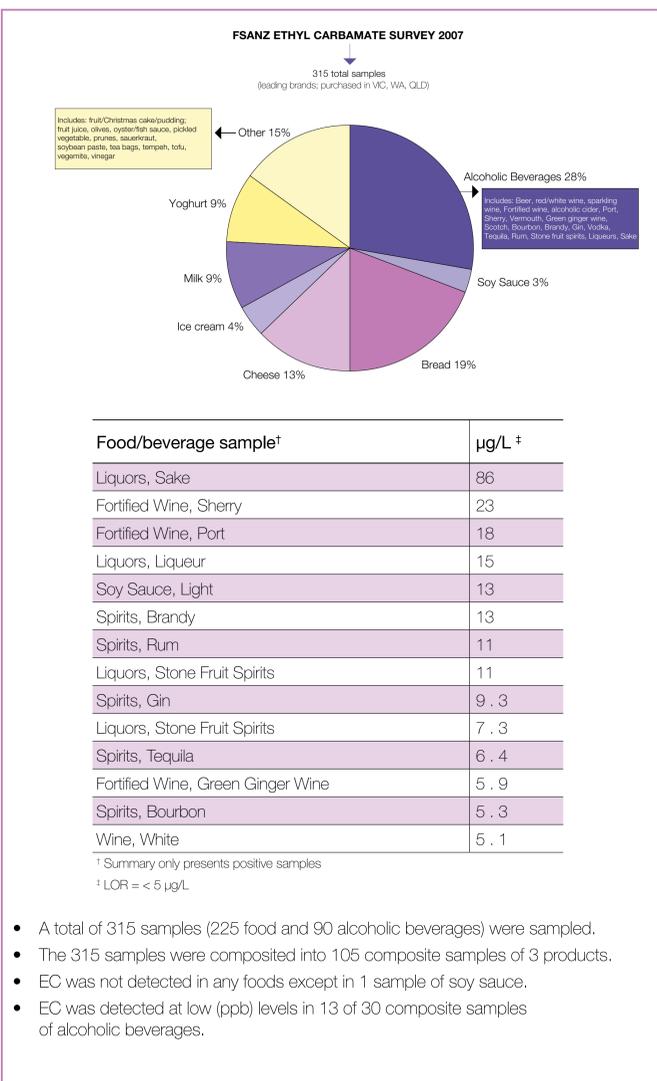
Targeted survey activity often occurs on an ad-hoc basis when there is a need for current scientific data on the concentrations and dietary exposure of specific contaminants, additives or nutrients in food. This need may be in response to an emerging issue.

FSANZ remains abreast of emerging issues and keeps in close contact with food regulatory agencies in Australia and overseas. FSANZ-generated data is of interest to these agencies as well as the World Health Organisation/GEMS, Joint FAO/WHO Expert Committee on Food Additives (JECFA), Codex Alimentarius Commission. Examples of FSANZ targeted surveys are detailed below.

Ethyl Carbamate

In 2007-08, FSANZ commissioned an analytical survey of the levels of ethyl carbamate, also known as urethane, in a range of foods and beverages. Ethyl carbamate is a naturally occurring chemical produced during processing of fermented foods and alcoholic beverages such as whisky, fruit brandies, beer, wine, bread, soy sauce and yoghurt. A summary of the survey design and survey outcomes is shown in Figure 2.

Figure 2: An overview of FSANZ analytical survey examining ethyl carbamate in fermented food and alcoholic beverages



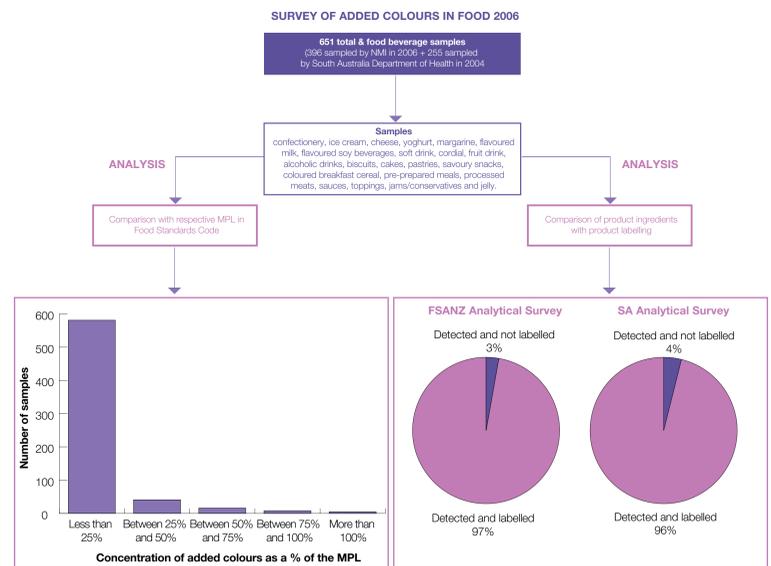
Added Colours in Food

In 2006, FSANZ commissioned an analytical survey to quantify actual levels of all permitted synthetic colours and two natural colours, Annatto (160b) and Cochineal/Carmine (120) in a variety of processed food and beverages in Australia (Figure 3). A total of 396 individual foods and beverages were sampled in 2006 and these results were combined with results from a similar survey of synthetic colours in foods, carried out by South Australia Department of Health and sampled in 2004 to give a total of 651 samples.

The risk assessment revealed that:

- dietary exposures to all colours analysed for the Australian population and all population sub-groups were below the respective Acceptable Daily Intake (ADIs) at both the mean and 90th percentile of consumption (the 90th percentile is representative of high consumers).
- food manufacturers are adding colours to food in accordance with the MPL and labelling requirements set in the Code.

Figure 3: An overview of FSANZ analytical survey examining added colours in food and beverages available in Australia

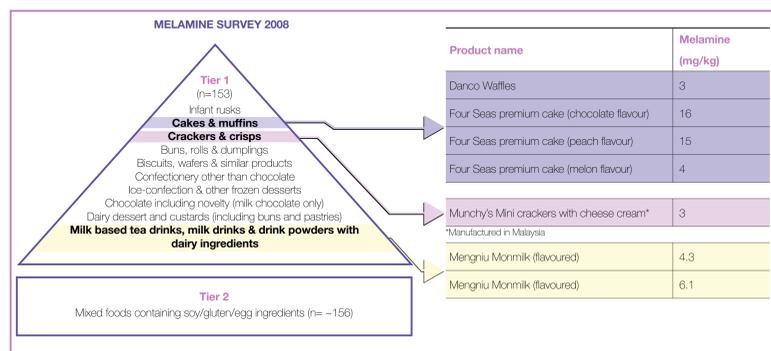


Melamine Survey

In 2008, the adulteration of milk and milk products in China emerged as a significant health and safety issue for the Chinese population. Under the National Incident Response Protocol, it was agreed that FSANZ in collaboration with AQIS, State and Territory food regulatory agencies, would coordinate a national survey of melamine in food manufactured in China but available in Australia.

A two tiered approach was adopted for the survey design and execution, which is based on the risk assessments for melamine conducted by FSANZ and other international regulatory agencies. The first tier included high priority foods sampled and analysed immediately and the second tier included a wider range of lower priority foods. The types of foods are outlined in Figure 4 together with the results of the survey.

Figure 4: A summary of the types of foods analysed in Tier 1 & 2 of the melamine survey and the positive detections of melamine above the referral level of 2.5 mg/kg



Conclusion

FSANZ conducts a variety of monitoring and surveillance activities which provide a valuable resource for contaminant, additive or nutrient levels in food, dietary intake and exposure data which can be used to inform Standards development. While on-going surveys such as the ATDS occur at regular intervals, there is scope to broaden these studies or conduct scientific targeted surveys to build a reliable evidence base for emerging issues. This combined with close collaborations with other food regulatory agencies, ensures FSANZ remains informed of emerging food safety issues in both Australia and overseas.