

Testing for the verification for the presence of undeclared meat species and allergens in lamb products from takeaway outlet

Summary

1. In April 2014 Which? published the results of a survey which found that of the 60 lamb takeaways (lamb curry and lamb kebab) sampled in Birmingham and London, 24 contained meat of species other than lamb. Kebabs were the main problem area with 20 of the kebab samples found to have beef and/or chicken present and in some cases as a major part of the product i.e. levels above 60%.
2. In response to the on-going concerns about lamb substitution, the FSA carried out priority testing of lamb takeaway dishes from businesses across the UK. The Link to the FSA news story can be found at: <http://www.food.gov.uk/news-updates/news/2014/6031/testing> and is also attached in Annex 1.

Survey requirements and overall approach

3. In April 2014 the FSA announced an additional programme of priority local authority (LA) testing of lamb dishes from takeaway restaurants across the UK. These were carried out, and funded, as a specific part of the 2014 -15 National Food Sampling Programme. From the samples allocated to this priority, 307 were allocated for lamb takeaway meals (curries and kebabs), with a specific UK-wide sampling plan for officers to follow that will be generally representative of the UK market. The sampling plans which provided further details on what samples were required, can be seen in Annex 2 Figures 1 and 2.
4. Under EU Regulation 178/2002, it is the responsibility of food businesses to make sure the food they produce and sell is both safe and accurately described. Labelling law requires that the name of food should not be misleading – the name of the food on the menu should be accurately described. It is against the law to mislead consumers and fines can be imposed of up to £5000.
5. If samples have been found to contain peanuts or nuts, and if it was requested that they be made without these ingredients, there will be possible offences under The Food Safety Act 1990

Sampling

6. A total of 307 samples of lamb-based takeaways dishes were collected as single official control samples¹, and taken according to the Food Law Code of Practice by suitably qualified officers. These samples were final products intended for immediate consumption.
7. Samples were taken from a range of takeaway outlets providing different cuisines (including Indian, Kebab shops and oriental food premises i.e. Chinese, Malaysian) offering lamb takeaway dishes. The table below shows the range of products tested.

Table 1

Type of product sampled	No of samples
Indian Style Takeaway Meals	204
Lamb Kebabs	48
Other Style Takeaway Meals	25
Oriental Style Takeaway Meals	21

¹ In accordance with Section 6.1.6 of the Code of Practise

<http://food.gov.uk/enforcement/enforcework/food-law/code-sampling/61/#6.1.6Divisionofsamplesforanalysis>

Restaurant Meals	4
Burgers	2
Cooked Lamb	2
Takeaway Meals - British/American Style	1
Grand total	307

8. The participating group of LAs and the number of samples allocated are listed in Figures 1 and 2 of Annex 1. The total numbers of samples were split between the groups so they were proportional to the number of all takeaway establishments for the region covered by the group of LAs. The number of samples to be taken within each group was also split between the FHRs ratings (FHIS for Scotland). The FHRs tiers have been grouped as follows: 0-2, 3, 4-5 and unrated and were split in proportion to the number of takeaways for each grouped FHRs rating within each region.
9. For dishes made with sauce, sampling officers requested at the point of ordering the meal, whether peanuts or nuts were an ingredient in the meal and if they were whether the meal can be made without peanuts or nuts. If this was possible these samples were also analysed for undeclared allergens.

Analysis

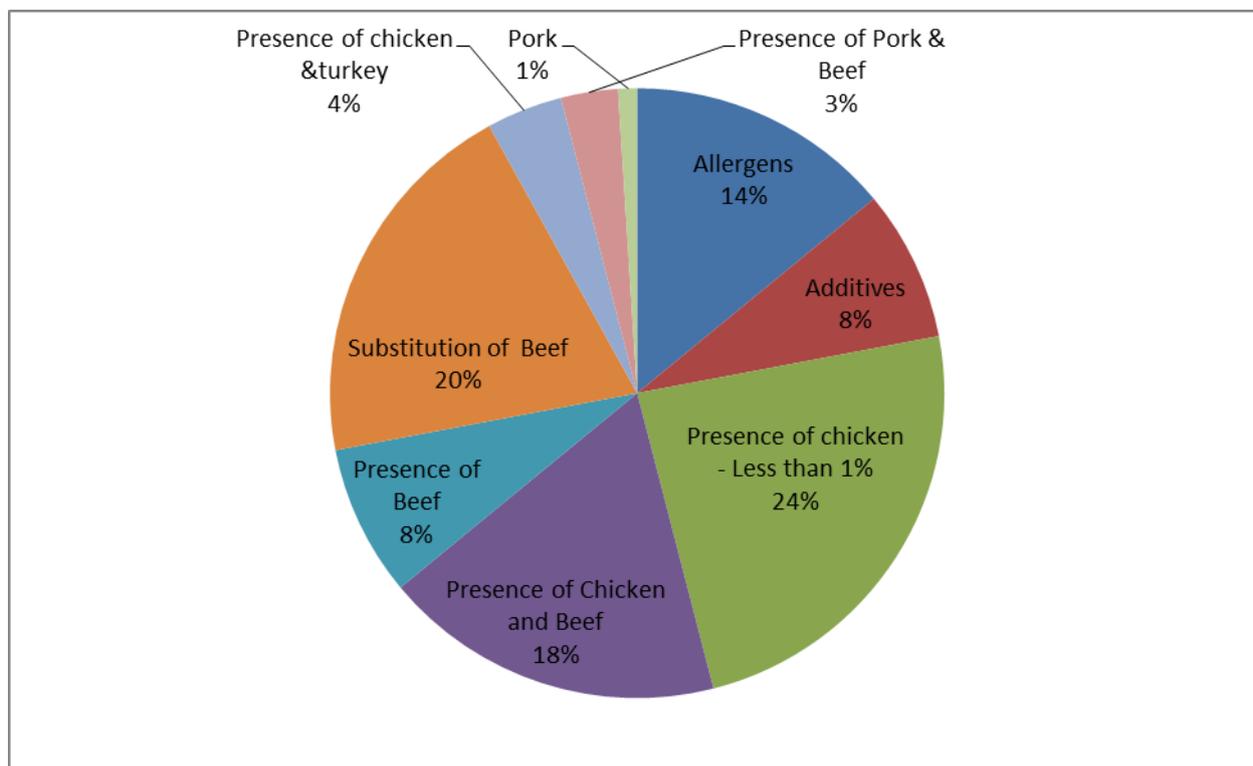
10. Samples were analysed for meat speciation and, where made with a sauce they were also analysed for undeclared allergens (primarily peanut and nut powders).

Results

11. Of the 307 samples submitted 73% were compliant. Of the 84 samples that failed 77% failed for the presence of non-declared meat (however as you will see from the table below 35% of these were found to be below the 1% threshold).
12. 164 samples were dishes made with a sauce and were subsequently tested for allergens. Of these samples 7% were found to be non-compliant due to the presence of allergens (which represents 22% of the total non-compliance figure). A more detailed breakdown of the non-compliance can be seen below:

Table 2: Breakdown of non-compliances

13. looking at the overall non-compliance the pie chart below demonstrates the contribution from various food issues



Conclusion

14. A 1% threshold limit was agreed in line with the horsemeat incident as a pragmatic threshold to distinguish between adventitious contamination and gross adulteration. To support consistent enforcement approach with Local Authorities we kept the 1% threshold limit and requested they take a pragmatic view, and that they talk with the companies including about traceability of the products to decide whether they believe this to be cross contamination or deliberate adulteration. 23 samples were found to contain less than 1% substitution with other meat and were therefore considered to be due to poor handling practises rather than deliberate inclusion and advice has been given to the FBO.

14. Of the remaining 42 samples that were found to contain undeclared meat above 1%, 12 and 7 samples were found to be non-compliant for the presence of undeclared allergens and additives respectively.

Allergen

15. Looking at samples where undeclared peanut and almond protein were found in products and information provided at point of sampling, full risk assessments were performed on peanut and tree nut positive samples;

- 2.5 – 41.8mg/kg peanut protein: Based on a 500g portion - Levels of peanut protein found are sufficient to elicit a reaction in those with an allergy to peanut.

- 11mg/kg almond protein: Based on a 500g portion - Levels of almond protein found were sufficient to elicit a reaction in those with an allergy to almond and other tree nuts
 - Levels of peanut and almond were indicative of low level cross contamination either from the ingredient used or from within the kitchen during the preparation and cooking of the food. Where meals were described as peanut free or nut free, the presence of peanut or almond protein would not fulfil this claim.
16. From these results we have not seen examples of adulteration of nut powders, though low levels of cross contamination were evident from within the catering kitchen. When making claims that a meal of free from a particular allergen it should be exactly that, free from. Businesses may wish to choose to indicate that a meal cannot be guaranteed free from, but all care should be taken to manage cross contamination during the preparation and cooking of the meal. Some of the dishes sampled were 'marketed' as free from nut or peanut when asked and subsequently had been found to contain low levels of peanut sufficient to elicit allergic reactions in those with peanut allergy.
17. The testing for undeclared allergens, allergen management & knowledge and the use of nut powders in food remains a priority for the 2014-15 National coordinated food sampling programme.

Additives

18. In looking at the results concerning the non-compliant samples for additives the FSA identified that both colours (E 110 Sunset Yellow and E 124 Ponceau 4R) are permitted food additives within EU food additive Regulations, but have restrictions on their use.
15. Up until 31st May 2013 both colours were permitted in sauces at 500 mg/kg. Following a programme to re-evaluate all food additives, carried out by EFSA, a number of amendments were made to the foods that were permitted to contain the two colours, and the maximum levels in those foods. Part of the amendment included withdrawing the permission for E 110 and E 124 in 'sauces' (which includes curry sauces). Both colours are however still permitted in a wide variety of other foods and drinks at reduced maximum levels. The levels found in sauces in this survey were found within a range of 3-167 (mg/kg), which all appear to be a breach of the current legislation, but none would have breached the 500 mg/kg limit in the legislation pre 31st May 2013.
16. The Acceptable Daily Intake (ADI) for an additive is the amount of that substance that can be consumed daily over a lifetime without any appreciable risk to health. It is unlikely that the ADI for Ponceau 4R or Sunset Yellow would be breached following consumption of one of these curries at the levels detected. The fact that the previous legal limit for Ponceau 4R in sauces has not been exceeded is not a useful indicator of safety however, because the ADI has been revised downwards since this legal level was set.
17. Sunset yellow: the highest level of sunset yellow in this product was 45 mg/kg. In order for a 78kg adult to exceed the ADI, they would need to consume nearly 7kg of sauce which is extremely unlikely.
18. Ponceau 4R: the highest level of Ponceau 4R detected was 167mg/kg. This was significantly higher than other samples. A 78kg adult would have to consume approximately 330g of this product to reach the ADI. This is quite a lot but is not impossible on a one-off basis but unlikely on a daily basis. A one off or infrequent exceedance of the ADI is unlikely to result in adverse effects; therefore we would not expect adverse results from the consumption of this product.
19. In summary, short term consumption of this product would not be expected to result in adverse health effects.
20. From the results of this survey it is apparent that some takeaway outlets are not complying with current legislation. During the negotiations on the change to the legislation FSA has kept industry and Enforcement Authorities informed, and following its adoption into law we informed them of the changes

to the legislation, specifically highlighting the removal of the authorisation to use the colours in sauces and asked them to work with caterers to flag these changes.

21. This is also a priority of the national coordinated food sampling programme for 2014-2015 and the FSA have requested that both of these colours to be included (specifically checking for them in sauces used in restaurants and takeaway outlets). This sampling programme will provide us with intelligence on whether further work is needed to improve compliance with the new legislation.

Enforcement

19. If a food does not satisfy legal requirements, enforcement authorities have the power to seize and detain in accordance with the Food Safety Act (1990) and then take the necessary action to protect the food chain. For any non-compliant sample taken as part of this survey it was expected that these samples be dealt with in accordance with the FSA Code of Practice on food law enforcement.
20. The FSA has been working with Local Authorities who are carrying out appropriate and consistent enforcement action, to ensure corrective action is taken. A range of enforcement action took place with respect to the samples found to be unsatisfactory, summarised in the table below.

Table 3: Breakdown of follow up action

Description of follow up action taken	Incidence of follow-up action taken
Below 1% - considered to be due to poor handling practises rather than deliberate inclusion. Advice given to FBO	23
Investigation on-going	11
Investigation on-going - Discussion with FBO and follow up sample taken	8
On-going investigation (looking into Supply chain and PACE Interview to be carried out)	7
Incidents notification	6
Advice given, possible follow-up samples at a later date	5
Further investigation at premises which includes investigation into supplier	3
Written warning, advice provided and follow up sample to be taken	4
FBO to be interviewed under PACE	4
LA investigation and looking to formal action and organising interview under PACE	2
Letter to premises and follow up investigation	2
FBO interviews and departmental caution issued	1
Written warning - Cross contamination issue has been addressed	1
Further investigation at premises which includes investigation into supplier. FBO has now changed their supplier	2
Instigation carried out by LA with retailer into the traceability of their suppliers and menu has been changed to state exact type of meat	1
Investigation and written warning. FBO since amended menu description	1
Investigation carried out and FBO to provide more accurate labelling	1
Investigation carried out by LA and The FBO has been advised that follow up action will be carried out to assess compliance and any related failures are likely to be addressed with formal enforcement measures. A revisit and follow up sampling is already planned.	1
Sample taken from a new business and results communication and	1

discussed with business as part of investigation	
Total	84

Overall conclusions

21. The majority of the samples taken as part of this survey were found to be compliant and the information gathered from this programme has provided a beneficial insight. It is supporting enforcement officers as they raise awareness amongst food businesses of the action they face for defrauding consumers. The results are also informing future work and surveillance of takeaway products which will continue as part of local authority sampling programmes.

Annex 1 - Press release

Local authorities to test for lamb meat substitution

The FSA has today announced an additional programme of priority testing of lamb dishes from takeaway restaurants across the UK following evidence of ongoing substitution of lamb for cheaper meats such as beef and chicken. Businesses could face prosecution if food is found to have been deliberately mislabelled.

An FSA review of local authority sampling data, from July to December 2013, found that 43 out of 145 samples of lamb takeaway meals contained meat other than lamb. In total, 25 of these samples were found to contain only beef. Other meat species identified included chicken and turkey. No samples were found to contain horse meat.

In response to the ongoing concerns about lamb substitution, the FSA is starting a further round of priority testing of lamb takeaway dishes from businesses across the UK. Local authorities are being asked to test 300 samples from takeaway restaurants and report the findings to the FSA. Sampling will start at the beginning of May. The mislabelling of food can result in fines of up to £5,000.

The concerns identified in the local authority data are also reflected in a survey of lamb dishes from restaurants in Birmingham and London released today by Which? the consumer organisation purchased 60 lamb takeaways, 30 curries and 30 minced lamb kebabs, of which a total of 24 were adulterated with beef and chicken.

Andrew Rhodes, Chief Operating Officer at the FSA, said: 'Substitution of lamb for cheaper meats in takeaway food, as seen in our own data and the survey released today by Which?, is unacceptable and we are working closely with local authorities to ensure robust action is taken against any businesses misleading their customers.'

'Prosecutions have taken place against business owners for mislabelling lamb dishes, but the recurring nature of the problem shows there needs to be a renewed effort to tackle this problem. Clearly the message isn't getting through to some businesses.'

'The further priority testing we have announced today will focus the efforts of enforcement officers and raise awareness amongst food businesses of the action they face for defrauding consumers.'

Following the completion of the priority testing programme, authenticity testing of takeaway lamb dishes will continue as part of local authority sampling programmes

NATIONAL CO-ORDINATED FOOD SAMPLING PROGRAMME 2014-15

Lamb substitution in takeaway meals - protocol

Please note: This protocol outlines the sampling procedures to be undertaken by local authorities.

Overview

Study aim	Testing for the verification for the presence of undeclared meat species and allergens in lamb products from takeaway outlets.
Sampling period	May 2014 – July 2014
Sample type	Single Official Control samples
Sampling location	Takeaway Catering establishment
Survey code	LAMBTAKE14
Sample weight	Minimum of 200 grams of meat
Information to be gathered	Make sure all the relevant fields within UKFSS are filled. Name of dish on menu. Name of business and address For any products <u>bought in please place brand name details under the brand name field and a brand contact email addresses names and phone numbers should be added under the additional information field in the COP menu</u>
Sampling procedure	Equipment needed: Plastic bags, suitable plastic containers, labels, security seals, cool box, and frozen ice blocks.

Background legislation

Under EU Regulation 178/2002, it is the responsibility of food businesses to make sure the food they produce and sell is both safe and accurately described. Labelling law requires that the name of food should not be misleading – the name of the food on the menu should be accurately described. It is against the law to mislead consumers and fines can be imposed of up to £5000.

Try to include as wide and representative a sample range as possible in terms of different product types

If samples have been found to contain peanuts or nuts if requested to be made without these ingredients, there will be possible offences under

- The Food Labelling Regulations 1996; (up to 12 December 2014)

1. Organisation of the study

1.1. A total of 300 samples of lamb-based takeaways' dishes will be collected. Samples will be single official control samples, and not 3 part formal samples², and taken according to the Food Law Code of Practice code of practice by suitably qualified officers. Samples will be obtained from a variety of takeaways' premises and submitted to your appointed Public Analysts.

2. Samples

2.1. Samples should be taken from a range of takeaway outlets providing different cuisines (including Indian, Kebab shops and oriental food premises i.e. Chinese, Malaysian) offering lamb takeaway dishes. They should be analysed for meat speciation and undeclared allergens (primarily peanut and nut powders e.g. curry dishes made with a sauce – such as tikka masala, pasanda, Badami - where nut powders or whole almonds are used to thicken the sauce or whole as an ingredient). We would like the study to comprise of the final product intended for immediate consumption.

2.2. Products to target: Samples should be sourced containing and labelled as wholly lamb and/or mutton. We do not want mixtures, or likely mixtures, of meat species. Nor do we want doner kebabs³ unless they are labelled as lamb doner kebabs. If during the visit, there are concerns about meat of indeterminate/unlabelled species, then this may also be sampled as part of the general meat authenticity priority within the Sampling Programme - NOT as part of the lamb takeaway survey.

2.3 Samples should be collected as part of the National Co-ordinated Sampling Programme during the first quarter by the LAs who are parts of the Regional group bids throughout the UK. The participating group and the number of samples allocated are listed in Figures 1 and 2. The total numbers of samples have been split between the groups which are proportional to the number of all takeaway establishments for the region of which the LAs within the groups lie. The number of samples to take within each group has been split between the FHRS ratings (FHIS for Scotland). The FHRS tiers have been grouped as follows: 0-2, 3, 4-5 and unrated. The samples allocated have been split in proportion to the number of takeaways for each grouped FHRS rating within each region. As we cannot specify which LA to sample based on the data available, each group will have to decide how to allocate its samples.

2.4. **Allergens** At point of ordering the meal, ask if peanuts or nuts are deliberate ingredients in the meal.

2.4.1. If yes, ask whether the meal can be made without peanuts or nuts. If that is possible, then order and send the sample to be tested for undeclared allergens. If not, then order but no test for allergens is needed.

2.4.2. If no peanut or nut ingredients are added, then order and send the sample to be tested for undeclared allergens.

3. Business to target

² In accordance with Section 6.1.6 of the Code of Practise

<http://food.gov.uk/enforcement/enforcework/food-law/code-sampling/61/#6.1.6Divisionofsamplesforanalysis>

³According to LACORS report from 2009: **Product name and meat content:** There is no legal definition of a 'doner kebab', which literally means 'turning roast'. There is the view that a product named simply 'doner kebab' should contain only lamb or mutton. "Doner Kebab" without qualification can be considered to be a customary name for a sheep meat product. A customary name is a name which becomes, and therefore accepted as, the name of the food without needing further explanation. Therefore, where products are named simply 'doner kebab' on the product label supplied by the manufacturer then they should contain only lamb or mutton unless further clarification is provided

3.1. **Catering outlets:** this should include a range of takeaway establishments offering lamb products.

4. Collection of the sample

4.1. For the purposes of this study, we would like you to purchase product containing at least 200g of meat for each sample, one meal is likely to be sufficient for 1 sample.

4.2. When collecting the sample we would appreciate it if you could confirm whether the product was made on site or whether it was bought in. If so, then see point 5.2.

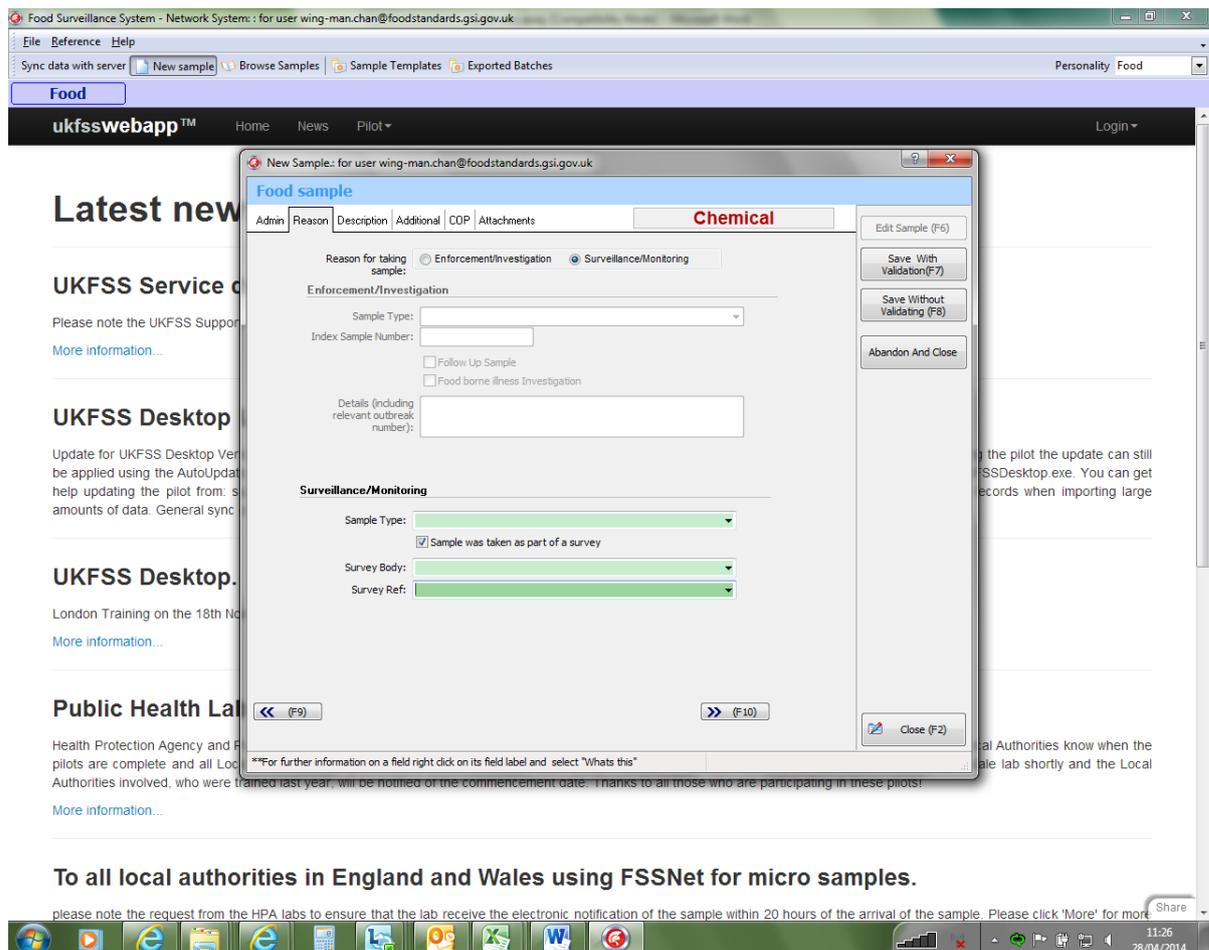
4.3. We would request that all samples be bagged “as served”, chilled and stored frozen (at -18°C or colder), until all samples have been taken. Samples should be transported in a cool box, packed with frozen ice blocks, from the outlet to the LA office / laboratory.

5 Recording Sample information

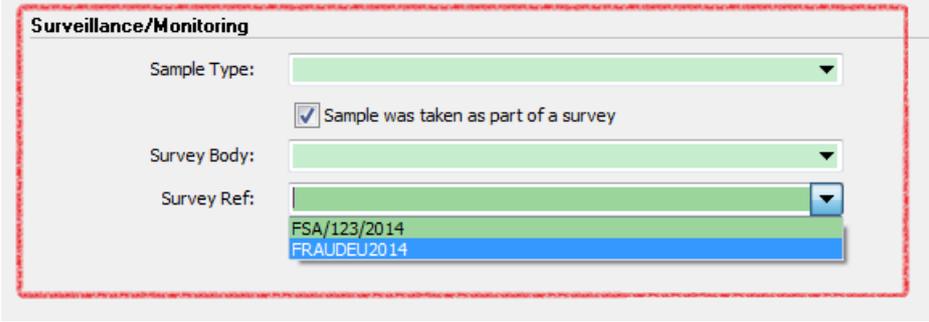
5.1 Data shall be uploaded onto UKFSS and the following survey code shall be added; **LAMBTAKE14**

5.2 **For those samples bought in please place brand name details under the brand name field and a brand contact email addresses names and phone numbers should be added under the additional information field in the COP menu - see below.** Photocopies or / digital photos of the product’s labelling should be taken and retained on local authority systems. These can be uploaded onto UKFSS version 9.

5.3



5.4 Data shall be uploaded onto UKFSS and the following specific code for this EU survey, 'Survey ref' shall be added: **LAMBTAKE14**. **Cut and paste this code into your optional look up lists and it will appear in the drop-down as shown below in the 'Reason tab' for sampling menu screen.**



The screenshot shows a web form titled "Surveillance/Monitoring". It contains several fields: "Sample Type" (a dropdown menu), a checked checkbox labeled "Sample was taken as part of a survey", "Survey Body" (a dropdown menu), and "Survey Ref" (a dropdown menu). The "Survey Ref" dropdown is open, displaying two options: "FSA/123/2014" and "FRAUDEU2014". The "FRAUDEU2014" option is highlighted in blue. A red dashed rectangular border is drawn around the "Survey Ref" field and its dropdown menu.

5.5 **If you are a version 9 user you will be expected to upload test certificates into UKFSS DESKTOP by adding attachments. Non-Version 9 users should send the certificates to the FSA to standards.support@foodstandards.gsi.gov.uk**

5.6 The final reporting level for positives however, remains at 1%.

6 Analysis

6.1 Analysis will be carried out by your appointed public analyst. Tests for allergens should be able to detect and quantify allergenic protein (to determine level of contamination). Tests for meat speciation should cover the main meat species (including ovine, bovine, porcine, chicken, horse, and goat) and quantify any undeclared species over 1%.

7 Timescales

7.1 All samples should be taken in the first quarter of the sampling programme (May-July 2014).

8 Invoices

8.1 The cost of sampling and analysis will be paid by the FSA as part of your grant award for the National Co-ordinated Sampling Programme.

9 FSA Expectations for samples positive

9.1 The FSA should be notified of non-compliant samples by filling in an Incident Report Form (see the link: <https://incidents.foodapps.co.uk/IncidentReportForm/login.aspx>).

9.2 Where food fraud is suspected then the FSA Fraud Food Team should also be notified (see the link <http://food.gov.uk/enforcement/enforcework/foodfraud/foodfrauddatabase>)

9.3 The FSA expects robust action to be taken for those samples found to contain undeclared meat above 1% w/w, using the hierarchy of enforcement.

Figure 1: Number of samples to be taken for each Group in England, Wales and Northern Ireland, broken down by grouped FHRs ratings.

Region	Group	FHRs Rating 0-2	FHRs Rating 3	FHRs Rating 4-5	Unrated	Total
E	East of England Trading Standards Association	4	5	13	0	22
EM	Trading Standards East Midlands Group (TSEM)	4	5	13	1	23
LDN	London FG	10	11	15	1	37
NE	North East Food Group	2	3	6	0	11
NE	Tees Valley Food Liaison Group and River Tees Port Health Authority	1	1	2	0	4
NI	Northern Ireland Food Liaison Group	1	2	5	0	8
NW	Trading Standards North West Regional Group	8	12	21	1	42
SE	Trading Standards South East (TSSE)	6	7	17	1	31
SW	SWERCOTS	2	4	13	1	20
WA	Glamorgan Food Group (Trading Standards)	1	1	2	0	4
WA	North Wales Food and Metrology Panel	2	2	6	0	10
WM	CENTSA	5	7	11	1	24
YH	Yorkshire and the Humber Trading Standards Group (YAHTSG)	7	7	19	1	34
Total		53	67	143	7	270

Figure 2: Number of samples to be taken for each Group in Scotland, broken down by FHIS ratings.

Region	Group	FHIS – Improvement necessary	FHIS – Pass	Unrated	Total
SC	Lothian & Borders Food Liaison Group Scotland	5	6	1	12
SC	North of Scotland Food Liaison Group Scotland	2	4	0	6
SC	Tayside & Fife Group	3	9	2	14
Total		10	19	3	32

Annex 3

Local Authority	No of Samples taken
Aberdeen City Council	2
Aberdeenshire Council	2
Barnsley Metropolitan Borough Council	5
Blaenau Gwent Borough Council	5
Bolton MBC	4
Buckinghamshire County Council	1
Cheshire and West Chester Council	4
City of Glasgow Council	7
City of London Council	2
City of York Council	4
CLACKMANNANSHIRE	4
Conwy County Borough Council	2
Cornwall County Council	3
Coventry City Council	3
Craigavon Borough Council	2
Cumbria County Council	1
Devon County Council	3
Doncaster Metropolitan Borough Council	1
Dorset County Council	2
Durham County Council	1
East Riding of Yorkshire	4
Essex County Council	1
Flintshire County Council	1
Gateshead Metropolitan Council	2
GLASGOW CITY	3
Gloucestershire County Council	6
Gwynedd Council	2
Halton Borough Council	3
Hampshire County Council	3
Hartlepool Unitary Authority	1
Hertfordshire County Council	9
Isle of Anglesey County Council	2
Isle of Wight Council	5
Kent County Council	11
Kingston Upon Hull City	1
Lancashire County Council	26
Leicester City Council	9
London Borough of Barnet	1
London Borough of Bexley	1
London Borough of Brent	1
London Borough of Bromley	1
London Borough of Ealing	2
London Borough of Greenwich	2
London Borough of Hackney	1
London Borough of Haringey	1
London Borough of Harrow	1
London Borough of Havering	1
London Borough of Hillingdon	1
London Borough of Lambeth	1

London Borough of Richmond Upon Thames	2
London Borough of Southwark	1
London Borough of Sutton	1
London Borough of Waltham Forrest	2
Luton Borough Council	1
Metropolitan Borough of Wirral	3
Metropolitan Borough of St Helens	3
Middlesbrough Unitary Authority	1
Milton Keynes Council	1
Newport City Council	2
Newry and Mourne District Council	2
Norfolk County Council	9
North East Lincolnshire Council	2
North Lincolnshire Council	2
North Tyneside Metropolitan Council	3
North Yorkshire County Council	2
Northamptonshire County Council	3
Northumberland County Council	1
Nottingham City Council	1
Nottinghamshire County Council	3
Oxfordshire County Council	2
Pembrokeshire County Council	5
Peterborough City Council	6
Plymouth City Council	8
Redcar & Cleveland Unitary Authority	1
Royal Borough of Kensington & Chelsea	1
Salford City Council	4
Sandwell Metropolitan Borough Council	6
Sefton District Council	2
Sheffield City Council	6
Shropshire Unitary Authority	3
Slough Borough Council	2
Southampton City Council	1
Staffordshire County Council	11
Stockport Metropolitan Borough Council	3
Stockton Unitary Authority	1
Stoke-on-Trent City Council	2
Surrey County Council	8
Telford & Wrekin Council	2
The City of Liverpool Council	3
Torfaen County Borough Council	2
Trafford Metropolitan Borough Council	3
Walsall Metropolitan Borough Council	2
Wandsworth Borough Council	4
Warwickshire County Council	7
West Sussex County Council	2
West Yorkshire Trading Standards Services	2
Westminster City Council	1
Wiltshire County Council	1
Wrexham County Council	2
Grand Total	307

