

Food Safety Survey of Retail Doner Kebabs in NSW

P. Bird, T. Soenario and P. Sutherland

NSW Food Authority, 6 Avenue of the Americas, Newington, NSW 2127, Australia

Introduction

Doner kebab is a popular take-away fast food, consisting of thin slices cut from a cylindrical block of minced and seasoned meat or chicken, eaten in a roll of unleavened bread with fresh salad and sauce. The meat (usually lamb, chicken or beef) is grilled on a vertical, rotating spit. OzFoodNet epidemiologists reported five outbreaks of foodborne disease associated with doner kebabs in NSW between January 2001 and December 2003^{1,2}. These outbreaks affected 60 people, with five hospitalised. Two previous surveys (Victoria³ and Hunter Public Health Unit, NSW⁴) revealed microbiological food-safety problems with doner kebabs. Consequently, the NSW Food Authority conducted a survey to assess the level of food hygiene compliance by doner kebab outlets in NSW and determine the microbiological quality of prepared kebabs.

Survey Method

Retail doner kebab outlets were identified using the NSW web-based database (Notification and Food Safety Information System). Two hundred and thirty-seven outlets across NSW were surveyed for compliance with good food-handling practices and the microbiological quality of prepared kebabs. The survey was conducted from September to November 2004.

Inspections were conducted during normal business hours and included observation of:

- cooking practices;
- time/temperature control of food;
- potential cross contamination between raw and prepared food;
- cleaning and sanitising of equipment and premises;
- personal hygiene.

To gauge the overall microbiological quality of doner kebabs at the point of consumption, a single sample of a whole, prepared doner kebab was obtained from each outlet. Samples were tested at the Division of Analytical Laboratories (DAL) for Standard Plate Count (SPC), *Escherichia coli*, *Clostridium perfringens*, *Staphylococcus aureus* and *Salmonella*.

Results

Significant non-compliance with the Food Standards Code for food-handling practices were noted in 16% of outlets surveyed, resulting in regulatory action. Potentially poor practices in a number of other outlets were discussed with the management at the time of inspection and rectified immediately or within a short period. Some examples of poor hygiene practices observed, included:

- ready to eat, potentially hazardous ingredients not refrigerated at or below 5°C;
- frozen kebab not thawed under refrigeration;
- fresh raw doner kebab sticks unrefrigerated while setting;
- leftover doner kebab meat not properly cooled/refrigerated;

- non-effective sanitisation of food contact surfaces;
- non-effective sanitisation of knives and meat shavers;
- hand washing facility not properly used and installed;
- raw meat juices of uncooked sticks dripping onto cooked meat;
- cross-contamination issues between raw and prepared foods; and
- separate utensils not used for raw and prepared foods.

The results of microbiological testing of 236 samples of whole kebabs are represented in Table 1.

Conclusion

The survey highlighted some areas of concern in the preparation of doner kebabs. In particular, good hygiene practices are essential as is the requisite food safety skills and knowledge for those working in these outlets.

Follow-up investigations by the NSW Food Authority indicated that good food-handling practices and satisfactory microbiological quality of doner kebabs could be achieved in a relatively short period. Many of the failures may have been the result of poor knowledge of good hygiene practices. This could be rectified with education programs. Fact sheets (including some in languages other than English) and verbal advice were given to businesses at the time of inspection—available on www.foodauthority.nsw.gov.au/pdf/Doner%20kebabs.pdf. Education was aimed at assisting businesses to improve their hygiene and handling practices. As food safety programs embrace systematic and routine management of good food handling practices, there may be a case for promoting them in this sector of the food industry.

References

1. Foodborne outbreaks possibly associated with kebabs—Analysis of OzFoodNet outbreak data, 2000–2003. 1 November 2003. Pers. com.
2. OzFoodNet: Enhancing foodborne disease surveillance across Australia: Quarterly report, January to March 2004. *Communicable Diseases Intelligence* - Vol 28 No 2, June 2004
3. *Microbiological Survey of Kebabs*. 2001. Department of Human Services, Food Safety Victoria.
4. *Survey of Kebab Outlets to Determine the Microbiological Quality and General Hygiene Status of the Foods and the Premises in the Hunter Area Health Service*. May 2002. Hunter Public Health Unit, Hunter Area Health Service, Wallsend NSW Australia.

Acknowledgements

Survey conducted by food safety officers of the NSW Food Authority. Laboratory analysis conducted by NSW Health Division of Analytical Laboratories, Lidcombe.

Table 1

Organisms	Level of detection		
	Not detected	< 100 CFU/g	> 100 CFU/g
<i>Escherichia coli</i>	163 (69.0%)	49 (21.0%)	24 (10.0%)
	Not detected	< 1000 CFU/g	> 1000 CFU/g
<i>Staphylococcus aureus</i>	228 (96.6%)	7 (3.0%)	1 (0.4%)
<i>Clostridium perfringens</i>	231 (97.9%)	3 (1.3%)	2 (0.8%)
	Not detected	Detected	
<i>Salmonella</i>	236 (100%)	0 (0%)	