Food Sampling by Scottish Local Authorities - 2010 Summary Report

FSS UK
Food Surveillance System

Food Standards Agency
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Food sampling is an important tool for ensuring that existing controls in food production are effective in protecting consumers from health risks and fraud.

This report provides a summary of the results of food sampling conducted by Scottish Local Authorities during 2010.

Key Findings

During 2010, officers from Local Authorities visited a range of food premises in Scotland to collect food samples in support of both enforcement and surveillance activities. A total of 10,471 samples were collected and submitted to the Public Analyst Laboratories in Scotland for microbiological examination (56%) and chemical analysis (chemical composition and labelling - 44%).

Samples were collected across a wide variety of food categories and premises type. The most frequently sampled foods were **meat and meat products** (26%) and **prepared dishes** (24%).

The majority of samples were taken from **retailers** (39%), followed by **restaurants and other caterers** (27%) and **manufacturers and processors** (24%).

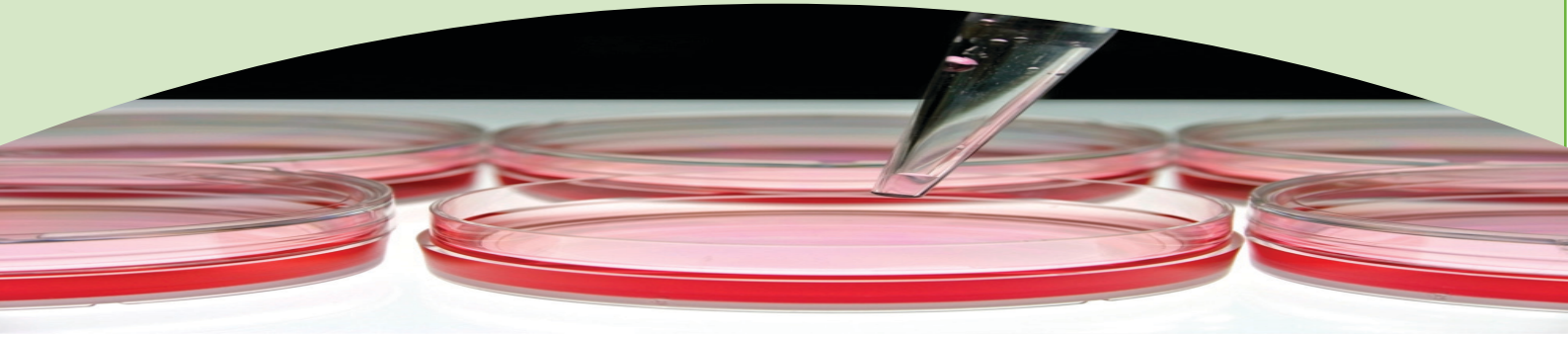
77% of microbiological samples were satisfactory; the majority of samples which did not meet microbiological standards were due to the presence of elevated levels of hygiene indicators (bacteria which can be used as indicators of general hygiene practises in food premises), rather than pathogens. 77% of chemical samples were satisfactory; most of the samples which failed chemical analysis were due to labelling issues, rather than being due to the presence of harmful substances.

Food Sampling in Scotland

Food sampling is an integral part of the food safety enforcement work carried out by Scottish Local Authorities. This report uses data obtained from the United Kingdom Food Surveillance System (UK FSS) which is commissioned, funded and managed by the Food Standards Agency (FSA).

Since 2005, 29 out of the 32 Local Authority Environmental Health Departments and all partner laboratories in Scotland have been using UK FSS routinely for storing sampling and results data, with up to 13,000 samples submitted annually to the central database.

Food samples are taken by Local Authorities during **routine sampling, specific investigations or as part of targeted food surveillance projects**. It is therefore essential to understand that results **are not representative** of the entire food industry in Scotland.



Microbiological Examination of Food Samples

77% of the food samples met the required microbiological standard. The majority of samples that did not meet microbiological standards were reported as failures due to quality rather than safety issues.

The results of microbiological sampling do not reveal any widespread issues regarding the contamination of food with pathogens that could cause illness.

Foodborne pathogens

Food samples submitted for microbiological examination may be tested for presence of the pathogens (illness causing organisms) most frequently associated with food poisoning: Salmonella, Campylobacter, *Escherichia coli* O157*, Listeria monocytogenes, Clostridium perfringens, Staphylococcus aureus* and *Bacillus cereus*.

Examinations of foods tested for the presence of at least one of these pathogens revealed that the number of samples in which pathogens were detected was **small** (76 samples or 1.3%) in relation to the total number of samples submitted for microbiological examination.

Salmonella, Campylobacter and *Escherichia coli* O157 **were not detected** in any of the samples tested.

The majority of microbiological sample failures (53) were due to detection of high levels of *L. monocytogenes* or *S. aureus* in samples of unpasteurised cheeses and smoked fish collected from **a small number** of individual businesses. These results prompted follow-up enforcement action to ensure that public health was protected, with all affected **products being recalled from the food chain for destruction**.

B. cereus was detected at elevated levels in a sample of fresh herbs and *C. perfringens* in canned fish.

Where pathogenic organisms are detected in foods, Local Authority Environmental Health Services take appropriate action to ensure public health is protected at all times.

The results obtained during 2010 have prompted further surveillance of soft and semi-soft ripened cheeses on sale in Scotland. This work will determine the need for future guidance on the production and storage of these products and for advice to consumers on food safety risks.

Identification of General Hygiene Indicator Bacteria

Food samples are also examined for the presence of certain bacteria (such as enterobacteriaceae, non-pathogenic *E. coli* and *Listeria* species), which can be used as indicators of general hygiene practices in food establishments.

The presence of elevated levels of hygiene indicators in food products is indicative of **poor hygiene practices during food preparation and handling, such as cross-contamination** and/or **poor temperature control**.

A small proportion of ready-to-eat food samples were found to contain high levels of hygiene indicators. These were non pre-packed foods and included ice-creams, unpasteurised cheese, sandwiches, cooked meats and poultry and take-away meals.

Food enforcement officers will take appropriate action whrere sample results are not considered to be satisactory and will continue to work closely with industry to improve general hygiene practices in relation to these products.

Total Bacterial Counts

In addition to microbiological food safety tests, the Food Examiner determines the total number of bacteria on a food sample. High bacterial counts in ready-to-eat-foods could reflect some or all of the following:

- Poor temperature control;
- Poor handling practices;
- Inadequate cooking.

Samples of ready-to-eat foods were **generally satisfactory**, however, higher levels of bacteria were observed in some samples of cooked meats and poultry and sandwiches. Again, the majority of these samples were products that were non pre-packed, or packed at the retailer's own premises, suggesting issues with temperature control during storage and handling.

Food enforcement officers will take appropriate action whrere sample results are not considered to be satisactory and will continue to work closely with industry to improve general hygiene practices in relation to these establishments.

Chemical Analysis of Food

Scottish Local Authorities collected 4608 samples which were analysed for chemical composition and labelling. Overall, 77% of samples were reported as satisfactory. It is worth highlighting, incorrect **labelling constituted the majority of chemical samples which were not considered to be satisfactory**.

Food samples may be subjected to a range of analyses that includes:

- **Constituents** and **nutritional components** - assessment of the accuracy of labelling information or compliance with legislation relating to nutrition or composition of food. The main issues related to labelling inaccuracies in the declaration of meat contents, fat levels and sugar levels in products.

- **Substitution** – evaluation of the authenticity of the product, and whether the food is correctly described and labelled. The main issues related to beef and/or pork being found in meat products and take-away meals labelled or described as lamb.

- **Undesirable Substances** - includes testing for the presence of antibiotics, heavy metals, pesticides and mycotoxins. The main issue was elevated levels of mycotoxins found in several samples of cereal products, herbs and spices.

- **Additives** - includes testing for 'Flavour Enhancers', 'Colouring Matter', 'Sweeteners' and 'Preservatives'. The main issues were artificial colours above the maximum permitted level found in nine samples (Indian-style take-away meals, sauces and spice mixes and ethnic confectionery), and preservatives above the maximum permitted level found in 25 samples (sausages, burger, bacon and gammon, potato chips, langoustine, soft cheese, meat in tapas). In addition, seven samples (smoked salmon, mince and ethnic cake) were found to contain non-permitted or undeclared preservatives.

Food enforcement officers will take appropriate action where sample results are not considered to be satisfactory and will continue to work closely with industry to ensure compliance with the food composition and labelling legislation.

Conclusions

Throughout the year extensive resources were used in collecting, submitting and analysing foods sampled for the purposes of informing Scottish Local Authorities on whether food sold in Scotland meets the regulatory standards of safety, hygiene, composition and labelling.

It is reassuring to note that a very high percentage of foods sampled in Scotland across a wide range of foodstuffs **were found to comply with food safety and standards legislation**. Very few samples were found to present an immediate risk to human health, and in all of these cases the relevant Environmental Health Services took appropriate action to ensure public health was protected.

It is essential to recognise that the information obtained from food sampling activities provides significant cost benefit outcomes by early detection of emerging risks or trends in food safety.

The UK FSS plays an important role in providing data to aid the Scottish food law enforcement community and the FSA in developing targeted sampling programmes.

Targeted sampling programmes

Specific issues were identified from the 2010 data regarding the microbiological quality of potted meats, soft and semi-soft cheeses and vegetable salads. Food standards issues highlighted were substitution in meat dishes in restaurants and take-away establishments and levels of nitrate in meats cured by various methods. The Scottish Food Enforcement Community is taking forward surveys in these areas to improve our knowledge of these issues and highlight any action required.

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