

# **UK Local Authorities Imported Food and Feed Sampling Report 2009/10**

## Foreword

*This report provides a summary of the imported food and feed sampling data collected by 258 enforcement authorities throughout the UK during 2009/10. My thanks go to all the enforcement officers, food examiners, public analysts and Agency staff for their support, hard work and assistance. The successful collation of this report is a direct result of their collaborative workings.*

*The surveillance of imported food and feed provides an essential contribution to public health protection. This programme supports our science and evidence strategy for 2010-15, which sets out key evidence and actions required to deliver our strategic objectives that imported food is safe to eat.*

*This programme has provided both financial and enforcement support to assist local authorities in their sampling targets which is important in light of increasing pressure on resources. It is very encouraging to see LAs submitting their sampling data for this programme via UKFSS and it is hoped that LAs will increasingly see the value of using UKFSS as a routine data entry tool. This will work towards improved public health through easy access to sampling data and the ability to identify emerging issues and develop risk-based sampling programmes*

*The objective for this initiative is to raise the importance of Enforcement Authority sampling, surveillance and controls for imported food/feed both at the port of entry and 'inland'. This report demonstrates the benefits of collaborative working and illustrates the level of regulatory compliance of imported food and feed. It also provides confidence to consumer that effective measures that in place to protect public health, and provides useful information to local authorities tasked with food safety enforcement.*

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## 1.0 Executive Summary

The Food Standards Agency (the Agency) invited applications from UK enforcement authorities (LAs) for grant funding during 2009/10 to support Port Health Authorities (PHAs) and inland local authorities (LAs) with sampling and surveillance of imported food and feed.

Local authorities took samples of a wide range of imported food, including spices, rice and rice products, meat and meat products and beverages. Samples were taken as part of a targeted sampling programme within local authorities' routine enforcement activity. Therefore, rates of non-compliance were higher than those expected for randomly selected foods.

5846 food samples were analysed and 261 (4% of samples) were found to be unsatisfactory due to microbiological or chemical contamination and 947 (18% of samples) had unsatisfactory following labelling checks. Over 7124 different assessments were carried out including labelling, and on presence of chemical contaminants, unauthorised ingredients, bacteria and mycotoxins. Where samples failed on multiple checks, sampling officers were asked to report this sample as a single unsatisfactory result. The Agency has verified the reason for failure for those samples. Local authorities took a range of follow-up action on the 1046 unsatisfactory results and these have been summarised in the report.

12% of the samples collected as part of this programme were submitted using the [UK Food Surveillance System](#). Since the implementation of this system, 29 out of 32 LAs in Scotland, all Northern Ireland authorities and 45 English authorities are using it to routinely submit their food sampling data. The use of the system allows for rapid transfer of information between the authorities and laboratories and provides added value to authorities' sampling investment.

The programme provides an insight into the overall compliance of imported food and feed with official controls in the UK. From looking at data since this programme started in 2003, there has been a gradual improvement in compliance from products from Asia has been observed.

Irradiated food supplements are an example of where grant-funded sampling has highlighted persistent areas of concern. The data submitted from this and previous years' programmes, has been considered by the Food Irradiation Stakeholder Group with representatives from the food supplement industry, enforcement bodies and testing laboratories. This group is producing a good practice guide for the food supplement industry on compliance with the legislation on irradiation of food ingredients, which should continue the recent trend of reducing the number of incidents in this area.

This programme has also supported UK policy development and negotiating positions in Brussels. For example, the sampling of organic contaminants highlighted small problems in PAHs in smoked fish, herbs and herbal supplements; the data from this programme has been submitted to the Commission for inclusion in their review.

Analysis was undertaken on a wide range of imported feeding stuffs, including cereal and soya products, feed additives (such as trace elements) and compound feeds. Most samples were feed materials (97%), with cereal or soya products sampled at the highest rates (23% and 24% respectively). Of the 233 samples analysed, 12 (5.2%) did not meet at least one requirement of EC legislation, which is the same percentage failure found in 2008/2009. RASSF<sup>1</sup> notifications were issued in relation to the affected consignments of groundnuts from Brazil and Argentina. As a result, these products at the point of entry into EU now appear on the list of high-risk products requiring increased levels of official control in accordance with Regulation (EC) 669/2009.

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<sup>1</sup> Rapid Alert System for Food and Feed - The legal basis of the RASFF is [Regulation EC/178/2002](#) laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (O.J. N° L 31 of 1 February 2002). In Articles 50, 51 and 52 scope and procedures of the RASFF are defined

## 2.0 Introduction

The Agency has been working with UK enforcement authorities to improve the effectiveness of controls over imported food and feed entering the country since 2003. The programme provides financial support in the form of grant funding to LAs to enforcement authorities in their sampling and surveillance. The programme originated as part of a cross- government initiative to achieve a step change improvement in imported food and feed controls. Part of this outcome is to help ensure risk-based targeted checks at ports and LA monitoring of imports throughout the food chain. This programme supports one of the five main outcomes from the Agency's 2010-15 Strategic Plan - that imported food is safe to eat.

In 2009/10 the Agency made £900,000 funding available, bringing the total investment over the past seven years to £6.3 million. For the second year running, additional funding (76k) was also made available to support the monitoring of undesirable substance in imported animal feed. Wherever enforcement authorities are mentioned in this report they include PHAs, local authorities, Food Liaison Groups and regional groups.

The Sampling Coordination Working Group<sup>2</sup>, with the Agency's policy branches, reviewed the broad outcomes from the 2008/09 and with the consideration of the programmes criteria suggested priorities for the 2009/10. The criteria used to determine priorities under the programme were: (bold indicates those criteria which must apply to all samples taken under the programme):

- **there is evidence of a particular food concern;**
- **the issue is of concern to public health or consumer protection;**
- **the issue is enforceable by local authorities;**
- **analytical methods are readily available; the products are from third countries;**
- **no safeguarding measures apply; sampling is not covered by existing surveillance programmes;**
- a need exists to raise local authority awareness to an area of concern;
- evidence shows sampling is overlooked by local authorities due to high sample or analysis cost;
- the EU has requested sampling for set areas of concern; and
- Where there is a legislative requirement.

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<sup>2</sup> The Sampling Coordination Working Group (SCWG) is a group jointly chaired by the FSA and Local Government regulations

Details of these priorities were sent out to UK enforcement authorities along with the Survey requirements in January<sup>3</sup>. Thirteen priority areas for sampling food and animal feed were identified:

**1) Microbiological**

- *Salmonella* in fresh produce including herbs
- *Listeria* in cooked chicken

**2) Mycotoxins**

- Aflatoxins in oil seeds– (but not groundnuts)
- Aflatoxins in corn/maize meal (not corn flour)
- Moniliformin, Citrinin, Cyclopiazonic acid and Sterigmatocystin in a range of cereals and cereal products
- Aflatoxins in basmati rice (brown and white)
- Ochratoxin A in spices
- Ochratoxin A in coffee

**3) Contaminants**

- Nitrates in imported lettuce, spinach and rocket

**4) Organic contaminants**

- PAHs in smoked and dried fish and fish products
- PAHs in dietary supplements
- Dioxins in meat and liver
- Dioxins in eggs, egg products and dairy products
- Mineral oil in vegetable oil

**5) Inorganic contaminants**

- Aluminium in processed foodstuffs - (bakery products, pizzas, soya based products, tea)
- Mercury, lead and cadmium in fish
- Barium in nuts

**6) Process contaminants**

- 3-MCPD in soy sauce

**7) Food contact materials**

- Lead and cadmium migration from ceramics
- Phthalate migration from gaskets in jars of exotic sauces and pickles from the Far East.

**8) Irradiated products**

- Dried herbs and spices
- Food supplements
- Dehydrated Asian meals
- Dehydrated soups

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<sup>3</sup> <http://www.food.gov.uk/multimedia/pdfs/enforcement/enfe10008.pdf>

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**9) Food Authenticity**

- Added water - (as opposed to 'extraneous water' *per se*), meat content and foreign proteins in imported poultry products
- Authenticity of Basmati rice

**10) Artificial colours in food**

- Certain artificial colours - surveillance work done on the types of imported food (and prevalence) which contains artificial colours.

**11) Animal Feeds**

a) Mycotoxins, including fumonisins toxins

- Cereal products intended as feed
- Feed materials ground nuts for wild bird feed (aflatoxin B1 only)

b) Dioxins and dioxin like PCBs

- Processed feed materials
- Marine sourced feed materials including fish meal

c) Heavy metals e.g. arsenic, cadmium and lead

- Trace elements e.g. zinc sulphate (particularly those originating from China).
- Feed materials.

d) Unauthorised Genetically Modified (GM) organisms and GM free claims

- Cereal products intended as feed
- Other feed materials e.g. soya, Bt63 in rice and rice products.

e) Melamine contamination of high protein feed materials e.g. maize gluten originating from China other than milk, milk products, soya, soya products and ammonium bicarbonate.

**12) Using local knowledge and expertise**

Sampling based on a local assessment of risk taking into account issues such as the type and number of importers in your area. Supporting information should be supplied to justify the bid and set in the context of local priorities.

A total for 54 food grants and 17 feed grants were made available. These comprised both individual LAs and group bids. In total 258, local authorities benefited from the grant

programme, 87 LAs received funding for both food and feed. A breakdown of the types of LAs involved can be seen below.

|                               | Food       | Feed       | Total      |
|-------------------------------|------------|------------|------------|
| Borough Councils              | 27         | 12         | 39         |
| County Councils               | 51         | 37         | 88         |
| District Councils             | 12         | 2          | 14         |
| Metropolitan Borough Councils | 22         | 27         | 49         |
| Unitary Authorities           | 2*         | 22**       | 46         |
| Port Health Authorities       | 6          | 2          | 8          |
| London Borough                | 14         | 0          | 14         |
| <b>Total</b>                  | <b>156</b> | <b>102</b> | <b>258</b> |

Table 1: Breakdown of funding

\*This figure includes 3 Welsh and 10 Scottish Local Authorities

\*\* This figure includes 1 Northern Ireland, 3 Welsh and 6 Scottish Local Authorities

### 3.0 Overall data trend

#### 3.1 Food

During this programme a total of 5846 samples were submitted for microbiological or chemical testing of which 28% were formally taken<sup>4</sup>. 7124 different analyses were carried out on these samples, of which 500 samples were submitted for microbiological testing.

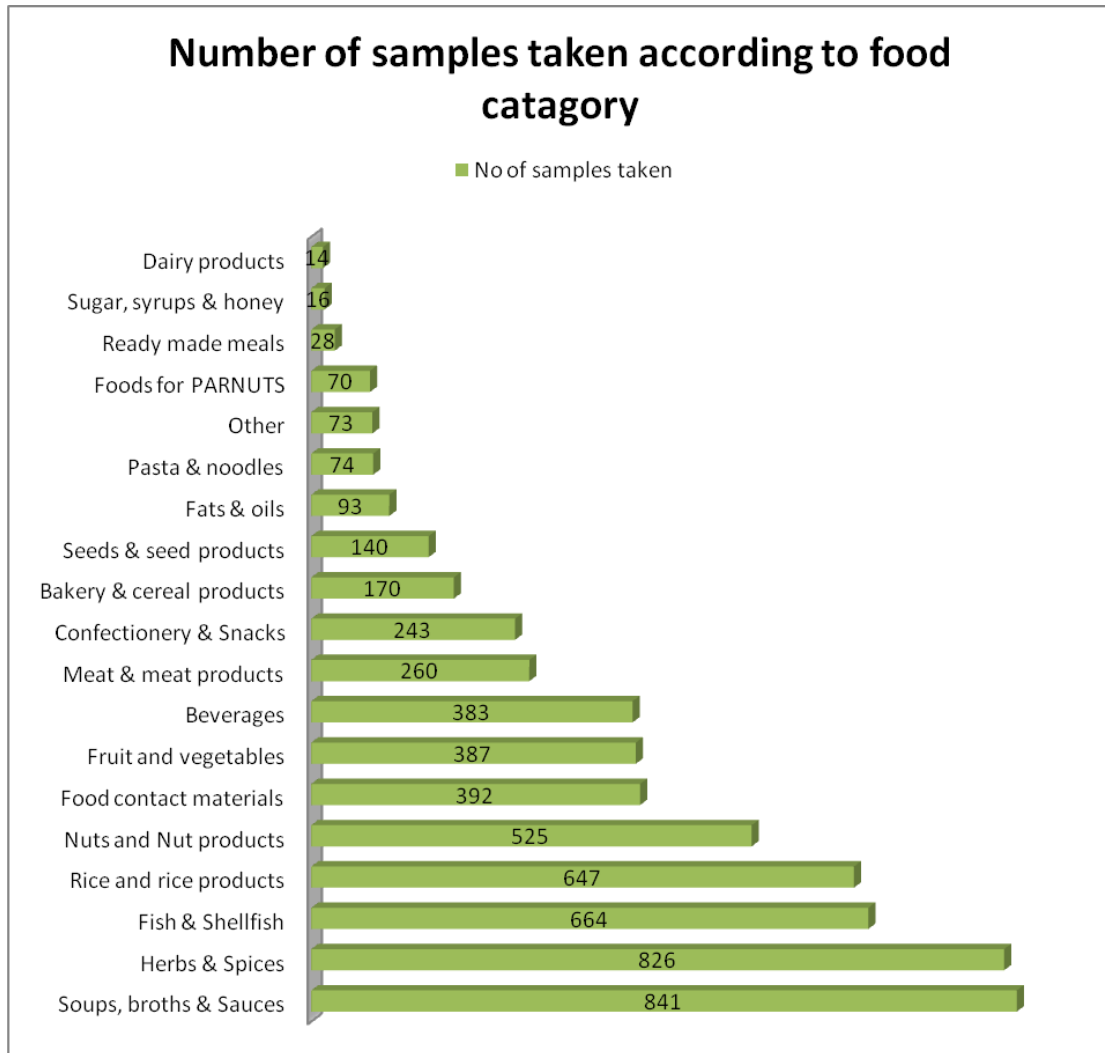
The samples taken as part of this programme were targeted towards areas of known or suspected risk and were taken as part of routine enforcement activity and as a result it was expected that rates of non-compliance would be higher than those taken as part of

<sup>4</sup> The Code of Practice sets out instructions and criteria to which the local and port health authorities (food authorities) should have regard to when engaged in the enforcement of food law. Food authorities must follow and implement the provisions of the code that applies to them.



randomly selected foods. The samples were collected from a wide range of food categories, but focussed on the priority sampling areas in the food categories, a breakdown of the samples taken according to each food category can be seen in chart 1 however, it can be see that the largest food groups sampled were soups, broths & sauces, herbs & spices, fish & shellfish and rice & rice products.

Chart 1: Percentage distribution of samples according to food categories



Of the 5846 samples taken 261 were found to be unsatisfactory due to microbiological or chemical and 787 were found to be unstaisactory follwing labelling checks (four samples failed on both chemical and labelling). It was expected that all samples were checked for compliance with labelling requirements, these are visual checks carried out by the public analysts and involve no chemical examination. The information in this report has therefore been separated and the focus on the report is on the unsatisfactory results for the microbiological and chemical testing. The discussion on the food labelling data can be seen in more detail in section 5.10.

Table 2: Breakdown of sampling statistics from 2007/08 – 2009/10

|  | 2007/08 |    | 2008/09 |    | 2009/10 |    |
|--|---------|----|---------|----|---------|----|
|  | No      | of | No      | of | No      | of |
|  |         |    |         |    |         |    |

|                        | samples take | failures | samples take | failures | samples take | failures |
|------------------------|--------------|----------|--------------|----------|--------------|----------|
| <b>Microbiological</b> | 280          | 20 (7%)  | 719          | 32 (4%)  | 501          | 16 (3%)  |
| <b>Chemical</b>        | 3876         | 346 (9%) | 5078         | 292 (6%) | 5345         | 245(5%)  |

Table 2 above provides a breakdown of sampling statistics and whilst it is difficult to compare previous programmes due to the different priorities for sampling set it has been noted that the percentage of samples that failed for microbiological or chemical tests has decreased.

Chart 2

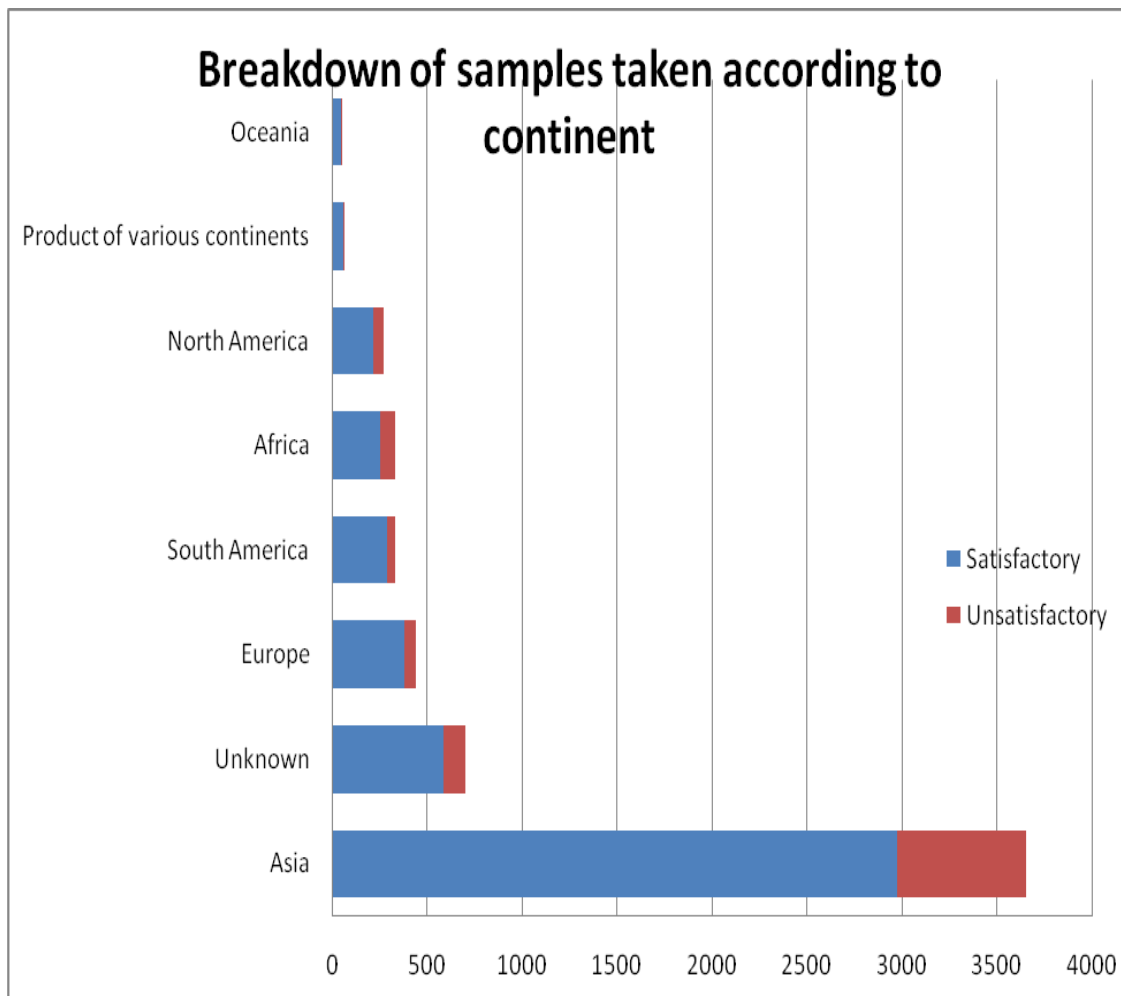


Chart 2 shows a breakdown of the samples taken by continent, the samples taken during this programme originated from various continents. However, as seen in previous years, the greatest percentage of samples originated from Asia (63%).

Whilst it is not mandatory for most products to state the country of origin, 88% of the products sampled did specify the country of origin. In January 2010 the [Agency published its new research on country of origin](#) and, as part of its continuing commitment to improve food labelling for consumers, has issued [guidance](#) to industry and enforcement officers on this subject.

As seen in this and previous programmes Asia was the source of the highest number of non-compliances, which indicates that further imported food control work targeting these countries is merited. In looking into this figure in more detail, the majority of samples were from China, India and Thailand. The % of samples from the top eight Asian countries can be seen below in table 3.

| Country of Origin  |             |
|--------------------|-------------|
| China              | 23%         |
| India              | 18%         |
| Thailand           | 12%         |
| Pakistan           | 9%          |
| Hong Kong          | 6%          |
| Vietnam            | 4%          |
| Israel             | 4%          |
| Malaysia           | 3%          |
| Other <sup>5</sup> | 21%         |
| <b>Total</b>       | <b>100%</b> |

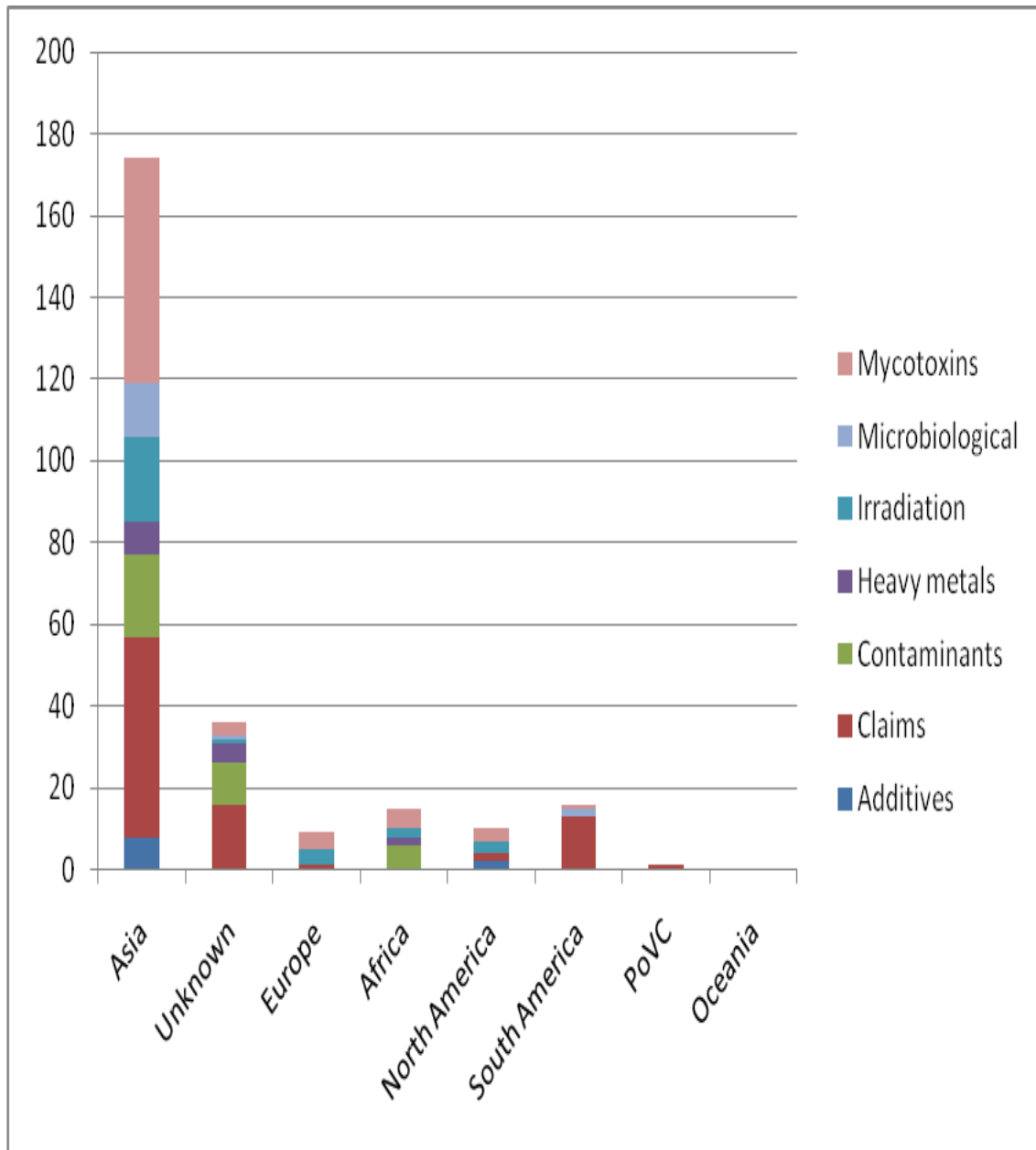
Table 3: percentage of samples

The chart above demonstrates the breakdown of the frequency of unsatisfactory chemical and microbiological samples according to the reason for failure and continent.

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<sup>5</sup> Other countries include Bangladesh, Grenada, Guatemala, Indonesia, Iran, Japan, Jordan, Lebanon, Lesotho, Madagascar, Maldives, Mauritius, morocco, Myanmar, Nigeria, panama, papa new guinea, Philippines, Saudi Arabia, Seychelles, sierra Leone, Singapore, sri lank a, Sumatra, Syria, Taiwan, Thailand and Trinidad.

Chart 3: Frequency of unsatisfactory chemical and microbiological samples according to the reason for failure and continent



PoVC – Products of Various Countinents

### 3.2 Feed

The Agency distributed additional funding to 83 local authorities in England, Wales, Scotland and the Department of Agriculture and Rural Development in Northern Ireland (DARDNI). A total of 233 samples of feed imported originating from outside the EU were analysed for various undesirable substances, including unauthorised genetically modified (GM) material.

Analysis was undertaken on a wide range of imported feeding stuffs, including cereal and soya products, feed additives (such as trace elements) and compound feeds. Most samples

were feed materials (97%), with cereal or soya products sampled at the highest rates (23% and 24% respectively).

Of the 233 samples analysed, 12 (5.2%) did not meet at least one requirement of EC legislation. This is the same percentage failure found in 2008/2009. Five of the 42 samples (11.9%) tested for GM materials were found to contain undeclared GM varieties. This is a slight reduction on the previous year's result of 12.7%. Again, non-compliance was found in samples analysed for the presence of mycotoxins. Five of the 79 samples (6.3%) did not meet EU statutory requirements. In all cases of non-compliance, respective local authorities took appropriate follow-up action.

## 4.0 Microbiological Sampling data

### 4.1 Background

Following incidents involving *Salmonella* contamination of imported fresh leafy greens and herbs and *Listeria* spp. contamination of imported cooked frozen chicken, further testing of these products was undertaken to ascertain the extent of these problems.

*Listeria monocytogenes* is one of the key pathogens the FSA aims to reduce as a food borne disease. In the UK, illness from *Listeria monocytogenes* (listeriosis) has increased in recent years, particularly among those people over 60 who have weakened immune systems. Although listeriosis isn't common, it can be life-threatening in people with reduced immunity and can have serious implications for pregnant women.

### 4.2 Results

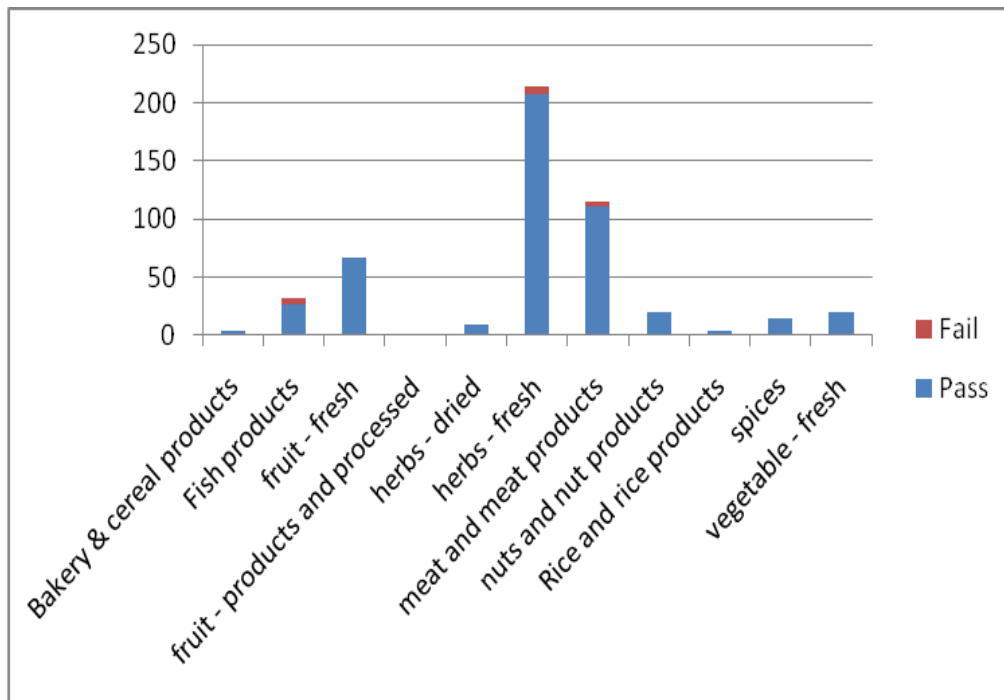


Chart 4: Distribution of microbiological samples according to food category

Out of 223 samples of herbs, only one was found to be unsatisfactory due to the presence of *Salmonella*. However, any presence of *Salmonella* in a ready to eat food is unacceptable and potentially injurious to health. This result was reported to the FSA at the time and investigated further. The LA for the importer agreed that they would monitor the situation going forward and consider further routine sampling at a later stage.

Two out of the 147 meat/meat products and fish products sampled were found to contain *Listeria monocytogenes*. Of these only one had exceeded the limit of 100 cfu/g set out in the microbiological criteria [Regulation \(EC\) 2073/2005](#) (As amended), while in the other sample was reported as present. A further two samples from this food category were contaminated with low level *Listeria innocua*. While *L. innocua* is not pathogenic (harmful), it may indicate that there was potential for contamination with *L. monocytogenes* at some stage during manufacture. In all cases the importer was informed and a copy of the letter sent to the importer was copied to their LA.

Additionally 10 herb samples were deemed to be unsatisfactory due to high levels of Enterobacteriaceae or a high Total Viable Count (TVC). This represents 4.5% of herbs sampled, or 2% of all samples analysed for microbiological contamination. Enterobacteriaceae and/or TVC are indicator organisms and high levels are not themselves a food safety risk, and are not covered by the Microbiological Criteria (EC) No 2073/2005 as amended. However, they can be used as an indication of quality - it can indicate poor production hygiene or temperature abuse during production, distribution or at the retail outlet.

Five samples were deemed unsatisfactory due to presence of *E. coli*. Again these results were all for samples of herbs, so this represents 2.2% of the herbs sampled, and 1% of all samples analysed for microbiological contamination. Similarly, *E. coli* is used an indicator organism and is not a food safety risk in itself although it can be indicative of faecal contamination at some stage.

Two samples of meat/meat products and fish products were deemed unsatisfactory due to high Aerobic Colony Count this represents 1.4% of all 147 of these types of products samples and 0.4% of all samples analysed for microbiological contamination. As above, high ACC can be used as an indication of quality - it can indicate poor production hygiene or temperature abuse during production, distribution or at the retail outlet.

### 4.3 Conclusion

The majority of the samples analysed for microbiological contamination (96%) were found to be satisfactory, with just 22 samples (4.4%) from the 501 analysed for microbiological contamination deemed as unsatisfactory. Of these, only two samples (0.4%) represented a level of contamination that was potentially injurious to health – i.e. the sample with presence of *Salmonella* and the sample with *Listeria monocytogenes* at a level above that in the Microbiological Criteria [Regulation \(EC\) 2017/2005](#) (as amended). The FSA was notified of these results, and investigated as appropriate and the importers of the products were notified accordingly.

The remaining samples that were deemed to be unsatisfactory were classed as such due to the presence of indicator organisms. While these do not represent a safety risk in themselves, they can be used as an indication of the quality of the food, and high levels may be indicative of poor hygiene at some stage during production, distribution or storage. Again, action was taken to notify the relevant LAs for the importers in order that the issues could be investigated at manufacture.

These results from the 2009/2010 survey are therefore encouraging as they indicate that the majority of the foods sampled and analysed for microbiological contamination were safe and fit for human consumption.

## 5.0 Chemical Contaminants

### 5.1 Mycotoxins

#### 5.1.1 Background

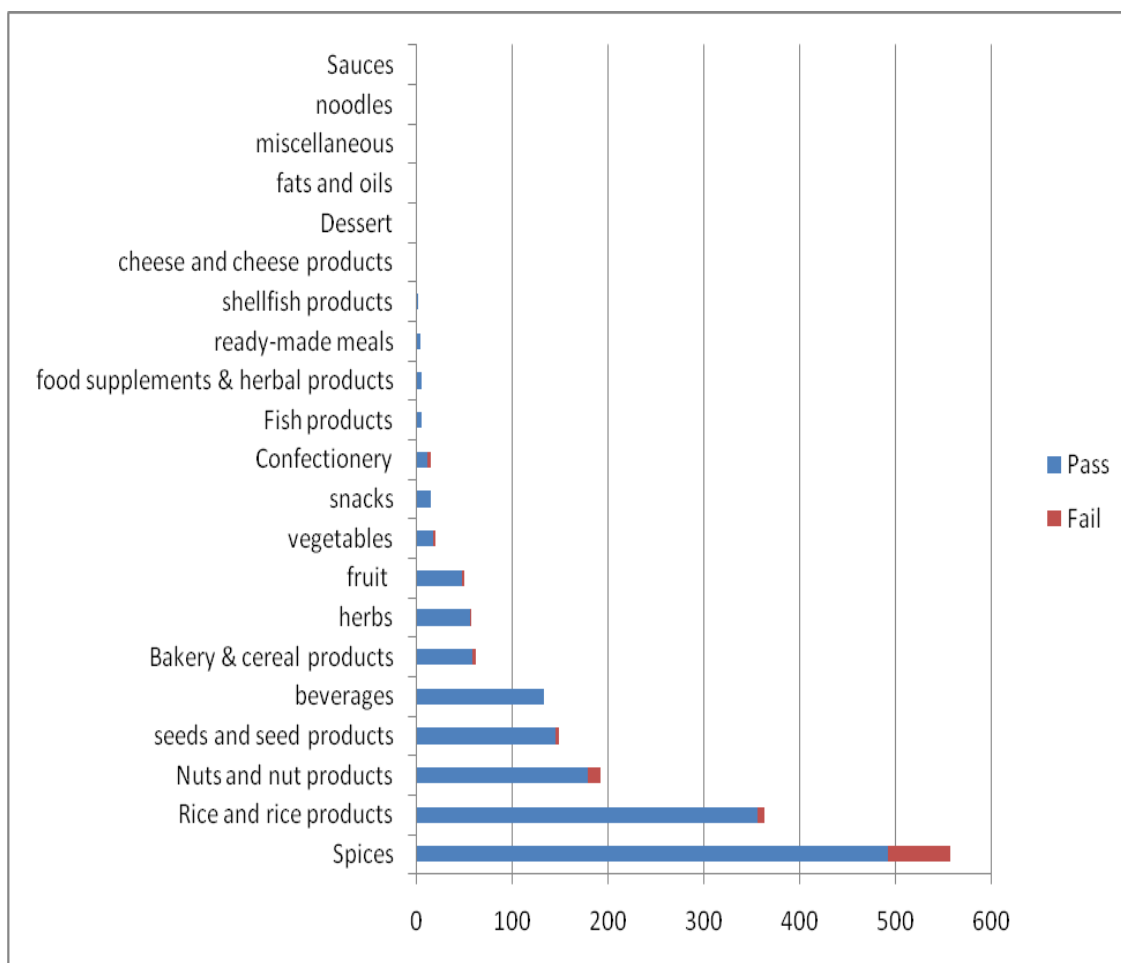
Mycotoxins are a group of naturally occurring chemicals produced by certain moulds. They can occur on a variety of different crops and foodstuffs including cereals, nuts, spices, dried fruits, apple juice and coffee, often under warm and humid conditions. Mycotoxins can cause a variety of adverse health effects in humans. For most mycotoxins, a tolerable daily intake (TDI) has been established, which estimates the quantity of mycotoxin which someone can be exposed to daily over a lifetime without it posing a significant risk to health.

The mycotoxins of most concern from a food safety perspective include the aflatoxins (B1, B2, G1, G2 and M1), ochratoxin A, patulin and toxins produced by *Fusarium* moulds, including fumonisins (B1, B2 and B3), trichothecenes (principally nivalenol, deoxynivalenol, T-2 and HT-2 toxin) and zearalenone.

In order to protect consumer safety, rules and legislative limits for aflatoxins, ochratoxin A, patulin and *Fusarium* toxins in certain foodstuffs are set out in European Commission [Regulation \(EC\) No. 1881/2006](#) (as amended). The legislation applies to the specified foods whether they are imported into the UK or produced in the UK. In addition, there are a number of special import conditions currently in place for some foods from certain third countries where the risk from mycotoxin contamination is increased, which further improves consumer protection. A significant proportion of commodities that may be more susceptible to mycotoxin contamination are those that are imported into the UK.

#### 5.1.2 Results

Chart 5: Distribution of samples for mycotoxins according to food category



The imported food mycotoxin results generally indicate a good level of compliance with the legislation, given that this is targeted at higher risk products. Problems with high aflatoxin levels were seen mainly in some imported spices and spice mixes, peanut products and other products such as melon seeds and rice.

Although the limit for ochratoxin A in spices was not in force during this surveillance period, there would be a number of non-compliant findings if the same results were obtained in the future. Only one sample of cereal product indicated the presence of moniliformin at a low level. Other mycotoxins for which there are no legal limits including citrinin, cyclopiazonic acid and sterigmatocystin were not quantified in any of the samples.

### 5.1.3 Conclusion

In general none of the findings indicate a significant risk to consumers from one-off exposure.

However, the higher mycotoxin findings, especially for aflatoxins are a concern as they tend to be in products that may be consumed more frequently by particular consumers or communities due to dietary and shopping habits. In particular, several samples of spices contained elevated levels of mycotoxins as well as some nut products and to a lesser extent



rice and oil seeds. The results for ochratoxin A in coffee all appear to be well within the required limits, which indicate that this sector is performing particularly well.

The results indicate that in general, levels of mycotoxins in the products sampled are low but also demonstrate that there is a continued need for extra diligence for some products and the importance of additional import controls such as those set out in Commission [Regulations 1152/2009](#) and [669/2009](#). All non-compliant findings that are reported to the Agency are dealt with as incidents, appropriate risk management advice is given to LAs to protect consumers and the EU Commission and other member states are informed via the RASFF system.

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## **5.2 Contaminants**

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### **5.2.1 Background**

Currently, Commission Regulation (EC) No 1881/2006 sets maximum limits for nitrate levels in lettuce and spinach. However, permanent increases to these and the introduction of a new nitrate limit for rocket (rucola) have been under discussion in the EU since the end of 2008 as the temporary derogations allowing the UK, and some other Northern European countries to market fresh lettuce and spinach grown and intended for consumption on their own respective territories with levels of nitrate above the limits came to an end.

The Food Standards Agency carries out annual monitoring for nitrate in these commodities to inform on discussions within the EU. The surveillance work here expands on the testing carried out as part of the annual monitoring by investigating some samples of fruit and vegetables not covered by this regime.

### **5.2.2 Results**

None of the samples for which there are EU limits contained nitrate in excess of these limits. Levels in other fruits and vegetables appear to be low. One sample of rocket contained a relatively high level of nitrate although there are currently no limits for nitrate in spinach.

### **5.2.3 Conclusion**

From the results, nitrate does not appear to be a concern in commodities for which there are no limits directly applicable e.g. in fruit, since the levels are much lower in these type of commodities. As would be expected, levels found in samples of lettuce and spinach indicates compliance with the limits, where growing conditions in these southern hemisphere countries are less conducive to accumulation of nitrate in the leaves. The high level of nitrate in the rocket sample would be above the current limit under discussion within the EU and adds to the weight of evidence that consideration of regulating this commodity; particularly for those who frequently consume rocket is important.

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## 5.3 Organic contaminants

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### 5.3.1 Background

#### Dioxins and Polychlorinated Biphenyls (PCBs)

The limits for dioxins and total toxic equivalent (TEQ) in food are set out in [Commission Regulation \(EC\) No. 1881/2006, Section 5 of the Annex<sup>6</sup>](#), and [Commission Regulation \(EC\) No. 1883/2006](#) specifies methods of sampling and analysis for the Official Control of levels of dioxins and dioxin-like PCBs in certain foodstuffs.

New limits are likely to be introduced in 2010 for non dioxin-like PCBs in meat, fish, eggs and dairy products. There is currently a Directive in force relating to PCB disposal (*Council Directive 96/59/EEC on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT)*), which states that all PCB-contaminated equipment is to be decontaminated or disposed of by the end of 2010. As a consequence, there may be an increased risk of illegal disposal activities throughout Europe (including illegal transfers to third countries). Such activities have previously led to major dioxin and PCB contamination incidents in Belgium, Italy and, most recently, the Irish Republic.

Sampling and testing of meat, fish, eggs and dairy products for dioxins and PCBs were therefore considered a priority to support discussions on future regulatory limits.

#### Polycyclic Aromatic Hydrocarbons (PAHs)

Limits for PAHs are currently under review. It is the intention that the contaminants regulations will be extended from benzo(a)pyrene (BaP) to include chrysene (CHR), benz(a)anthracene (BaA) and benzo(b)fluoranthene (BbF). It is likely that there will be limits for BaP and for the sum of the four PAHs. The range of food groups covered by regulatory limits may also be extended, in particular to cover cereals, dried herbs and herbal food supplements and possibly vegetables.

Additional sampling and testing for PAHs was therefore encouraged in smoked products, especially those which are also partially dried during the process (which may be vulnerable to any tightening of the limits), processed cereal products and dried herbs, herbal food supplements and dried vegetables to support discussions on future regulatory limits.

#### Mineral oil in vegetable oil

Following the discovery of mineral oil contamination of a large consignment of Ukrainian sunflower oil in 2008, special measures were introduced for sunflower oil from Ukraine alone. These measures were converted into a regulation ([Commission Regulation 1151/2009](#)) in November 2009. Certain Member States, possibly with vested interests in their own vegetable oil industries, have been pushing the Commission to widen the regulation to cover other oils. In the absence of a clear need and in the interests of Better Regulation, the UK has opposed such a move. Nevertheless, it was important to have data to support the UK position.

## **5.3.2 Results**

### **5.3.2.1 PAHs in smoked and dried fish and fish products**

12 samples out of 102 were reported to be non-compliant. These were generally from small-scale producers. Suppliers were notified but, in most cases, no product remained in the supply chain and there was insufficient risk to indicate the need for a product recall.

### **5.3.2.2 PAHs in dietary supplements**

22 samples were tested for PAHs. There are no regulatory limits for supplements at present although these have been under discussion for some time. None of the results indicated a cause for concern.

### **5.3.2.3 Dioxins in meat, liver, eggs, egg products and dairy products**

Overall, 62 samples were tested for dioxins, of which 50 were meat and meat products. No non-compliances were reported.

### **5.3.2.4 Mineral oil in vegetable oil**

31 samples of a wide range of vegetable oils were tested for mineral oil. All were reported to be below the limit of detection.

## **5.3.3 Conclusion**

For PAHs, the results for smoked fish indicate that a small problem first identified several years ago still remains. This concerns fish cured using a process common in Africa and Asia that involves very vigorous smoking and drying. All of the data generated, including compliant and non-compliant samples, will be submitted to the Commission for use in an ongoing review of PAH limits which may involve introducing a new category for this type of product. In the case of herbs and herbal supplements, occasional high PAH levels have been reported through the Rapid Alert System. This prompted the Commission to consider introducing an additional category of supplements in the ongoing review of limits. The UK data will be used in formulating the UK position.

Dioxin monitoring is very expensive and Port Health Authorities are reluctant to fund a significant amount of sampling. Under these circumstances, the lack of non-compliance is very useful information as it can be used to refute any suggestion that there needs to be a major increase in compliance monitoring for dioxins and Port Health Authorities are therefore able to prioritise in other areas of higher risk.

The evidence generated from this project for the absence of mineral oil contamination of vegetable oil will be used to inform and reinforce the UK position that there is not a wider underlying problem.

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## **5.4 Inorganic Contaminants**

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### **5.4.1 Background**

A number of metals and other elements are present in food and studies on the levels at which they are found and their possible effect on human health are of interest to the

Agency. Environmental sources are the main contributors to contamination of food by most metals and other elements. Some elements (e.g. arsenic) are present naturally but the major sources of other elements (e.g. lead) in the environment are because of pollution from industrial and other human activities. The presence of metals and other elements in food can also be the result of contamination by certain agricultural practices (e.g. cadmium from phosphate fertilisers), manufacturing and packaging processes (e.g. aluminium and tin in canned foods).

In this year's imported foods survey, sampling was carried out on various foodstuffs to determine the levels of aluminium, lead, cadmium, mercury and barium.

#### **5.4.2 Results and conclusion**

##### *Aluminium in various foodstuffs:*

A tolerable weekly intake (TWI) of 1 milligram per kilogram body weight has been established for aluminium by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the European Food Safety Authority (EFSA). Over 350 samples were examined and the levels of aluminium measured were comparable to levels published in literature.

The survey has provided useful background data on the levels of aluminium present in various foodstuffs imported into the UK. In conjunction with data available from other studies carried out by the Agency, it will be used in risk assessments, incident response and in formulating the UK's position at EC meetings.

##### *Heavy metals in fish*

The levels of lead, cadmium and mercury were measured in over 350 seafood samples and all except two were within the regulatory limits. One sample of shark and one sample of swordfish exceeded the legal limit and follow-up action was carried out by the LA. These two species of fish are known to accumulate mercury and the Agency has issued [advice](#) on consuming these fish

##### *Barium in nuts*

Results from the 2006 TDS indicated that nuts have a very high concentration of barium. The COT recommended that further research is carried out. Therefore, data on barium levels in various nuts (more than 300) was collected. The levels of barium were similar to values reported in literature; Brazil nuts had higher concentration of barium.

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## **5.5 Process Contaminants**

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### **5.5.1 Background**

3-Monochloropropane-1,2-diol (3-MCPD) is a chemical contaminant formed during the processing of certain foods, i.e. acid hydrolysis of hydrolysed vegetable protein. Higher levels

of 3-MCPD have been observed in soy sauce and it is classed as a probable carcinogen by the Scientific Committee on Food (SCF). Due to the concerns around 3-MCPD, the European Commission has set regulatory limits under Commission Regulation (EC) No 1881/2006 for 3-MCPD in soy sauce and hydrolysed vegetable protein. The Agency have monitored levels of 3-MCPD in various foodstuffs and as part of the ongoing monitoring, analyse 3-MCPD levels in soy sauce brought in from outside the EU. These results allow the UK to ensure that 3-MCPD levels are within safe limits, and are also used to help with policy decisions at EU level.

### **5.5.2 Results**

449 samples of soy sauce and similar type products were analysed for 3-MCPD, of which 2 were reported as unsatisfactory with regard to regulatory limits set by the European Commission. The levels found would not have posed a significant risk for consumers. Follow up investigations by the local authorities did not indicate a problem.

### **5.5.3 Conclusion**

From the above monitoring, 94% of samples analysed for 3-MCPD were within the regulatory limits set by the European Commission or were below detectable levels. The results suggest a high level of compliance with the European Commission regulatory limits.

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## **6.0 Food contact materials**

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### **6.1 Background**

Lead and cadmium migration from ceramics

There are detailed rules regarding the migration of these heavy metals from ceramic materials and articles intended to be brought into contact with food and there have been breaches of the limits set in law detected among imported goods in various parts of the EU. Council Directive 84/500/EEC as amended deals with the migration into food of lead and cadmium from ceramic materials and articles intended to be brought into contact with the food. Article 2 (4) of this states for lead/cadmium : A ceramic article shall be recognised as satisfying the requirements of this Directive if the quantities of lead and/or cadmium extracted during the test carried out under the conditions laid down in Annexes I and II do not exceed the following limits:

Category 1: Articles which cannot be filled and articles which can be filled, the internal depth of which, measured from the lowest point to the horizontal plane passing through the upper rim, does not exceed 25 mm;

- 0,8 mg/dm<sup>2</sup> Pb
- 0.07 mg/dm<sup>2</sup> Cd

Category 2: All other articles which can be filled:

- 4,0 mg/l Pb
- 0.3 mg/l Cd

Category 3: Cooking ware; packaging and storage vessels having a capacity of more than three litres:

- 1,5 mg/l Pb
- 0.1 mg/l Cd

Phthalate migration from gaskets in jars of exotic sauces and pickles from the Far East.

[Directive 2007/19/EC](#) amending [Directive 2002/72/EC](#) made it clear that plastic layers or plastic coatings, forming gaskets in lids that together are composed of two or more layers of different types of materials came within scope of the rules on food contact plastics. Restrictions within Directive 2007/19/EC state that all five plasticisers are only to be used in repeat-use materials and articles and the use of the phthalates in single-use materials and articles contacting fatty foods is prohibited. The phthalates are only to be used as a technical support agent in concentrations up to 0,1% for BBP, DEHP, DINP and DIDP and 0,05% for DBP. . These restrictions applied from 1<sup>st</sup> July 2008. Further details of restrictions are contained within the Directive.

The jars of food taken for this survey fall under the category of single-use applications contacting fatty foods. There have been several RASFFs issued over the past year for migration from lids, with **DEHP** (di-ethylhexyl phthalate) DINP (di-isononyl phthalate) DBP (di-butyl phthalate) reported. The reports are from Third Country imports. In the EU restrictions have been imposed on five particular phthalates, DEHP (SML = 1,5 mg/kg food simulant), DBP (SML = 0,3 mg/kg food simulant), DINP (SML = 9 mg/kg food simulant), DIDP (SML = 9 mg/kg food simulant) and BBP (SML = 30 mg/kg food simulant)) under Commission Directive 2007/19/EC.

## 6.2 Results

Lead and cadmium migration from ceramics

21 samples were obtained and analysed, all of these samples complied with the legislation.

Phthalate migration from gaskets in jars of exotic sauces and pickles from the Far East

231 samples were purchased and analysed for the migration of plasticisers from lid gaskets used on glass jars with 'twist-on twist-off' lids, containing oily foods such as olives, pickles and sauces, 49 (21%) were found to be non-compliant.

### **6.3 Conclusion**

A relatively small number of ceramic articles were tested for lead and cadmium, all were found to be compliant with the migration levels set in the legislation.

The non-compliant results for the 2009/2010 survey for phthalate migration indicate that there is still an issue surrounding imported jars of exotic sauces and pickles from the Far East. All non-compliant samples reported to the Agency were dealt with as incidents, following consultation with Agency toxicologists for a risk assessment. The Agency's Incident Response Branch then co-ordinated a National response, notifying other Member States and the EU Commission of potential food safety issues via the Rapid Alert System for Food and Feed.

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## **7.0 Irradiated Products**

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### **7.1 Background**

Certain irradiated foodstuffs have been allowed in the United Kingdom for 20 years and may be imported as long as they comply with specific rules and are correctly labelled. There are seven categories of foods which may be irradiated for sale in the UK: fruit; vegetables; cereals; bulbs and tubers; dried aromatic herbs, spices and vegetable seasonings; fish and shellfish; and poultry. When assessing the legality of imported irradiated food, it is necessary to consider where the food or food ingredient was irradiated. Prior to 31 July 2009, the only types of food irradiated in non-EU countries permitted under UK legislation were herbs and spices. Since 31 July, any of the seven categories may be permitted providing certain conditions are met and they originate from a European Commission approved food irradiation facility.

### **7.2 Results**

The results of this year's programme has shown that, of the 228 products subjected to initial screening test for irradiation, 11 products gave results that indicated that they may have been irradiated or that a component within the food may have been irradiated. Either these products were not labelled as irradiated, were not a permitted category of food or had not been irradiated at an approved facility. Of these 11 products, 2 were food supplements, 6 were dehydrated noodle meals and the remaining 3 were spices.

### 7.3 Conclusion

The number of irradiated foods detected has fallen compared to the previous year's survey, particularly with food supplements of which there were 7 samples which gave unsatisfactory results in the 2008-09 survey. The number of dehydrated noodle meals remained level with 6 unsatisfactory samples in both this and the previous year's survey.

In recent years there has been a number of food irradiation incidents reported to the Food Standards Agency in particular relating to food supplements. As a result of this the Agency has set up a Food Irradiation Stakeholder Group with representatives from the food supplement industry, enforcement bodies and testing laboratories. The Food Irradiation Stakeholder Group provides support in the following areas,

- Discuss irradiation issues in a forum setting
- Provide support to other members of the group
- Discuss recent incidents and ways forward
- Discuss concerns over analytical methods
- Discuss new developments and research

This group is producing a good practice guide for the food supplement industry on compliance with the legislation on irradiation of food ingredients.

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## 8.0 Food Authenticity

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### 8.1 Background

Market intelligence suggests continuing problems with mislabelling of frozen chicken breast product imports, including over-declaration of meat content, inaccurate added water declarations and incorrect name of food (e.g. using descriptions reserved for poultry parts under Poultry meat Marketing Regulations and not for chicken products). In addition there is evidence that the species origin of water-retaining agents used in some chicken products is not being accurately declared.

"Basmati" is a customary name for certain varieties of rice that are grown in specific areas of India and Pakistan. This premium rice type sells at two to three times the price of ordinary long grain rice and certain varieties are also exempt from import duty when entering the EU, both of which provide a strong incentive for adulteration. The UK Code of Practice on Basmati Rice lays down minimum specifications for Basmati rice sold in the UK in terms of approved varieties. The Code also specifies where non-Basmati varieties exceed 7% the product cannot be described as Basmati rice but has to be labelled as a mixture.

Durum wheat (*Triticum durum*) is traditionally used in the manufacture of dried pasta because it produces the correct eating qualities (i.e. texture). Common wheat (*Triticum aestivum*) makes very poor quality dried pasta, and if added to durum wheat pasta softens the cooked pasta texture. It is generally accepted that durum wheat may contain up to 3% common wheat from unavoidable adventitious contamination during grain harvesting and handling (International Standard ISO 11051:1994(E)). Durum wheat pasta containing common wheat in excess of this level may be considered as misdescribed. A recent decline in the supply of durum wheat has increased the incentive for adulteration with common



wheat and there is some evidence that products on the market may be adulterated with significant levels of common wheat.

## **8.2 Results**

### **Labelling declarations of chicken products/preparations**

A total of 103 chicken samples was analysed for added water and the declared meat content, 20 samples (19%) were found to be unsatisfactory, where either the chicken content was absent or incorrectly declared, and/or water was not declared either in the name of the food or in the ingredients list. Chicken was the only species found to be present, using the DNA analysis method currently available.

### **Authenticity of Basmati rice**

A total of 353 samples of rice labelled as Basmati were tested for the presence of non-Basmati varieties. The industry Code of Practice on Basmati Rice stipulates that when a product is described as "Basmati rice", the non-Basmati rice content must not exceed 7%. 55 samples (16%) were deemed as unsatisfactory with respect to the levels of non-Basmati rice present as laid down by the Code of Practice, with 21 samples (6%) containing more than 20% non-Basmati varieties and 6 samples (2%) containing more than 60% non-Basmati varieties, for which 4 contained no detectable Basmati rice varieties.

### **Authenticity of durum wheat pasta**

A small number of samples (28) were taken by one local authority. None of these samples was found to contain unsatisfactory levels of non-durum wheat.

## **8.3 Conclusion**

The analysis of chicken products and preparations has shown that the correct labelling of meat content and added water is a continuing problem, and the number of samples with unsatisfactory labelling has increased from 13% in the 2008/09 surveillance exercise to 19% in the 2009/10 surveillance exercise. Where samples were judged to be unsatisfactory the importer was contacted or the results were passed on to the Home Authority<sup>7</sup> to help resolve the mislabelling issues found and to increase awareness of the labelling requirements for chicken products and preparations.

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<sup>7</sup> Home Authority Principle has been developed by food and trading standards authorities as an aid to good enforcement practice and aims to provide businesses with a home authority source of guidance and advice provide a system for the resolution of disputes and ensure that there is effective liaison between local authorities. A local authority acting as Home Authority (HA) has a particularly important role within the system and they perform the function of giving advice on regulation, good practice and remedial action is a legitimate aspect of enforcement.

The levels of Basmati rice adulteration are similar to those seen in the 2008/09 surveillance exercise, both in terms of the overall proportion of unsatisfactory samples and the levels of non-Basmati rice found in these samples. The follow-up action of unsatisfactory samples in this surveillance exercise included testing further samples, contacting the importer and referral to the Home Authority. This will help to address the continuing issue of Basmati rice adulteration.

A small number of samples analysed in the 2008/09 surveillance exercise revealed the presence of common wheat in durum wheat pasta above the 3% level in a product on the market. Although the investigation this year was also on a small scale, the results indicate that the adulteration of durum wheat pasta with common wheat is not a significant concern in the UK market.

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## **9.0 Artificial colours in food**

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### **9.1 Background**

In 2007 Southampton University published results of its study which looked into the effects of six artificial food colours and a preservative on the behaviour of children.

The six colours are:

- sunset yellow FCF (E110)
- quinoline yellow (E104)
- carmoisine (E122)
- allura red (E129)
- tartrazine (E102)
- ponceau 4R (E124)

The findings of the study suggested that if a child shows signs of hyperactivity or Attention Deficit Hyperactivity Disorder (ADHD) then eliminating the colours used in the Southampton study from their diet might have some beneficial effects.

On the basis of the evidence from this peer reviewed study, UK Ministers and the FSA asked UK industry to voluntarily remove the six colours from food and drink in the UK by the end of 2009.

Surveillance work was carried out as part of the 2009/10 programme to provide intelligence on the types and prevalence of imported food (in particular soft drinks and confectionary) which contains any of these six colours. Samples were taken between April and October 2009.

Under EU legislation use of the 6 colours is permitted in specified foods at certain levels. From the 20 July 2010 food and drink containing one or more of the colours placed on the market must carry an additional warning label.

## 9.2 Results

There were 675 samples taken which looked at food colours as part of this programme. Of the 675 samples there were 219 products which contained 1 or more of the six colours. Of those 219 products, the breakdown was as follows:

- 92 products contained 1 of the 6 colours
- 59 products contained 2 of the 6 colours
- 57 products contained 3 of the 6 colours
- 11 products contained 4 of the 6 colours

However, it is likely that the products which contained 4 of the colours were multiples, i.e. all four colours were not necessarily in the same sweet, but in a bag with a number of different sweets

## 9.3 Conclusion

The results show that in 2009, ahead of the target deadline requested by UK Ministers and the FSA for voluntary withdrawal of the colours, almost a third of the samples taken for this part of the survey still contained one or more of the 6 colours. This section of the sampling programme provides an evidence base for future policy discussions concerning these colours.

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## 10.0 Food Labelling Data

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### 10.1 Background

Public Analysts provide a service to LAs in looking at the compliance of pre-packed foods with complex and highly technical food labelling regulations. No chemical examination is undertaken. Previously, the Imported Food Sampling Programme has identified poor or inappropriate labelling to be the most significant factor in a sample being considered “unsatisfactory”. Food labelling rules are harmonised at EU level under Directive 2000/13/EC. This legislation is currently being revised and will be replaced by a Regulation (timescale for the adoption is late 2011/early 2012). The principal provisions of the [UK Food Labelling Regulations 1996 \(as amended\)](#) require most pre-packed food (with a few exceptions) that is ready to be delivered to the ultimate consumer to be marked with:-

- (a) the name of the food;
- (b) a list of ingredients;
- (c) the appropriate durability indication; most food would either need to carry a “Best Before” for foods to indicate the period for which it can be reasonably expected to

retain its optimum quality or a “Use By” date, for those foods that are highly perishable and will have a relatively short shelf life, after which their consumption would present a risk of food poisoning;

(d) any special storage conditions or conditions of use;

(e) the name or business name and an address or registered office of either or both;

(i) the manufacturer or packer, or

(ii) a seller established within the European Community;

(f) particulars of the place of origin or provenance of the food if failure to give such particulars might mislead a purchaser to a material degree as to the true origin or provenance of the food; and

(g) instructions for use if it would be difficult to make appropriate use of the food in the absence of such instructions.

Technically an offence is only committed at the point of sale, so where a food is checked on import can only give advice to importer and LA of destination.

There is no statutory definition of “place of origin or provenance” in the Food Labelling Regulations 1996 or of “origin or provenance” in Directive 2000/13/EC. Under WTO Rules, the country of origin is deemed to be the place of last substantial change.”

Additional labelling requirements and controls are in place for certain foods for example those that contain specific ingredients or that are packaged in a specific manner (e.g. in a modified atmosphere) or make a certain type of claim. Quantitative ingredient declarations (i.e. QUID) must be given for ingredients mentioned in the name of a food. For example, the meat content of meat products must be quantified as a percentage of the weight of the final food, either next to the name of the food, or in the ingredients list.

## 10.2 Results

Overall, 787 samples were found to be inappropriately labelled which represents 13% of all samples. A breakdown of the precise nature of labelling faults can be seen below and it is important to stress that a number of samples were found to be unsatisfactory for more than one labelling fault and for this reason the number of failures listed is higher than the number of samples which failed.

Table 4: Frequency of labelling errors

| Precise nature of labelling fault            | Total |
|--|-------|
| Category of additives not declared           | 68    |
| Durability marking                           | 163   |
| Errors in ingredients list, QUID declaration | 143   |
| Illegibility of label                        | 49    |
| Inappropriate labelling for specific foods   | 67    |

|   |             |
|---|-------------|
| Name insufficiently precise   | 32          |
| Name of business operator   | 46          |
| No declaration – GMO, Food Allergens  | 9           |
| No English version of name or ingredients   | 7           |
| No intended use   | 3           |
| Nutritional information format  | 235         |
| Potentially misleading statement 'no MSG added' as likely to contain naturally occurring glutamate & Na       | 15          |
| Pre-packed product but failed to comply with Regulation 5 requirements of the Food Labelling Regulations 1996 | 8           |
| Minor labelling fault (specific reason for failure not specified)   | 115         |
| Traceability  | 2           |
| Unauthorised health claim   | 40          |
| <b>Total</b>  | <b>1002</b> |

### 10.3 Conclusion

Whilst a number of labelling irregularities were reported it is important to note that the majority of products (i.e 87%) were compliant. A significant minority of labelling failure (27%) was due to nutrition labelling format, date marking (17%) ingredients listing (QUID-17%) and category of additives not declared (8%).

24% of the labelling faults were considered to be minor labelling and the precise nature of faults were not specifically identified and is a matter we would wish to have addressed in future programmes

|         | % labelling error |
|---------|-------------------|
| 2007/08 | 16                |
| 2008/09 | 18                |
| 2009/10 | 13                |

Table 5

Compliance with labelling has consistently been the greatest proportion of non-compliance however, from looking at this years data an improvement can be seen in the overall percentage of samples found to be unsatisfactory due to labelling has reduced since last year. However, the most frequent nature of labelling faults has remain consistent with Errors in ingredients list, QUID declaration, nutritional information format and durability marking being the top three.

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## 11.0 Follow up action

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If a food does not satisfy legal requirements food 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 sample found to be unsatisfactory under this programme it was expected that these samples be dealt with in accordance with the FSA Code of Practice on food law enforcement.

A range of enforcement action took place with respect to the 1044 samples found to be unsatisfactory, a breakdown of what follow up action has been taken is summarised in table 6 below, a more detailed breakdown according to reason for failure can be seen in appendix 2.

Table 6: Breakdown of follow up action

| Description of follow up action taken                    | Frequency of follow up action taken |
|--|-------------------------------------|
| Home Authority Referral                                  | 464                                 |
| Letter sent to imported/company/retailer/FBO             | 293                                 |
| Minor labelling - No action taken                        | 173                                 |
| Follow up sample proved satisfactory                     | 39                                  |
| Not known at this stage                                  | 32                                  |
| Informal warning   | 31                                  |
| Advice to retailer                                       | 19                                  |
| FSA Risk Assessment - No public health Hazard - Released | 18                                  |
| Product no longer imported/stocked                       | 17                                  |
| Product re-labelled                                      | 16                                  |
| Product destroyed  | 9                                   |
| FSA Notified   | 8                                   |
| Improvements to companies Standards Operating Procedures | 7                                   |
| product voluntarily surrendered                          | 7                                   |
| Re-exported  | 6                                   |

|  |             |
|--|-------------|
| <b>Product relabelled</b>                  | 4           |
| <b>RASFF or Incidents form sent to FSA</b> | 4           |
| <b>Company ceases trading</b>              | 1           |
| <b>Formal sample proved satisfactory</b>   | 1           |
| <b>Total</b>                               | <b>1149</b> |

15% of the samples were considered to have minor labelling action and such minor labelling forming, durability. In accordance with their local enforcement policy the LA may decide that formal action is not required.

## 12.0 Animal Feeds

### 12.1 Introduction

The Food Standards Agency works with enforcement authorities across the UK to monitor and improve the control of imported feed entering the UK. £76,000 in LA grant money was resulted in 233 samples being analysed for the presence of undesirable substances and undeclared GM material. A list of the local authorities that took part in the programme can be found in Annex I.

### 12.2 Categories of feed sampled

Enforcement authorities sampled a wide range of imported feedingstuffs, but the focus was on feed materials (particularly cereal and soya products). A summary is shown below.

| Imported feed type              | %<br>sampled |
|---------------------------------|--------------|
| Feed materials, consisting of:  | 98           |
| - cereal products               | 23           |
| - soya products                 | 24           |
| - groundnuts                    | 13           |
| - marine sourced feed materials | 3            |
| - sources of trace elements     | 5            |
| - other feed materials          | 30           |

|                |   |
|----------------|---|
| Compound feeds | 2 |
|----------------|---|

Table 7: Summary of feeding stuffs sampled

### 12.3 Feed types analysed

The table below summarises the number of analyses undertaken against the various feed types.

Table 8

| Imported feed type                   | Samples analysed for mycotoxins | Samples analysed for GM feed | Samples analysed for hazardous metals | Samples analysed for dioxins/PCBs | Samples analysed for melamine |
|--------------------------------------|---------------------------------|------------------------------|---------------------------------------|-----------------------------------|-------------------------------|
| <b>Cereal products</b>               | 28                              | 10                           | 10                                    | 3                                 | 8                             |
| <b>Soya products</b>                 | 6                               | 30                           | 6                                     | 8                                 | 6                             |
| <b>Sources of trace elements</b>     | 0                               | 0                            | 10                                    | 2                                 | 0                             |
| <b>Marine sourced feed materials</b> | 0                               | 0                            | 0                                     | 6                                 | 0                             |
| <b>Groundnuts</b>                    | 27                              | 0                            | 0                                     | 2                                 | 0                             |
| <b>Other feed materials</b>          | 13                              | 9                            | 25                                    | 16                                | 1                             |
| <b>Compound feeds</b>                | 5                               | 2                            | 0                                     | 4                                 | 1                             |
| <b>Total</b>                         | <b>71</b>                       | <b>51</b>                    | <b>51</b>                             | <b>41</b>                         | <b>16</b>                     |

### 12.4 Results

233 feed samples were analysed for undesirable substances and GM feed. Twelve samples (5.2%) failed to meet the requirements of the EU legislation. Enforcement authorities found high levels of non-compliance in feed analysed for mycotoxins and GM feed; GM failures applied to labelling requirements rather than unauthorised GM feed varieties. Non-compliance was found in samples analysed for hazardous metals (3.6%). All samples analysed for PCBs/dioxins and melamine were compliant. A summary of the results is shown in the table below.



Table 9

|                         | Number of samples analysed | Number of samples failing to meet statutory controls or guidance values | % of samples failing to meet statutory controls |
|-------------------------|----------------------------|---|---|
| <b>GM feed</b>          | 51                         | 5*  | 11.9  |
| <b>Mycotoxins</b>       | 71                         | 5**   | 6.3   |
| <b>Hazardous metals</b> | 51                         | 2   | 3.6   |
| <b>Dioxins and PCBs</b> | 41                         | 0   | 0   |
| <b>Melamine</b>         | 16                         | 0   | 0   |
| <b>Total</b>            | <b>230</b>                 | <b>12</b>   | <b>5.2</b>                                      |

\* All failures relate to labelling requirements, where GM presence was not stated on label. Only authorised GM feed varieties were found.

\*\* Aflatoxin B1 is the only mycotoxin with statutory maximum levels. The mycotoxins deoxynivalenol, zearalenone, ochratoxin A, fumonisins B1 and B2 and T2 and HT-2 were analysed in certain samples; all results were below the guidance values for these mycotoxins.

### 12.5 Non-compliant samples

The table below summarises the feed types that failed to meet the requirements of EU legislation quoted in Annex II. Enforcement authorities took appropriate follow-up action where they found non-compliance.

Table 10

| Substance               | Imported feed materials failing to meet EU statutory controls | Countries of origin        | Number of samples per feed type failing to meet statutory controls |
|-------------------------|---|----------------------------|--|
| <b>GM feed</b>          | Soya products   | Argentina, Brazil and USA, | 5  |
| <b>Mycotoxins</b>       | Groundnuts  | Brazil and Argentina       | 5  |
| <b>Hazardous metals</b> | Trace elements  | Russia and Turkey          | 2  |

All of the GM feed samples were found to contain traces of approved GM events. The presence of GM in the affected consignments was found to be adventitious and not at levels which would suggest that GM soya was being passed-off as being free of GM.

In the case of groundnuts found to contain mycotoxins, these samples all related to feed for wild birds which were found to exceed the maximum permitted level of aflatoxin B1 i.e. 0.02mg/kg (ten times greater than that permitted in food for human consumption). In most cases arrangements were made with the Dutch authorities to have the affected consignments held under official control pending their decontamination in the Netherlands before permitting the product back into the feed chain. Where decontamination was not possible product was removed from the feed/food chain. RASSF notifications were issued in relation to the affected consignments and groundnuts from Brazil and Argentina now appear on the list of high-risk products requiring increased levels of official control in accordance with Regulation (EC) 669/2009.

The non-complying trace elements were copper sulphate from Russia and zinc oxide from Turkey. In both cases the total levels of arsenic found exceeded that permitted. The zinc oxide was also found to contain higher than permitted levels of lead. The samples were surveillance samples taken from small amounts of product and investigations revealed that all stocks had been exhausted and further work is being undertaken to establish if the results are indicative of a wider problem with these materials. The Agency's National Enforcement Priorities on Feed Law Enforcement for 2010/11 include reference to the importance of sampling trace elements for the presence of undesirable substances and trace elements have again been included in the imported feed sampling grant programme for 2010/11.

### **13.0 Overall conclusion and future work**

Throughout the year considerable resources were spent on food & feed sampling for the purpose of enforcement activity. Overall the majority of samples were found to be compliant. This programme has provided a useful insight into the overall compliance of imported food and feed. The benefits of this programme has continued into 2010/11

The results of this work show that continual monitoring of imported food and feed is necessary to establish trends in non-compliance and indicate whether statutory controls need amendment.

The results provide reassurance for both consumer safety and animal welfare. However, the work shows that ongoing surveillance of imported food and feed is necessary in order to establish trends in non-compliance and to indicate if existing controls need amending. As a result, the Agency intends to make additional funding available to UK enforcement officers in 2010/11.

Based on the results of this year's programme the Agency has modified the sampling priorities and produced a detailed specification which sent to local authorities as part of [ENF/10/003](#). As part of the on-going improvements to the programme the Agency has improved its reporting mechanism and communication throughout the programme to ensure that LAs are supported throughout the programme and ensure that the full results are reported to Agency.

## 14.0 Appendices

### APPENDIX 1 - List of Local Authorities that took part

| Name of Local name<br>Authority / Group | Names of Local Authorities taking part in the case of a<br>group application |
|---|--|
| Bolton Council                          |  |
| Crawley Borough<br>Council              |  |
| Telford and Wrekin                      |  |
| Wigan                                   |  |
| Birmingham City<br>Council              |  |
| Cambridgeshire<br>County Council        |  |
| Canterbury City<br>Council              |  |
| East Riding Of<br>Yorkshire Council     |  |
| Lancashire                              |  |
| Lancashire County<br>Council            |  |
| Nottinghamshire<br>County Council       |  |
| NW Leiceshtershire                      |  |
| Shepway District<br>Council             |  |

|  |  |
|--|--|
| <b>Uttersford District Council – Stansted Airport</b>                  |  |
| <b>Association of Greater Manchester Authorities (AGMA) Food Panel</b> | Blackburn with Darwen Borough Council, Blackpool Borough Council, Bury MBC, Manchester City Council, Oldham MBC, Rochdale MBC, Salford City Council, Stockport MBC, Tameside MBC, Trafford MBC   |
| <b>CEntSA</b>  | Birmingham, Coventry, Dudley, Sandwell, Solihull, Staffordshire, Stoke-On-Trent, Shropshire, Telford & Wrekin, Walsall, Warwickshire and Wolverhampton. This includes Trading Standards and Environmental Health Groups. The Unitary Authorities includes elements of Trading Standards and Environmental Health Groups.   |
| <b>Durham County Food Liaison Group</b>                                | Durham County Council, Sedgefield Borough Council, Easington District Council, Durham City Council   |
| <b>East of England Trading Standards Authorities (EETSA)</b>           | Bedfordshire County Council<br>Essex County Council<br>Hertfordshire County Council<br>Luton Borough Council<br>Norfolk County Council<br>Peterborough City Council<br>Southend on Sea Borough Council<br>Suffolk County Council<br>Thurrock Council   |
| <b>Hereford and Worcester Food Liaison Group</b>                       | Worcestershire CC, Herefordshire Council, Worcester City Council<br>Environmental Health<br>Bromsgrove District Council Environmental Health<br>Redditch Borough Council Environmental Health<br>Malvern Hills District Council Environmental Health<br>Wychavon District Council Environmental Health<br>Wyre Forest District Council Environmental Health  |
| <b>Lincolnshire Food Group</b>   | Lincolnshire CC, Lincoln City, East and West Lindsey DCs, North and South Kesteven DCs, South Holland DC, Boston BC  |
| <b>North East London Food Liaison Group</b>                            | London Boroughs of Camden, Enfield, Havering, Islington & Tower Hamlets  |
| <b>SWERCOTS</b>  | Bath and North East Somerset Council (unitary authority), Bournemouth Borough Council (unitary authority), Bristol City Council (unitary authority), Cornwall County Council, Devon County Council, Dorset County Council, Gloucestershire County Council, North Cornwall District Council, North Somerset Council (unitary authority), Plymouth City Council (unitary authority), Poole Borough Council (unitary authority), Somerset County Council, South Somerset District Council, South Gloucestershire Council (unitary authority), Swindon Council (unitary authority), Wiltshire County Council |

|  |  |
|--|--|
| <b>Trading Standards South East (TSSE)</b>                         | Bracknell Forest Borough Council, Brighton & Hove City Council, Buckinghamshire County Council, East Sussex County Council, Hampshire County Council, Isle of Wight Council, Kent County Council, Medway Council, Milton Keynes Council, Oxfordshire county Council, Reading Borough Council, Royal Borough of Windsor & Maidenhead, Slough Borough Council, Southampton City Council, Surrey County Council, West Berkshire County Council, West Sussex County Council                              |
| <b>Tees Valley Food Liaison Group.</b>                             | Middlesbrough, Hartlepool, Stockton, Redcar and Cleveland (microbiological sampling only), Darlington (microbiological sampling only)  |
| <b>London Food Co-ordinating Group</b>                             | London Borough of Enfield<br>London Borough of Croydon<br>London Borough of Barnet<br>London Borough of Merton<br>Royal Borough of Kingston<br>London Borough of Richmond-upon-Thames<br>London Borough of Brent<br>London Borough of Hounslow<br>London Borough of Tower Hamlets<br>London Borough of Lambeth<br>Royal Borough of Kensington and Chelsea<br>London Borough of Ealing<br>London Borough of Hillingdon (including Heathrow)<br>London Borough of Harrow<br>London Borough of Hounslow |
| <b>Merseyside Food Safety and Food Standards Groups</b>            | Liverpool CC, St Helens MBC, Warrington BC, Wirral MBC, Sefton MBC, Halton BC, Knowsley MBC, Cheshire CC   |
| <b>Trading Standards East Midlands</b>                             | Leicestershire<br>Derbyshire<br>Northamptonshire   |
| <b>Yorkshire &amp; the Humber Trading Standards Group (YAHTSG)</b> | Barnsley MBC, Doncaster MBC, Hull City Council, North East Lincolnshire Council, North Lincolnshire Council, North Yorkshire County Council, Rotherham MBC, Sheffield City Council, West Yorkshire Joint Services (comprising of Bradford, Calderdale, Kirklees, Leeds and Wakefield) and City of York Council.  |
| <b>LB Bexley</b>   |  |

|  |   |
|--|---|
| <b>LB Camden</b>   |   |
| <b>LB City Of Westminster</b>                                    |   |
| <b>LB Hackney</b>  |   |
| <b>LB Hillingdon</b>   |   |
| <b>LB Kingston Upon Thames</b>                                   |   |
| <b>Southwark</b>   |   |
| <b>LB Sutton</b>   |   |
| <b>Rotherham MBC</b>   |   |
| <b>Walsall Council</b>   |   |
| <b>Northern Ireland Food liaison Group</b>                       | All of the 26 District Councils in Northern Ireland |
| <b>Crawley (Gatwick)</b>   |   |
| <b>London Port Health Authority</b>                              |   |
| <b>Mersey Port Health Authority</b>                              |   |
| <b>Portsmouth City Council/ Portsmouth Port Health Authority</b> |   |
| <b>Southampton Port Health Authority</b>                         |   |
| <b>Suffolk Coastal Port Health Authority</b>                     |   |

|  |   |
|--|---|
| <b>Lothian and Borders Food Liaison Group</b>                            | City of Edinburgh Council; West Lothian Council; East Lothian Council; Scottish Borders Council; Midlothian Council             |
| <b>North of Scotland Food Liaison Group</b>                              | Aberdeen City Council; Aberdeenshire Council; Highland Council; Moray Council; Orkney Islands Council; Shetland Islands Council |
| <b>Renfrewshire Council Environmental Services Department</b>            |   |
| <b>South Ayrshire Council</b>  |   |
| <b>Carmarthenshire County Council</b>                                    |   |
| <b>Neath Port Talbot CBC</b>   |   |
| <b>Pembrokeshire County Council</b>                                      |   |
| <b>Rhondda Cynon Taff County Borough Council</b>                         |   |
| <b>South &amp; West Wales Public Analysts</b>                            |   |
| <b>South and West Wales Food and Agriculture Standards Liaison Group</b> | Bridgend County Borough Council; Powys County Council; Pembrokeshire County Council   |
| <b>Torfaen County Borough Council</b>                                    |   |
| <b>Glamorgan Food Standards Group</b>                                    | Bridgend, Cardiff, Merthyr, Neath Port Talbot, Rhondda Cynon Taf (RCT), Swansea, Vale of Glamorgan                              |



**APPENDIX 2 – Breakdown of follow up action taken according to sample failure**

|  | Additives | Claims | Contaminants | Heavy metals | Irradiation | Microbiological | Mycotoxins | Labelling | Total       |
|--|-----------|--------|--------------|--------------|-------------|-----------------|------------|-----------|-------------|
| Home Authority Referral                                  |           |        |              |              |             |                 |            |           |             |
| Letter sent to imported/company/retailer/FBO             |           |        |              |              |             |                 |            |           |             |
| Minor labelling - No action taken                        |           |        |              |              |             |                 |            |           |             |
| Follow up sample proved satisfactory                     |           |        |              |              |             |                 |            |           |             |
| Not known at this stage                                  | 2         | 4      | 1            | 1            |             |                 | 1          | 23        | 32          |
| Informal warning   |           | 11     | 3            | 2            |             |                 | 1          | 14        | 31          |
| Advice to retailer                                       |           |        | 1            | 1            |             |                 |            | 17        | 19          |
| FSA Risk Assessment - No public health Hazard - Released |           |        |              |              |             |                 | 18         |           | 18          |
| Product no longer imported/stocked                       |           | 5      | 4            | 1            |             |                 | 2          | 5         | 17          |
| Product re-labelled                                      |           |        |              |              |             |                 |            | 16        | 16          |
| Product destroyed  |           |        |              |              |             |                 | 9          |           | 9           |
| FSA Notified   |           | 7      |              |              |             | 1               |            |           | 8           |
| Improvements to companies Standards Operating Procedures |           | 7      |              |              |             |                 |            |           | 7           |
| product voluntarily surrendered                          |           |        | 2            |              |             |                 | 2          | 3         | 7           |
| Re-exported  |           |        |              |              |             |                 | 6          |           | 6           |
| Product relabelled                                       |           |        | 1            |              |             |                 |            | 3         | 4           |
| RASFF or Incidents form sent to FSA                      |           |        |              |              |             |                 | 4          |           | 4           |
| Company ceases trading                                   |           |        |              |              |             |                 |            | 1         | 1           |
| Formal sample proved satisfactory                        |           |        |              |              | 1           |                 |            |           | 1           |
|  |           |        |              |              |             |                 |            |           | <b>1149</b> |

## **APPENDIX 3 – Legislative controls**

### **Legislative controls**

#### **Mycotoxins**

Aflatoxin B1: Statutory controls set in Directive 2003/100/EC, amending Directive 2002/32.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:285:0033:0037:EN:PDF>

Deoxynivalenol, zearalenone, ochratoxin A, fumonisins B1 and B2: Commission Recommendation 2006/576

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:229:0007:0009:EN:PDF>

#### **Hazardous metals**

Arsenic & Lead: Directive 2003/100/EC amending Directive 2002/32

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:285:0033:0037:EN:PDF>

Mercury: Directive 2005/8/EC amending Directive 2002/32.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:027:0044:0045:EN:PDF>

Cadmium: Directive 2002/32

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:140:0010:0021:EN:PDF>

#### **Dioxins & dioxin-like PCBs**

Statutory controls set in Directive 2006/13/EC amending Directive 2002/32.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:032:0044:0053:EN:PDF>

#### **Melamine**

Commission Decision 2008/798

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:273:0018:0020:EN:PDF>

Decision 2008/921

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:331:0019:0020:EN:PDF>

#### **GM feed**

Regulation 1829/2003

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:268:0001:0023:EN:P>