

Food Sampling by Northern Ireland District Councils – 2008 Report

Northern Ireland Strategic Committee on Food Surveillance



The Northern Ireland Strategic Committee on Food Surveillance was established in 2007 to independently evaluate statistical data obtained from the United Kingdom Food Surveillance database. The database holds details of food samples collected by Environmental Health Department staff of District Councils along with corresponding chemical analysis results and details of microbiological examination.

This is the second report to use data obtained from the United Kingdom Food Surveillance System and has been drafted to provide a broad overview of the outcome of microbiological and chemical analysis of food.

The database was made available to District Councils in 2006 and through support funding from safefood they were able to commence using it on 1 January 2007. In 2007 it was reported that there were 8700 Northern Ireland food samples on the database. At the end of 2008 there were an additional 9314 food samples on the database, which now holds details of over 18,000 food samples for Northern Ireland.

Based on the results of sampling the Committee did not observe any major issues regarding the contamination of food, with exception to an incident relating to *Listeria monocytogenes* and two incidences of salmonella in ready to eat foods. All of which were fully investigated and appropriate follow up action taken.

The information leaflet represents only a brief summary of the key points of the main report.

The full report can be accessed at

<http://www.food.gov.uk/multimedia/pdfs/foodsamplingni2008.pdf>





Key Findings

During 2008 officers of District Councils visited a range of food premises in Northern Ireland to collect food samples in support of both enforcement and surveillance activities. A total of 9314 food samples were collected and submitted to the Northern Ireland Public Health Laboratory and Public Analyst for microbiological examination (67%) and chemical analysis (33%).

Microbiological Examination

The most frequently sampled foods for microbiological examination in 2008 were meat and meat products and prepared dishes. As outlined in the 2007 report, these food types were found most often to fail microbiological tests though not to levels that would be harmful to health.

29% of the food samples did not meet microbiological standards but much of this was attributed to quality rather than safety. 7% of meat and meat product samples were found to have high bacterial loading, consistent with potential temperature abuse but further investigation is needed to refine why these foods have failed these quality and safety tests. Approximately 30% of non pre-packed foods also failed microbiological standards. In the absence of trend data from other years it is not known whether this was atypical but it does require further investigation.

Premises Hygiene Risk Category

The relationship between food premises sampled and their hygiene risk category was examined. Sampling activities focused on higher risk premises but it was found that almost 700 samples submitted did not have details of the premises risk category. As a result, modifications will be made to the software programme used to validate samples details to make the risk classification mandatory.

The poor level of compliance with general microbiological testing, although not hazardous, implies unsatisfactory hygiene practices relating to temperature control of food.

Premises Type

Comparisons were made between types of premises from which samples were taken and sample results. As outlined in the 2007 report, few primary producers, packers and import/export premises were sampled. Such premises, though few in number, have the potential to contribute to the safety of the food supply chain and warrant some form of extended sampling. The majority of food samples were taken from retail and catering premises. The highest rate of unsatisfactory samples occurred in retail premises (33.5%) followed by restaurants and other caterers (28.2%).

Food Poisoning Organisms

- **Salmonella**
- **Campylobacter**
- **E. Coli 0157**
- **Listeria**
- **Clostridium perfringens**
- **Staphylococcus aureus**
- **Bacillus cereus**

Examinations of food revealed that the number of pathogens detected was extremely small compared with the total number of samples collected and submitted to the food examiner. During 2008, of 5640 foods examined for Salmonella there were four instances of detection. Two samples of ready to eat steak pieces were found to contain Salmonella agona. Following investigation the food business operator initiated a product recall. Two other food samples consisting of mini chorizo were found to contain Salmonella however the product was not regarded as a ready to eat product and therefore was not considered a health risk to consumers. The products contained details regarding cooking before consumption but officers took the view that the labelling was not very clear and reported the issue to the Food Standards Agency, home authority and manufacturer.



Listeria monocytogenes and other Listeria species was found in sliced cooked ham, ear and tongue roll and noodle. The contaminated ear and tongue roll originating from Lithuania was subsequently removed from sale.

During the period May to November 2008 a Listeria outbreak occurred in the Belfast Health and Social Care Trust. There were 7 reported cases with 3 deaths. All had significant co-morbidity. Details of the investigation report of the outbreak can be obtained from the Public Health Agency Web site www.publichealth.hscni.net/publications

Identification of General Hygiene Indicator Bacteria

The Food Examiner also examines food for certain bacteria whose presence in food can be used as an indicator of general hygiene practices in premises. High numbers of organisms known as enterobacteriaceae, usually indicate poor hygiene, inadequate cleaning and disinfection they can also indicate possible contamination of ready to eat food after cooking or survival of bacteria after inadequate cooking.

In 2008 foods found to contain elevated levels of enterobacteriaceae were:

- **Meat and meat products**
- **Prepared dishes**
- **Fruit and vegetables**
- **Bakery products and cereal**

In comparison with all the foods sampled microbiologically only a small proportion had high levels (220 samples or 3.5%).

Total Bacterial Count

In addition to the microbiological food safety tests the Food Examiner also establishes details of the total number of bacteria on a food sample. Comparisons of total bacterial counts were made for different food types. High bacterial counts in ready to eat food could reflect some or all of the following

- **Poor refrigeration of product on display or storage**
- **Poor temperature control in the distribution chain**
- **Poor handling practice**
- **Inadequate cooking**

The following food types were found to have bacterial counts in excess of one million colony forming units per gram

- **Meat and meat products**
- **Prepared dishes**
- **Fruit and vegetable based products**
- **Egg and egg based products**
- **Fish and shellfish**
- **Cakes and confectionery goods (mainly due to the fact that samples contained cream)**

In total 422 samples had high bacterial counts representing (7%) and a significant number of these foods were foods described as non-prepacked. This information helps direct Environmental Health Departments in determining future sampling surveillance activities.



Chemical Analysis of Food

Officers also sampled 3078 foods for chemical composition and labelling. 14% of these samples were taken as part of planned regional/national surveys. The remainder of samples were taken for enforcement and surveillance. As in the previous year 50% of food samples were reported as unsatisfactory and this is partially due to the fact that samples failing labelling requirements are reported as unsatisfactory.

Meat and meat products, bakery products & cereals and prepared dishes formed a significant proportion of foods sampled and also represented a significant proportion of sample failures.

The food products that were consistently found to fail as a result of labelling errors were meat and meat products, prepared dishes, bakery products & cereal and cakes & confectionery. Typically the samples failed as a result of incorrect labelling of ingredients or the quantity of certain ingredients required to be declared on the label.

Benefits of Sampling for Action by District Councils

The report and information obtained through the Food Surveillance database will enable District Councils to allocate resources to specific areas to improve food safety and quality.

It is important for District Councils to recognise that the information gained from food sampling activities will provide significant cost benefit outcomes by early detection of emerging risks or trends in food safety and composition.

Conclusions

Throughout the year considerable resources were spent collecting, submitting and analysing foods sampled for the purposes of informing District Councils that the food businesses are producing food to regulatory standards of hygiene, composition, labelling and safety.

The number and scope of foods sampled is considerable and it is reassuring to note that a very high percentage of foods examined have been found to be free from pathogenic bacteria. Evidence from sampling indicates that there are instances of *Listeria* species at low levels in some ready to eat foods and this continues to be monitored.

It is also reassuring to note that the microbiological examination of foods sourced from retail and catering establishments, which continue to form the biggest group of premises sampled, were found to be relatively free from pathogenic or disease producing organisms based on the figures for 2008.

The results of food examination would suggest that there is scope in some cases requiring improvement in relation to the hygienic handling and chill storage of food.

As in previous years it is also apparent that certain groups of food businesses such as manufacturers and manufacturers selling by retail e.g. butchers/bakers, are experiencing difficulties in getting labelling descriptions and declarations on food correct. District Councils continue to work closely with this food sector to support their understanding of the general rules on composition and labelling of food.

Recommendations

The report contains a number of recommendations which deal with matters such as the need for further investigation to better define why certain food types fail microbiological tests and also suggests that there is scope as the database grows to look at evidence of seasonal trends.

The Northern Ireland Strategic Committee on Food Surveillance also noted that the introduction of enhanced food sample coding would also facilitate more detailed evaluation of food sample results.



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Environmental Health Departments in Northern Ireland District Councils - for all their hard work and efforts in getting the data onto the Food Surveillance System.

Members of the Strategic Committee on Food Surveillance- for their time, expertise and guidance in producing this report.

Further Information

If you have any feedback on the structure and content of this report or would like to see additional information in future reports, your comments and observations would be very welcome.

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