



FOOD  
STANDARDS  
AGENCY

NORTHERN  
IRELAND

## Food sampling by Northern Ireland District Councils - 2007 Report



The Northern Ireland Strategic Committee on Food Surveillance is an expert group, established in 2007 to independently evaluate statistical data obtained from the Food Standards Agency United Kingdom Food Surveillance System (FSS (UK)) Database on sampling activities in Northern Ireland.

As this is the first report to use data obtained from the FSS (UK) the focus has been to provide a broad overview of the outcome of microbiological and chemical analysis of food samples. This has enabled, for the first time, a comprehensive insight into food sampling activities within Northern Ireland. It is anticipated that Northern Ireland data provided to the FSS (UK) in future years will enable more focused reports to be produced which can study trends in certain food groups or premises.

The FSS (UK) database was made available to district councils in 2006, through funding from Safefood and began operation on 1 January 2007. By the end of 2007, the database held the results from the analysis of approximately 8,700 food samples taken by district councils.

Based on these sampling results the Committee did not observe any major issues regarding contamination of food with disease causing bacteria, nor were there any incidences where food was found to be potentially hazardous that would have required it to be removed from the market.

This information leaflet represents only a brief summary of the key points of the main report and as such the reader is encouraged to access the full report.

The full report on the FSS (UK) database can be found at:

[www.food.gov.uk/news/newsarchive/2008/dec/niscfsfs](http://www.food.gov.uk/news/newsarchive/2008/dec/niscfsfs)



### Key Findings

During 2007 officers of the district councils visited a range of food premises across Northern Ireland collecting food samples either to support enforcement activities or as surveillance/monitoring. A total of 8649 samples were collected and 68% of these were submitted for microbiological analysis to the appointed Food Examiner with the remainder being submitted to the Public Analyst for chemical analysis.

### Microbiological Examination

The most frequently sampled foods for the purpose of microbiological examination were meat and meat products and prepared dishes. These food types were found to most often fail microbiological tests though not to a level that would be injurious to health.

The discovery of micro organisms indicative of contamination or poor hygiene practices would support the continued sampling of such food products. District councils should implement suitable interventions that would help food business operators achieve better microbiological standards.

### Premises Hygiene Risk Category

The relationship between the premises sampled and their allocated risk category was examined. This revealed that sampling tends to be focused on the higher risk premises as would be expected. However, 337 sample forms did not have a corresponding risk rating assigned to the premises where the sample was collected. The issue of providing assigned risk details with sample information can be addressed through

ongoing training in the use of the database. In addition, 1155 samples were taken from premises with lower risk ratings but with a microbiological pass rate of only 12%. The poor level of compliance with general microbiological testing, although not hazardous, implies unsatisfactory hygiene practices or temperature control of food. Since lower risk rated premises are usually expected to have better food safety management systems, there is scope for further investigative sampling work.

### Premises Type

Comparisons were made between the type of premises from which samples were taken and the levels of compliance with microbiological tests. Findings have shown that relatively few primary producers, packers and import/export premises are sampled for microbiological tests. Such premises although fewer in number have the potential to significantly contribute to the safety of the food supply chain and warrant some extended sampling. The majority of samples were taken from retail and catering premises. The highest rate of unsatisfactory samples occurred in catering premises with the next highest rate observed in retail food premises.

### Food Poisoning Organisms

Food samples were examined to detect the following food poisoning pathogens

- Salmonella
- Campylobacter
- E. Coli 0157
- Listeria
- Clostridium perfringens

The number of pathogens detected was extremely small by comparison with the total number of samples collected during the year. During 2007 no foods sampled were found to contain Salmonella, E-coli 0157, Clostridium perfringens, or Campylobacter organisms. There was evidence of presence of low levels of some Listeria species in ready to eat foods and whilst the levels of these were within safety guidelines their occurrence in food should continue to be monitored.

### Identification of General Hygiene Indicator Bacteria

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



Foods found to contain elevated levels of enterobacteriaceae were:

- Bakery products
- Cakes and confectionery
- Dairy products
- Egg and egg products
- Fish and shellfish
- Fruit and vegetables
- Herbs and spices
- Ice cream and desserts
- Meat and meat products and prepared dishes

But only a small proportion of the above food products had high levels.

### Total Bacteria Count

In addition to conducting tests on food to establish levels of hygiene, tests are conducted to establish the total numbers of bacteria in food sampled. Comparisons of total bacterial counts were examined, and the levels of bacterial loading for each food category were ranked on a grade of 1 to 6. Grade "1" relates to the best and Grade "6" relates to the worst and would generally imply either poor hygiene or temperature abuse. Since some food types were found to have results falling into Grades 4 to 6 enforcement authorities should, as previously stated, implement suitable interventions that would help businesses achieve better microbiological standards for these types of food.

Future Northern Ireland FSS (UK) reports will compare and contrast the microbiology of different foods either pre packed or sold loose.

### Chemical Analysis of Food

Officers also sample food to establish compliance with food legislation in terms of compositional and safety standards and labelling provisions.

Almost half of the chemical food samples submitted for compositional analysis were reported as unsatisfactory. This is partly due to the fact that samples that fail labelling requirements are classified as unsatisfactory.

In respect of the type of foods sampled meat and meat products and prepared dishes formed a significant proportion of foods sampled for analysis as was the case for sampling for microbiological examination.

Food samples that consistently failed requirements for compositional standards and labelling were meat and meat products, prepared dishes, cakes and confectionery products. Any type of labelling irregularity is reported as a sample failure for the purposes of FSS (UK).





“...a very high percentage of ready to eat foods have been found to be free from pathogenic bacteria.”

## Conclusions

Throughout the year considerable resources were spent on food sampling for the purposes of informing the district councils that food businesses are meeting the statutory standards for hygiene and safety in relation to their particular food operations.

The number of foods and ingredients sampled is considerable and it is reassuring to note that a very high percentage of ready to eat foods have been found to be free from pathogenic bacteria. There is evidence of the presence of *Listeria* species at low levels in some ready to eat foods and as such their occurrence in food is being monitored. As the volume of data on the different food bacteria detected in food becomes more readily available it will be possible to look more closely at United Kingdom data to identify trends for which appropriate action can be taken

It is also reassuring to note that the microbiological examination of foods sourced from retail and catering establishments, which form the largest premises category, were found to be free from pathogenic organisms based on the results of sampling work in 2007.

The results of food examination do however indicate that there is scope in some cases for requiring improvement in relation to the hygienic handling and storage of food.

It is also apparent from this analysis that certain groups of food manufacturers and manufacturers selling by retail such as small butchers and bakery shops are making errors in the labelling of food and food ingredients.

Further consideration should be given by district councils to ways in which food business operators can be supported in understanding the necessary details of the labelling rules.

## Recommendations

The report contains a number of recommendations which deal with matters such as frequency of sampling, prioritisation of sampling, training and improvement to the database, and general inspection and interventions that could help improve food sample results.

### With thanks to:

Health Protection Scotland - for their contribution in helping to extract, colate and tabulate primary statistics from the database.

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. Please contact:

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