

How Safe Are Delicatessen Meats?



144 Local Governments

Introduction

Random sampling of cold meats at delicatessen counters by Environmental Health Officers (EHOs) has occasionally revealed the presence of disease-causing bacteria. In addition, inadequate food-handling practices have been observed. These include:

- Poor separation of raw and ready-to-eat foods
- Poor temperature control
- Cross-contamination between raw and ready-to-eat foods, (see 'What is cross-contamination?').

These practices may contribute to the spread of serious infectious food-borne diseases such as listeriosis, verotoxigenic *Escherichia coli*, salmonellosis and so on.

A survey of delicatessen meat products was undertaken as part of the Western Australian Food Monitoring Program. Samples were collected by EHOs from 47 local governments throughout Western Australia to determine if ready-to-eat delicatessen meats were:

- Safe to eat
- Displayed at safe temperatures
- Handled correctly.

At the time of purchase, temperatures were taken of foods on display and observations made of food-handling practices (for example,



Only 42 per cent of the survey samples of delicatessen meats had been handled correctly.

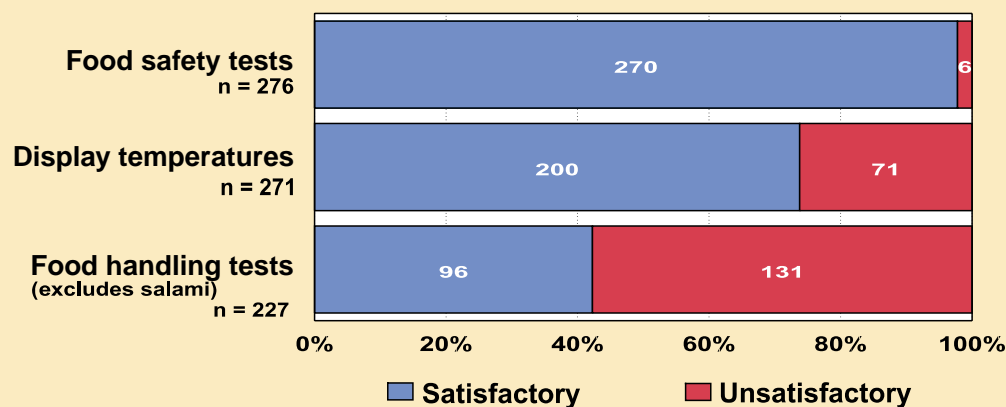
separation of raw and ready-to-eat food and cleanliness of meat slicers).

A total of 281 samples were analysed including:

- Salami (53 samples)
- Roast meats (55 samples including chicken, silverside, beef, pork and turkey)
- Ham (89 samples)
- Processed meats (84 samples including polony, mortadella, luncheon meat, chicken loaf, meatloaf and chicken roll).

Overall, 98 per cent of the foods tested would be unlikely to cause food poisoning, 74 per cent were displayed at safe temperatures and 42 per cent had been handled correctly, as shown in Table 1 below.

Table 1: Overall results



Food safety assessment

The microbiological safety of samples was assessed by comparing results with the *Western Australian Guidelines for Ready-To-Eat Foods* (see *Food Watch*, Number 5, April 1999).

All samples were satisfactory for *Clostridium perfringens*, *Salmonella* spp, *Campylobacter* spp, *Staphylococcus aureus*, *Bacillus cereus* and *Escherichia coli*.

Of the 276 samples tested for *Listeria monocytogenes* 270 (98%) were satisfactory. However, a total of six (2%) samples contained unsatisfactory numbers:

- four samples (one roast beef, one mortadella and two beef brawn) contained between 10 and 100 organisms per gram of food.
- two samples (one ham, one roast beef) contained more than 400 organisms per gram of food.

Foods containing more than 100 *Listeria monocytogenes* per gram of food may cause disease in susceptible people (for example, the elderly, pregnant women and the immunocompromised).

To keep food safe it is important to stop food-poisoning bacteria:

- Contaminating food (see 'What is cross-contamination?')
- Multiplying to numbers that could cause food poisoning.

This is achieved by handling foods hygienically and storing food at safe temperatures.

Food-handling and temperature assessment

An assessment of food-handling practices was made using a combination of the following indicators:

- Total Coliform Count (TCC) – which counts a type of bacteria found in the faeces of animals and humans and also in soil and on plants. Not all types of coliform cause food poisoning. However, an unsatisfactory TCC indicates that conditions would be suitable for food-poisoning bacteria to grow.
- Total Plate Count (TPC) – which counts all the bacteria present on a food (both good and bad) and indicates if the food environment is suitable for bacterial growth.

Some foods naturally have a high TPC as 'good' bacteria are used in their processing (for example, fermented sausages such as salami that contain bacterial cultures). Therefore, for this survey salamis were not included in the food-handling assessment.

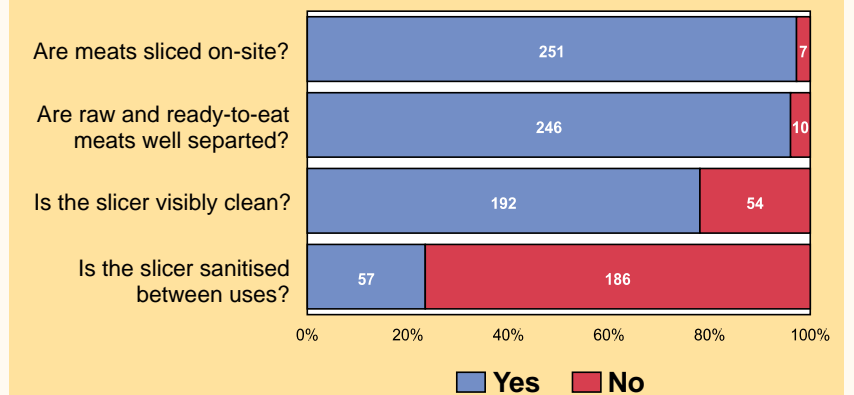
High numbers of TPC and TCC generally indicate that a food has been stored at inappropriate temperatures at some stage during its processing, transportation, storage or display.

The WA Health (Food Hygiene) Regulations 1993 require potentially hazardous foods to be stored below 5°C. Delicatessen meats are potentially hazardous foods as they can support the rapid growth of infectious or toxigenic micro-organisms above this temperature.

Approximately three-quarters of all samples tested were displayed below 5°C, but the TPC and TCC results indicated that more than half of the ham, polony and roast meats had been subjected to poor temperature control at some stage prior to sale.

At the time of sampling, EHOs ascertained if meats had been sliced on-site, if there was good separation between raw and cooked foods on display, if the slicer was clean and if the slicer was sanitised between uses. A summary of the observations is shown in Table 2.

Table 2: Food-handling observations



Overall, 251 (97%) of the meats surveyed had been sliced on-site and 246 (96%) were displayed separately from raw meats.

While 192 (78%) of slicers were in a visibly clean condition, only 57 (24%) were sanitised between uses. As meat slicers can be a source of cross-contamination, the lack of sanitising is of concern.

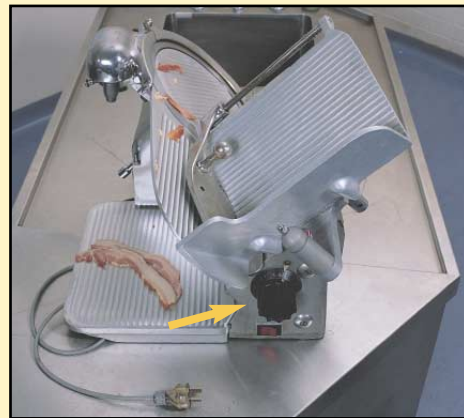
As an adjunct to the survey, 60 environmental samples were obtained from slicers, coolroom door handles, preparation benches and so on in 13 premises. *Listeria monocytogenes* was detected on meat slicer trays, blades and guards as well as on tongs, trolley handles and cutting boards in four premises.

All equipment should be frequently cleaned and sanitised to reduce the possibility of cross-contamination.

How to clean a meat slicer

Slicers are a potential source of cross-contamination and should be cleaned and sanitised between slicing each food type (salami, polony, roast meats). If the slicer is not cleaned and sanitised between each use, the proprietor must be able to demonstrate, in the food safety program, that the cleaning regime used adequately protects the food from cross-contamination.

1. SAFETY FIRST!



Unplug machine.
Set slice thickness to zero, so blade is flush with machine.

2. PREPARATION – dismantle machine



Remove blade guard.



Remove crumb tray.



Remove food guide plate.



Remove centre panel from blade.

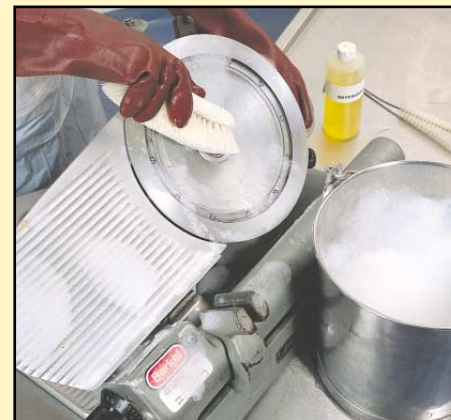
3. CLEANING removes grease and dirt



Use a dry brush to remove loose crumbs from machine and parts.



Clean parts in warm soapy water then rinse.



Clean machine in warm soapy water then rinse.

4. SANTISING kills germs



Soak parts in very hot water.



Spray machine with solution of sanitiser and leave to soak as per manufacturer's instructions. Rinse machine in clean water.

What is cross-contamination?

Cross-contamination occurs when bacteria are transferred by hands, utensils and equipment from one food to another. For example, raw meats naturally contain high numbers of bacteria which are killed when the meat is cooked. Bacteria from raw meat can spread to ready-to-eat foods on meat slicers, tongs, hands and so on. Care should also be taken to reduce the spread of contamination between different ready-to-eat foods.

Avoid cross-contamination by:

- Thoroughly washing hands or changing gloves between handling foods
- Separating raw and ready-to-eat foods. Use dividers that extend to the full height of the display unit when necessary

- Using separate utensils and chopping boards for each food type. Consider using different coloured tongs and boards for raw and ready-to-eat foods
- Cleaning and sanitising handles to fridges, coolrooms and so on
- Storing raw meats below ready-to-eat foods in cool rooms
- Keeping foods covered
- Preventing sleeves from touching foods during service
- Cleaning and sanitising plastic food decorations.

5. REASSEMBLE MACHINE



Slicer is now ready to use.

Who was involved in this survey?

Country local governments (23):

Albany, Broome, Bunbury, Capel, Carnarvon, Denmark, Derby, East Pilbara, Geraldton, Gingin, Goomalling, Harvey, Irwin, Kalgoorlie-Boulder, Katanning, Mandurah, Nannup, Northam (Town), Plantagenet, Port Hedland, Roebourne, Serpentine-Jarrahdale, Wagin.

Metropolitan local governments (24):

Armadale, Bassendean, Bayswater, Belmont, Canning, Claremont, Cockburn, Fremantle, Gosnells, Joondalup, Kalamunda, Melville, Mosman Park, Mundaring, Nedlands, Perth, Rockingham, South Perth, Stirling, Subiaco, Swan, Victoria Park, Vincent, Wanneroo.

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Western Australian Food
Monitoring Program
August 1999