

LOCAL HEALTH AUTHORITY ANALYTICAL COMMITTEE
SAUSAGE AND MINCE SURVEY
DECEMBER 2010

Background

Changes to the sampling protocols of the Local Health Authorities Analytical Committee (LHAAC) have seen the Revised Sampling Scheme (RSS) be replaced by a Coordinated Sampling Scheme.

The first target area of the Committee was a sausage and mince survey which was conducted in the 1st and 2nd quarter 2010/11. All samples were sent to the Inman & Farrell analytical laboratory in Bibra Lake for analysis. Inman & Farrell have prepared this report for the use of the LHAAC. Further reports will be prepared for the other surveys that have been initiated by the Committee.

Consignment Details

Local Councils were encouraged to sample both sausages and mince meat and send them to Inman & Farrell. At the end of the survey, 86 sausage samples had been submitted by 37 participating municipalities. A further 111 mince samples were submitted by 35 participating municipalities. Many of the participants submitted both sausage and mince samples (see Appendix 1).

Testing Methodology

Sausage Samples

If the sausage product came with a supplied Nutritional Information Panel, then the information on the NIP was compared to the Inman & Farrell laboratory results. If the protein, fat energy, sodium or total meat content of the tested product was at least 20% worse than what was declared on the NIP label, then the results were flagged on the test report.

If the sausage samples did not contain a NIP from the supplier, then the main area of focus in the laboratory was on:

- sulphur dioxide
- the proportion of meat in the sausage;
- and the ratio of total fat to meat content.

Mince Samples

All mince samples had a spot test for Sulphur Dioxide, Formaldehyde, Vitamin C and Starch. If the packaging on the mince claimed the product to be 'low fat' or 'heart smart' then a fat test was also conducted to ensure that the total fat content was below the 10% for low fat products.

Test Results

Sausages

Of the sausage samples submitted, 23 came declared with a NIP. The comparison between declared results and those analysed by Inman & Farrell are presented below:

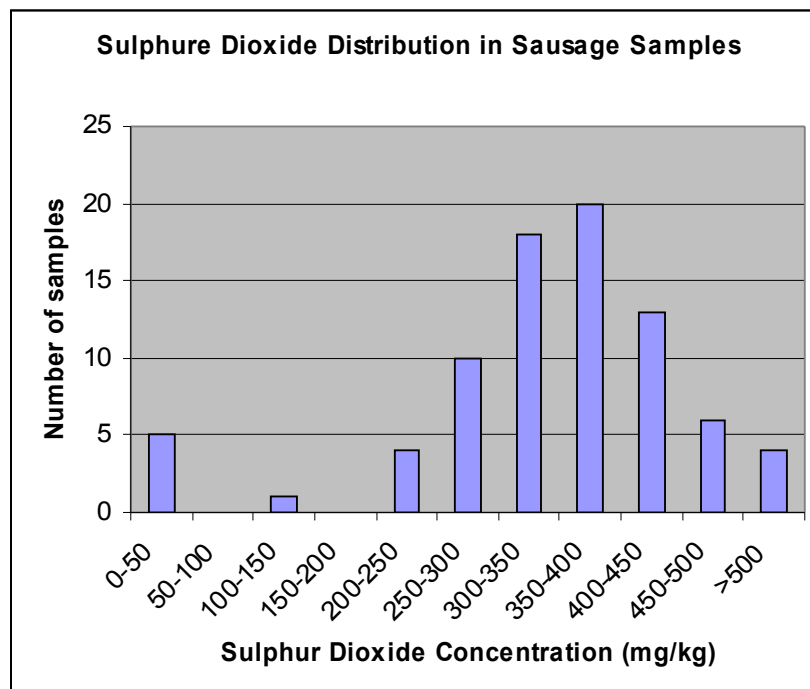
| Nutritional Information Panel | Protein (g/100g) | Fat (g/100g) | Carbohydrates (g/100g) | Energy kJ/100g | Sodium (mg/100g) | Total Meat Content (%) |
|----------------------------------|------------------|--------------|------------------------|----------------|------------------|------------------------|
| Declared Result | 14.3 | 15.5 | 1.0 | 904 | 818 | 69.5 |
| Laboratory Test Result | 14.2 | 13.9 | 0.6 | 894kJ | 719 | 80.3 |
| Number of non compliant samples* | 1 | 7 | NA | 10 | 3 | 0 |

* A non compliant sample is one where the declared result on the NIP is at least 20% less favourable than the result measured by Inman & Farrell.

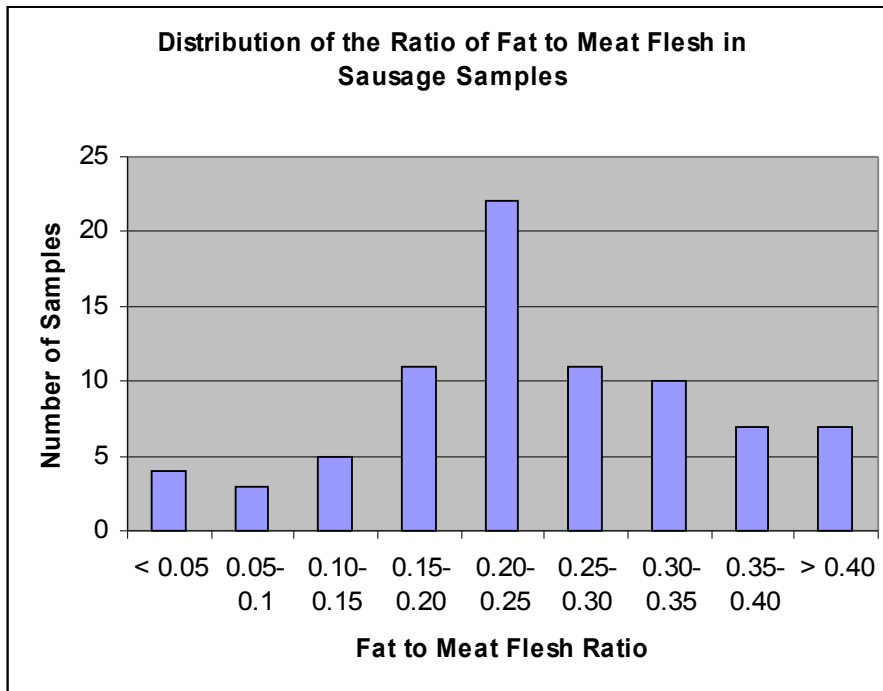
Of the sausage samples that did not come with a declared NIP, the main area of focus was the following:

- Presence of Sulphur Dioxide at concentrations greater than 500 mg/kg.
- Ratio of fat to free meat, with a maximum ratio of 0.5.
- Proportion of meat flesh, on a fat free basis with a minimum of 50% deemed acceptable.

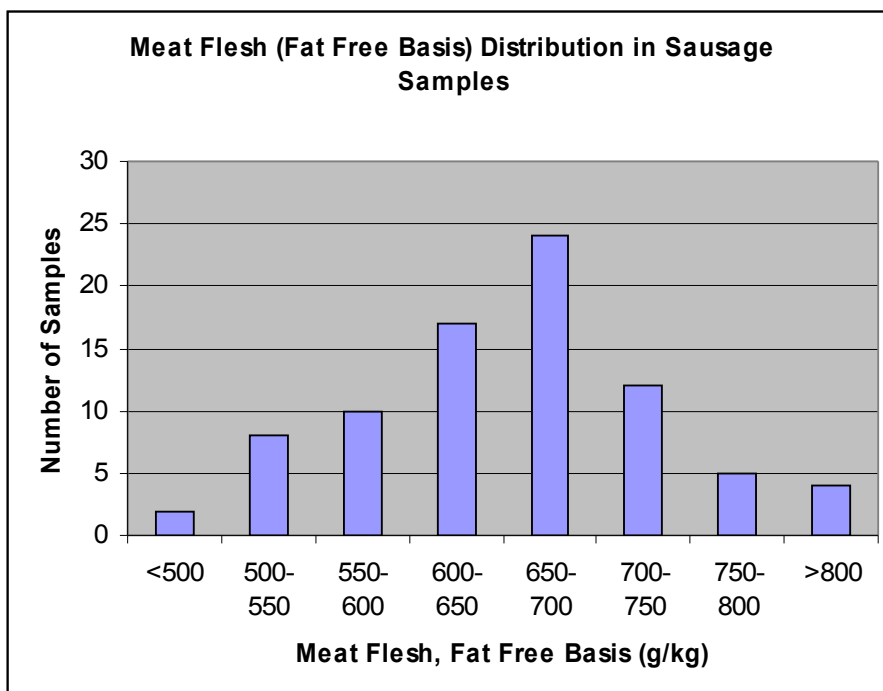
A total of 4 samples, or 4.6% of all sausages tested, had a sulphur dioxide concentration greater than 500 mg/kg. A further 2 samples were right on the limit of 500 mg/kg. The distribution of sulphur dioxide concentration in all samples tested can be seen in the graph below:



In terms of the ratio of fat to meat flesh, all 86 samples met the criteria of less than 50% fat to meat flesh content. The distribution of test results can be seen below:



There is also a requirement for sausage products to contain at least 50% meat flesh on a fat free basis. Of the 86 sausage samples analysed, only 2 failed to meet this criteria. There were a further 8 samples that were between 50-55% meat flesh as is shown below:

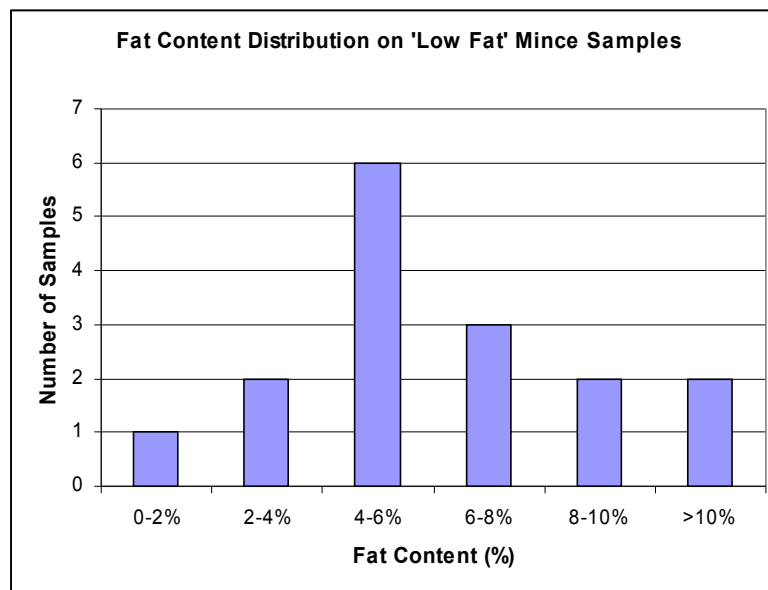


Mince

As mentioned earlier, spot tests for Sulphur Dioxide, Formaldehyde, Vitamin C and Starch was the main focus of the analysis of mince samples. For the relatively small number of products declared as low fat, further laboratory work was required.

Formaldehyde, Vitamin C and Starch were not detected in any of the 111 mince samples analysed. However, Sulphur Dioxide was found in 8 samples representing 7.1% of all mince products tested.

Of all samples received, 16 samples were marked as 'Low Fat' or 'Heart Smart'. To label a product in this way requires the fat content to be below 10%. Two of the samples analysed contained an average fat content of greater than 10% with a maximum result recorded of 13.5% fat. The average fat of all 16 samples was 6.6% and the graph below shows that most products comfortably met the 10% limit:



Further analysis

If required, Inman & Farrell are happy to provide further data analysis to the LHAAC on the results of the sausage and mince survey. Further reports will also be made available on the other surveys that are being conducted in 2010/11.

Appendix 1: Number of Samples submitted by participating Local Councils

| Council | Number of Samples: | |
|---------------------|--------------------|-------|
| | Sausages | Mince |
| Armadale | 4 | 4 |
| Bayswater | 1 | 3 |
| Belmont | 1 | 1 |
| Beverley | 1 | |
| Brookton | 1 | |
| Bunbury | 1 | 1 |
| Busseton | 1 | 1 |
| Canning | 1 | 9 |
| Capel | 2 | 2 |
| Claremont | 1 | |
| Cockburn | 2 | 4 |
| Collie | 3 | 4 |
| Cottesloe | | 2 |
| Cunderdin | 2 | |
| Dandaragan | | 1 |
| Donnybrook/Balingup | | 2 |
| Esperance | 3 | |
| Exmouth | 1 | |
| Fremantle | 2 | 2 |
| Gosnells | 2 | 2 |
| Harvey | 2 | 5 |
| Irwin | | 2 |
| Joondalup | 5 | 3 |
| Kalamunda | 1 | 2 |
| Kalgoorlie/Bolder | 3 | 11 |
| Katanning | 1 | |
| Kojonup | | 1 |
| Kwinana | 2 | 2 |
| Mandurah | 2 | 1 |
| Melville | 4 | 2 |
| Mundaring | | 3 |
| Murray | 1 | |
| Nedlands | 1 | 1 |
| Northam | | 2 |
| Peppermint Grove | 3 | 2 |
| Perth | 10 | 4 |
| Pingelly | 1 | |
| Plantagenet | | 3 |
| Port Hedland | | 2 |
| Rockingham | 2 | 2 |
| Roebourne | 1 | 1 |
| Stirling | 3 | 1 |
| Subiaco | 1 | |
| Swan | 4 | 9 |
| Victoria Park | 8 | |
| Vincent | | 10 |
| Wanneroo | 2 | 4 |