

Microbiological surveillance of raw egg products

Raw egg products are frequently linked to foodborne illness, and the Gippsland regional sampling group aimed to assess the microbiological safety of these products in their region of Victoria. All samples were accompanied by a questionnaire, detailing egg supply, process and production controls and other food safety aspects of the premises.

Samples were processed by analysts authorised under the Victorian Food Act 1984. The laboratories that processed samples are NATA accredited for the analytical methods used. Samples taken were analysed for Standard Plate Count (SPC), *Escherichia coli*, and *Salmonella* spp. The SPC and *E. coli* were included to provide an overall picture of the hygiene of these products, whereas *Salmonella* spp. are recognised food safety risks with these foods.

Seventy five samples of raw and undercooked egg products were submitted for analysis. These included samples of mayonnaise, aioli, tiramisu, hollandaise, and tartare sauce. The questionnaire asked about temperature of storage of eggs in the food business, the batch size for the product, the sample temperature at sampling, and questions related to the business's food safety program.

Neither *Salmonella* spp. nor *E. coli* were detected from any of the sauces or desserts analysed. The SPC for these ready to eat products were generally low, and overall all samples would be classified as acceptable or satisfactory according to the FSANZ guidelines for ready to eat foods. Not all samples had the temperature recorded at sampling, but of those that did; around one-third were stored out of temperature control, increasing the potential risk of these products to the consumers.

Although most businesses stored their eggs under temperature control, approximately 25% of premises stored their eggs at ambient temperature. The officers also enquired about the length of time the dessert or sauce had been made prior to sampling: some raw or undercooked egg products were recorded as being stored as long as 21 days after manufacture. While none of these long stored products had unsatisfactory microbiological results, it is likely that many of these low or undercooked egg products incorporated vinegar or lemon juice which will reduce the pH of the food. However, pH alone cannot be completely, reliably inhibitory for pathogens such as *Salmonella* spp.

All participating officers undertook to return to premises where problems with microbiological results, questionnaire information or other issues were identified.

The results of the questionnaire in this survey indicated that some of the premises sampled could improve the storage temperature of raw eggs and raw egg products, that temperature control of these products could be improved, and that smaller batches of pre-prepared product, stored for shorter periods would reduce the risk to consumers.

Raw egg products in the Gippsland regions were shown to be of good microbiological quality. However, improvements in handling and temperature control of these products will reduce the risk to consumers.