Review of Microbiological Criteria

Consultation Paper

What microbiological testing is currently undertaken by industry and government and why?

How are existing microbiological limits used and any difficulties in their application?

The NSW Food Authority (the Authority) currently uses microbiological analysis to:

1. Support the various Food Safety Schemes as per the Food Regulation 2010;
2. Provide information to assist in ensuring food is safe (Food Survey Program); and
3. Investigate suspected foodborne illness outbreaks or food safety incidents.

Food Safety Schemes

Through legislation, the Authority establishes Food Safety Schemes (Schemes) to assist in managing risks associated with food commodities. Schemes are established for dairy, meat, seafood, plant products, vulnerable populations and eggs. As part of the Schemes, the Authority has the ability to require food businesses to undertake analysis for the purpose of verifying that food safety programs (which are also required by the legislation for certain businesses) are managing risks associated with the products produced. To date, certain dairy, meat, seafood, plant products and egg businesses must meet minimal testing requirements and details are provided in the Authority's Food Safety Scheme Manual, http://www.foodauthority.nsw.gov.au/_Documents/industry_pdf/NSW_Food_Safety_Schemes_Manual.pdf.

In addition to the testing required by industry, the Authority undertakes its own microbiological verification program for products produced under Food Safety Schemes. The program provides a snapshot of the overall compliance of businesses and complements the audit and investigation procedures, which together provide an overall view of the effectiveness of the regulation and industry performance. The most recent microbiological verification report can be found on the Authority's website, http://www.foodauthority.nsw.gov.au/science/market-analysis/food-safety-schemes.

Analysis undertaken to support the Food Safety Schemes is based on the current microbiological limits listed in Standard 1.6.1 of the Australia New Zealand Food Standards Code (the Code), except that in most cases only one sample is taken for analysis. This is predominately due to the testing costs associated with following sample plans where multiple samples are required for analysis. Consequently, compliance is assessed against the lower limit (m) in the Code. Non-compliant

results are discussed in the first instance with the business and risk management appropriate for the level of risk is actioned (see section *Responding to results)*.

Food survey program

The Authority also conducts analysis through its food survey program. Information on the Authority's food survey program can be found on the Authority's website, http://www.foodauthority.nsw.gov.au/_Documents/science/survey_program_overview.pdf. The overall purpose of the program is to provide information to assist businesses produce safety food. For surveys, where relevant limits are included in Standard 1.6.1, the Authority uses these limits when assessing the results. As with the Food Safety Scheme verification testing, only one sample is analysed and the same approach as mentioned above is followed.

Regularly, the Authority undertakes microbiological surveys associated with ready-to-eats foods that are not covered by limits included in Standard 1.6.1 (e.g. take-away foods and chilled foods). In these situations, the Authority has developed guidelines to assist in assessing the results (http://www.foodauthority.nsw.gov.au/_Documents/science/microbiological_quality_guide_for_RTE_food.pdf). These guidelines are based on the *Guidelines for the microbiological examination of ready-to-eat food* developed by FSANZ, with the main difference being limits for *L. monocytogenes* where the Authority's guide takes into account the type of food and where it is sold. The approach here is similar to that used for the revised limits for *L. monocytogenes* in Standard 1.6.1.

Food investigations

Microbiological analysis is a key feature when investigating suspected foodborne illness outbreaks and food incidents were a microbiological agent is suspected to have caused the outbreak/incident as it provides clear evidence of the cause. In most cases the limits listed in Standard 1.6.1 are only relevant where assessing compliance. Both the Authority's and FSANZ's ready-to-eat food guidelines provide some assistance with assessing results.

Foods with no limit in Standard 1.6.1

For both food surveys and food investigation, there are many foods tested where no limit is listed in the Code. For example, Standard 1.6.1 includes limits for *Salmonella* for pepper, paprika, cinnamon, coconut and cocoa powder, although no limit exists for similar herbs, spices and other ingredients which may be used without further heating. Further, since the previous review of limits with the Code, a number of new products have emerged (e.g. chilled dips, fresh cut vegetables) many of which may appear more of a risk than some of the existing foods within Standard 1.6.1. As such it may be more appropriate to consider food category instead of specific food types.

Responding to results

When responding to results which either do not meet the Code requirements or other guidelines, the response taken by the Authority are commensurate to the risk posed. In general, pathogen detections would result in greater action than hygiene indicators (e.g. coliform, *E. coli* or *Enterobacteriaceae*). In most situations where the food is

made in New South Wales[1], the business is visited and an inspection conducted to ensure they met the Food Safety Standards (i.e. 3.2.2 and 3.2.3) of the Food Standards Code. Additional food samples are also collected for follow-up testing and where *L. monocytogenes* and *Salmonella* spp. are detected, environmental sampling may also occur. Food recall or withdrawal may also occur although that would depend on a number of factors, including:

- Type of organism detected and the level present
- Use by or best before date of the food
- Intrinsic properties of the food and behaviour of the organism in the food

The proposed approach to include food safety criteria and process hygiene criteria in the Code noting that each will have different corrective actions (i.e. response to not conforming to the criteria)

Whether the proposed order is appropriate

Issues related to specific commodities/commodity groups that should be considered under this review and the rationale

The Authority in-principle supports the approach to include food safety criteria and process hygiene criteria in the Code. This approach provides clear direction as to what constitutes a food safety risk and which is more associated with process control. While the Authority supports clear and consistent action in response to a failure to a criterion, there may be situations where an alternative action may be needed. For example, a response to high process hygiene criteria (e.g. high level of *E. coli*) together with evidence of that Food Safety Standards (i.e. 3.2.2 and 3.2.3) were not being met may require a food recall to be considered. As such, some flexibility may be required.

Further, the Authority supports the staged approach as detailed in Section 3.3, although notes that the paper does not make mention of products or commodities currently not covered by limits within the Code, with the exception of low moisture foods. It is also noted that the paper does not include mention of a review of FSANZ's *Guidelines for the microbiological examination of ready-to-eat food.* Given the comments mentioned early in this submission the Authority' would like to understand how these two issues will be considered during the review of the microbiological limits.

Resources available to assist in the application of microbiological criteria

- NSW Food Authority's Microbiological quality guide for ready-to-eat foods.

ENDS

[1] Where product is produced interstate, results are provided to the relevant jurisdiction for their action.

The views expressed in this submission may or may not accord with those of other NSW Government agencies. The NSW Food Authority has a policy which encourages the full range of NSW agency views to be submitted during the standards development stages before final assessment. Other relevant NSW Government agencies are aware of and agree with this policy.