

Retail Surveillance Sampling Programme 2024/25

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FSA Research and Evidence

This project conducted targeted surveillance sampling of retail food products for the Food Standards Agency (FSA) to identify emerging food safety risks and enhance the FSA's intelligence on the food system. The programme was delivered in partnership with 3 Local Authority Official Food and Feed Laboratories (OLs) and 2 private OLs in England and Wales.

A total of 822 food samples from 24 different food commodity types were purchased from physical and online retailers in England, Wales, and Northern Ireland and were tested for compliance with relevant food regulations.

The samples were categorised into basket or frequently consumed foods, surveillance foods to inform the FSA's knowledge of risk, and science and research foods to inform the FSA's scientific knowledge and policy development. The overall findings showed that most foods were compliant with the testing and assessments undertaken.

Of the samples tested for allergens 96% were deemed compliant whilst 4% indicated the presence of an undeclared allergen. Milk was the most common undeclared allergen found. In terms of authenticity, 94% of samples were deemed authentic. Reasons why samples were inauthentic included Basmati rice which contained more non-Basmati rice varieties than allowed, and non-pork meat found in pork sausages. The compliance rate for unauthorised ingredients was 93%, with issues including non-permitted sweeteners, and unauthorised and excess use of colours. For composition, 87% of samples were compliant, with issues including less meat content than declared in chicken ready meals and pork sausages, and incorrect fat content in milk. No mycotoxins or heavy metals were detected at levels of concern, but some oregano samples contained foreign bodies. Labelling irregularities were found in 21% of food products. These issues largely related to technical aspects such as incorrect typographical format of allergen information and durability dates, or missing or incorrect nutritional information.

1. Introduction

This 2024-25 Retail Surveillance Sampling Programme carried out by Official Feed and Food Laboratories (OLs) in England and Wales is the fifth national survey addressing the need for ongoing monitoring of food safety and standards across various retail environments. It also builds upon the work carried out in the previous surveys conducted since 2020 (FSA et al., 2023a, 2023b; 2024a, 2024b).

With the increasing complexity of food supply chains and emerging safety risks, it is crucial to ensure that food products available to consumers are safe and product information is not misleading. This programme of targeted surveillance sampling contributes to the aims of the Food Standards Agency (FSA) through identifying and evaluating emerging food risks and monitoring that food is what it says it is. The results assist the FSA in narrowing down areas of risk to food from the wide range of intelligence they receive and contribute to the monitoring of food standards in the United Kingdom post-EU Exit.

Based on intelligence from the Food Standards Agency, 24 key food commodities were identified for sampling and analysis to provide insights into relevant issues and offer a snapshot of the foods available on the market at the time of sampling. The food commodities were divided into the following categories:

1.1. Basket of Foods

These are foods that are deemed to be frequently consumed and in the most part are targeted due to known potential risks. The basket commodities are sampled regularly but not necessarily annually. This year's basket included 10 of the commodities from the prior year and 5 food types (breakfast cereals, butters and butter spreads, cheese, coffee and plain yogurt) were not included this time. To ensure that a diverse range of commonly consumed foods are sampled regularly, 3 products (minced meat, cow's milk and basmati rice) from the previous year's basket were added.

1.2. Surveillance

These are products chosen because they might pose risks based on knowledge from various sources like market trends and global information, and which surveillance sampling was deemed useful to enhance the FSA's understanding.

1.3. Science and Research

These are foods chosen to gather data for scientific and policy development purposes and studying them helps the FSA to learn more and develop new policies. There were not legal limits to compare the results from for all the tests conducted. In these cases, a satisfactory or unsatisfactory outcome was not assigned, and any significant results were highlighted as noteworthy. The samples from this category have not been included when calculating overall compliance rates.

The types and number of samples with the analysis required for each of the above categories can be found in Tables 2, 3 and 4 in Appendix A.

The foods were purchased from retailers in England, Wales and Northern Ireland and tested by OLs. The OLs in the UK play a vital role in ensuring the safety and quality of food and animal feed by conducting food and feed testing. This provides scientific evidence to regulatory bodies to enforce food safety laws and regulations.

The results of testing were reviewed against appropriate legislation and reported by the Public Analysts working in the 5 designated Public Analyst Laboratories in England and Wales:

- Hampshire Scientific Service
- Kent Scientific Services
- Lancashire County Scientific Services
- Minton Treharne and Davies Ltd
- Public Analyst Scientific Services

2. Method

Each of the participating laboratories were provided with a project plan detailing the sampling and analysis they were to undertake. An example plan can be found in Table 5 in Appendix A.

2.1. Sampling

The project aimed to provide representative surveillance across England, Wales, and Northern Ireland.

2.1.1. Sample Collection

OL staff bought informal samples at full cost from various businesses selling to the public, either in person or online, without notifying the Food Business Operators (FBOs) that the products were being bought for testing

purposes. Each sampler received a shopping list and a designated area to shop, ensuring that samples were collected from a variety of brands and businesses. Shoppers were instructed to target a mix of budget/own-brand products from both small and large retailers as well as premium products. They were also asked to consider where samples for previous surveys had been purchased to help prevent the same shops being sampled from year on year. A maximum of 2 samples could be purchased from the same shop within the same local authority area to minimise the burden on local authorities taking follow up action and ensure good geographical spread.

All samples bought for this programme had to be packaged. Items prepacked for direct sale (PPDS) were only purchased if they had an ingredients list. Foods tested for undeclared allergens couldn't have precautionary allergen labelling (PAL) for those allergens.

2.1.2. Geographic Distribution

Each OL identified specific areas in England, Wales, and Northern Ireland for staff to buy samples. Purchased samples were tracked by postcode and geospatially mapped to ensure a wide regional coverage. Areas not covered by in-store shopping were targeted for online purchases whenever possible.

2.1.3. Retail Outlet Types

Samples were taken from a mix of FBOs. The aim was to buy 40% of the foods from large retailers and 60% from smaller FBOs. Large retailers included mainstream supermarkets and large food distributors such as cash and carries. Small FBOs included corner shops, franchises, farm shops and speciality shops. Shoppers also aimed to buy 10% of the samples from online retailers.

The actual proportion of where samples were taken from is given in section 4.7 and more detail is shown in Figures [2](#), [3](#) and [4](#).

2.1.4. Sample Size

Sampling information was provided for each food item to ensure the right amount and quality for testing was bought. In general, only single food items were purchased but if multiple packets were needed, due to sample size or the nature of the hazard being tested, then a combined sample using items from the same batch number was used. This was particularly relevant to samples tested for mycotoxins which are not evenly distributed so at least 4 samples of the same batch were purchased for oregano and turmeric, and at least 3 samples of cured pork and aged cheese were tested.

All foods were purchased as informal surveillance samples, so the number of samples tested was not always consistent with that prescribed in relevant legislation for enforcement purposes due to the challenge of collecting a large quantity of the same batch code in a retail setting.

2.1.5. Duplication of Samples

To minimise duplication the sampling instructions allocated the major supermarkets and the main brands for each commodity to the OLs.

2.1.6. Sample Integrity

Sampling instructions specified how to transport and store samples properly to keep them in good condition. The integrity of the samples was maintained with comprehensive records kept to demonstrate chain of custody.

The sampling instructions including commodity details, sample size and transport requirements can be found in Table 5 in Appendix A.

2.2. Analysis

Samples were allocated to the OLs for analysis according to the analytical capabilities of each laboratory and where possible the laboratories used methods accredited to ISO17025. All the samples in this project were analysed using procedures suitable for official control samples and reported against appropriate legislation, international standards and/or industry best practice guidance for the food product and the tests undertaken.

2.3. Reporting Results

Public Analysts reviewed the analytical results and reported whether the samples complied with the relevant legislation, international standards and/or industry best practice guidance. If regulations differed between regions, compliance was assessed based on the laws of the country where the product was sold:

- The Food Information Regulations (*The Food Information (Amendment) (England) Regulations, 2022; The Food Information Regulations, 2014; The Food Information Regulations (Northern Ireland), 2014; The Food Information (Wales) (Amendment) (No.2) Regulations, 2020*)
- The Food Additives Flavourings Enzymes and Extraction Solvents Regulations (*The Food Additives, Flavourings, Enzymes and Extraction Solvents (England) Regulations, 2013; The Food Additives, Flavourings, Enzymes and*

Extraction Solvents Regulations (Northern Ireland), 2013; The Food Additives, Flavourings, Enzymes and Extraction Solvents (Wales) Regulations, 2013)

- The Nutrition and Health Claims Regulations (*The Nutrition and Health Claims (England) Regulations, 2007; The Nutrition and Health Claims Regulations (Northern Ireland), 2007; The Nutrition and Health Claims (Wales) Regulations, 2007*)
- The Food Supplements Regulations (*The Food Supplements (England) Regulations, 2003; The Food Supplements Regulations (Northern Ireland), 2003; The Food Supplements (Wales) Regulations, 2003*)
- The Products Containing Meat etc. Regulations (*The Products Containing Meat Etc. (England) Regulations, 2014; The Products Containing Meat Etc. Regulations (Northern Ireland), 2014; The Products Containing Meat Etc. (Wales) Regulations, 2014*)

The Public Analysts determined whether the sample was, in their professional opinion, satisfactory with regards to the labelling assessment and the tests carried out. Non-compliances were classified into the following hazards:

- Allergens
- Authenticity
- Composition
- Contaminants (physical or chemical)
- Labelling
- Unauthorised Ingredient

Not all samples analysed for science and research purposes had regulatory standards for compliance assessment. For these samples, any noteworthy results were reported to the FSA.

The FSA received a report for each unsatisfactory sample, including photographs of packaging and an interpretation of the results, for appropriate follow up action. For example, this may include handling a food safety incident. If a laboratory found a significant health hazard, the FSA was informed immediately.

The complete project data for all samples was provided to the FSA.

Table 1. Numbers of Samples Purchased and Analysed

Summary	Number
Total number of Products Sampled	822
Basket of Food Samples	445
Surveillance Samples	307
Science and Research Samples	70

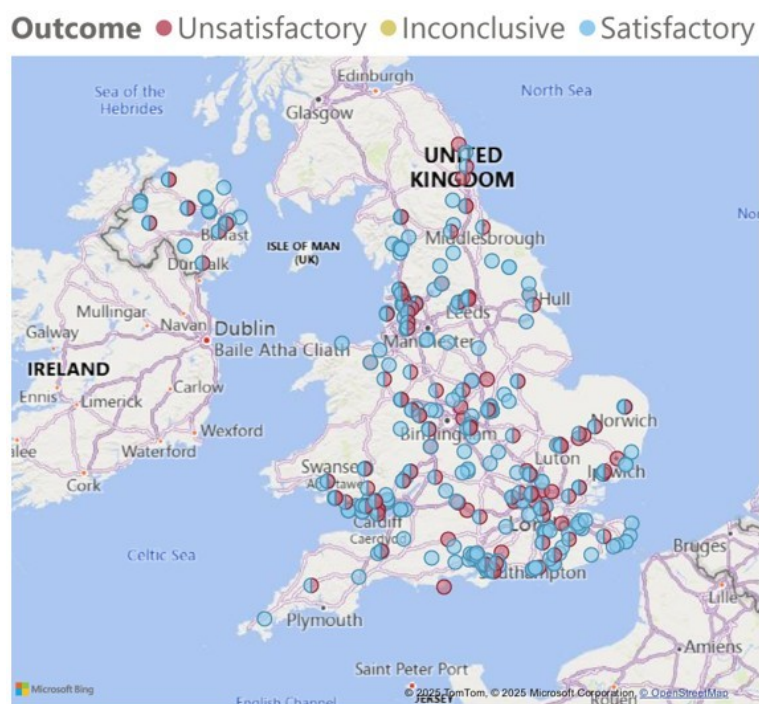


Figure 1. Sample Distribution Map with Outcomes

3. Results

A total of 822 samples were purchased across England, Wales and Northern Ireland of which 752 were analysed by OLs for compliance against legislation, and 70 were tested for science and research purposes.

In general, single food items (samples) were purchased for analysis as described in section 2.1.4. and this should be taken into consideration when interpreting the results. Results for composition for example may not be representative of the whole batch of a product and non-compliances may require further assessment.

[Figure 1](#) Sample Distribution Map with Outcomes shows the sampling distribution of all samples across England, Wales and Northern Ireland and indicates the samples that were compliant and non-compliant. There is a relatively even spread of samples with no hot spots for non-compliant results.

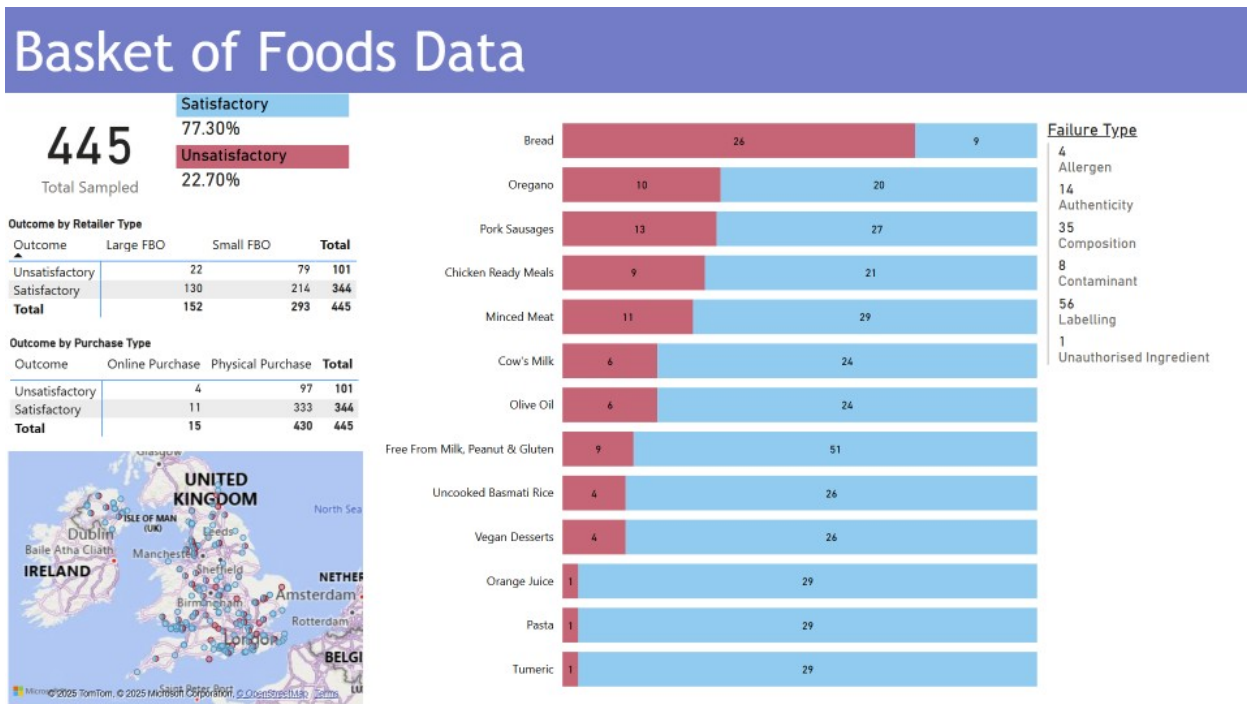


Figure 2. Summary of Basket of Foods Data

3.1. Basket of Foods

A total of 445 samples from 13 frequently consumed food types were tested for compliance to appropriate legislation, international standards and/or industry best practice guidance with rates ranging from 26% to 97%.

[Figure 2](#) Summary of Basket of Foods Data shows that 445 basket of food samples were taken of which 344 samples were compliant, 101 were non-compliant.

The graphic includes:

- A distribution map showing the basket sampling coverage across England, Wales and Northern Ireland. There is a fairly even coverage, with some denser areas of sampling in the areas closest to the laboratories.
- A stacked bar chart of the different basket commodities showing the number of compliant and non-compliant samples for each type. For example, bread is shown to have 9 compliant and 26 non-compliant outcomes.
- A table listing the retail outlets and the total number of basket samples taken from each, broken down as the number of compliant and non-compliant results. For

example, of the 445 samples, 293 were taken from small FBOs, of which 214 were compliant, and 152 were taken from large FBOs, of which 130 were compliant.

- A second table shows the split of online and physical purchases. Of the total 445 basket samples, 15 were purchased online of which 11 were compliant, and 333 of the 430 physical purchases were also compliant.

3.1.1. Bread

Bread products were analysed for the presence of undeclared sesame and milk allergens and compliance with labelling regulations and industry best practice guidance. All samples were prepacked except for one PPDS product. Bread products had the lowest compliance rate of the basket of food commodities at 26%, with only 9 of the 35 samples deemed satisfactory. The possible presence of undeclared allergens was indicated in 3 samples, but primarily samples were unsatisfactory because of labelling issues, identified on 26 samples.

Samples were analysed for sesame and milk allergens using enzyme-linked immunosorbent assay (ELISA) testing kits. Undeclared milk was detected in 2 samples, a packet of high fibre brown rolls (13 mg/kg total milk) and a white sliced bread (8.3 mg/kg total milk). Another sample of the same white sliced bread with a different batch code was also tested. Milk protein was not detected in this sample, suggesting that this contamination potentially only affected some products.

The presence of undeclared sesame was indicated in a sliced seeded loaf. However, the sesame ELISA kit validation data indicated possible cross-reactivity with sunflower seed and linseed, which were both listed ingredients in the product. This result was reported to the FSA for further consideration.

The bread samples were assessed for full labelling compliance with The Food Information Regulations implementing retained regulation (EU) No 1169/2011, and industry best practice guidance (BRC, 2013; European Union (EU), 2011), and 26 were reported as non-compliant for labelling.

A total of 18 samples were identified to have issues regarding allergen labelling. Five samples were non-compliant with The Food Information Regulations due to missing or incorrect emphasis of the declared allergens and the use of misleading PAL statements. The remaining unsatisfactory samples did not adhere to the voluntary guidance published in March 2013 by the British Retail Consortium (BRC) and the Food and Drink Federation (FDF) (BRC, 2013). These issues included the allergy advice statements not

being used as outlined, such as “For allergens, including cereals containing gluten, please see ingredients in bold”, as well as misspelling of allergenic ingredients, and incorrect format of the allergy advice.

Labelling issues were identified in 17 samples related to nutritional information. Issues included missing information, incorrect format, or errors in reference intakes. Additionally, 20 samples did not adhere to rounding guidelines set by the European Commission Health and Consumers Directorate-General in December 2012 (EC, 2012).

There were 11 broader labelling issues, such as inconsistent labelling (e.g., use of plurals), incorrect format for prescribed additive category names, missing serving sizes, insufficiently precise food names, use of terms like “authentic” without qualification, missing importer name and address, and grouped ingredients not in the prescribed format.

Finally, 10 samples had durability indication wording that was not in the prescribed format.

3.1.2. Oregano

Thirty oregano samples were tested for metals (lead, cadmium, mercury, and arsenic), aflatoxins, and ochratoxin A. They were also examined microscopically to assess authenticity and compositional quality. Of these, 20 samples were satisfactory, giving a compliance rate of 67%. All samples met the standards for metals and mycotoxin levels. The 10 non-compliant samples were identified through microscopic examination and had issues related to authenticity, composition, and physical contamination.

In terms of authenticity, 5 samples contained leaf material not consistent with oregano. Of these, 2 were described as not typical of oregano, while 3 contained other identifiable leaves, including sage, thyme, olive, and myrtle.

Compositionally, 5 samples were non-compliant due to containing extraneous plant material above the 2% threshold for the lowest class / grade II of oregano as specified in the Food and Agriculture Organisation of the United Nations and World Health Organisation Standard for Dried Oregano CXS 342-2021, 2022 amendment (FAO & WHO, 2022).

Physical contaminants were identified in 8 samples of oregano, with 2 samples containing more than one type of contamination. Insect fragments or insect eggs were found in 6 samples, 2 samples contained plastic contamination, and 3 samples contained fragments of shell, stone, or soil-like material. The presence of such foreign material is deemed unacceptable according to the BRC, FDF and Seasoning and Spice

Association (SSA) Guidance on Authenticity of Herbs and Spices, and the European Spice Association (ESA) Quality Minima Document, 2018 (BRC et al., 2017; ESA, 2018).

3.1.3. Pork Sausages

Fresh and frozen pork sausages were analysed for the presence of any undeclared species and for meat content to check compliance with Quantitative Ingredient Declaration (QUID). The Commission Notice on the Application of the Principle of Quantitative Ingredients Declaration (QUID), 2017 provides guidelines on the application of the principle of QUID in the context of retained Regulation (EU) No 1169/2011 (EC, 2017). Sample labelling was also assessed in relation to the analysis undertaken. Of the 40 samples tested the compliance rate was 68%, with 13 samples failing to meet the testing criteria.

Meat other than pork was detected in 4 samples. Cow DNA was found in all 4 samples, and one sausage also contained sheep and chicken DNA. The levels of these other meats were low, suggesting poor practice or cross-contamination rather than deliberate inclusion. Compositional requirements were not met in 9 samples as the apparent meat content of the samples was less than declared, and 3 samples had labelling irregularities where the declaration of meat content was not provided in accordance with The Food Information Regulations.

3.1.4. Chicken Ready Meals

A total of 30 fresh and frozen chicken ready meals containing pieces of chicken were checked for meat species by DNA and for QUID by physical separation and weighing. All the samples were satisfactory with regards to meat speciation with only chicken DNA detected. However, 7 samples were non-compliant due to compositional issues and 2 samples were non-compliant due to labelling issues related to the analysis. The overall compliance rate for chicken ready meals was 70%.

For the 7 samples deemed unsatisfactory for composition, the quantity of chicken was less than the declared QUID. Although there is no legal lower tolerance set for QUID declarations a lower tolerance of 10% is widely accepted as reasonable and is used by the Public Analysts.

The Food Information Regulations require meat products that are sold as prepacked for direct sale to be labelled with a meat content declaration. The 2 samples with labelling non-compliance failed to include a QUID for chicken.

3.1.5. Minced Meat

A total of 40 fresh and frozen minced meat samples, 36 beef, 3 lamb and one pork, were analysed for composition including fat content, excess fat, and collagen to meat protein ratio. They also had a labelling assessment undertaken related to the analysis. The compliance rate was 73% with 11 non-compliant samples in total.

According to retained Regulation (EU) No 1169/2011, Annex VI, enforced by The Food Information Regulations, 3 beef samples were unsatisfactory for composition (EU, 2011). They all had higher fat levels than the maximum permitted for the labelled minced meat (either minced beef or lean minced beef). A collagen to protein ratio above the maximum permitted was also found in one of these samples and one had a labelling irregularity concerning the use of the national mark. The sample bore the words “For UK market only” but did not include the required square depiction.

There were 8 other labelling non-compliances in relation to The Food Information Regulations that all related to nutritional information that was not sufficiently accurate and therefore misleading to consumers. A fat content greater than declared on the label was identified in 4 beef samples and 2 samples (one beef and one lamb) had a fat content lower than declared. Two samples had inaccurate nutritional information relating to protein levels – one lamb higher, and one pork lower than declared. Conflicting labelling and nutritional information regarding typical fat content was reported on one sample which was also missing a required statement of the collagen/meat protein ratio.

3.1.6. Olive Oil

The authenticity and composition of 30 olive oil samples were tested for compliance with Regulation (EEC) 2568/91 (EC, 1991) as enforced by The Olive Oil (Marketing Standards) Regulations (2014), which defines the characteristics to be fulfilled by oil described as olive oil. The overall compliance was 80%. All samples were satisfactory with regards to authenticity.

Five olive oils did not meet the compositional requirements laid out in Annex I of Regulation (EEC) 2568/91 (EC, 1991) as enforced by the Olive Oil (Marketing Standards) Regulations (2014).

Two samples had fatty acid profiles showing significant deviations from the average profile for virgin and extra virgin olive oils suggesting that the oil may not be 100% from olives.

A sample labelled as “a high quality blend of refined and extra virgin olive oil obtained directly from olives” failed to meet the requirements for “olive oil-a blend of refined and extra virgin olive oil” as the peroxide value

found (18.1mEq/kg fat) exceeded the maximum permitted limit of 15.0. The peroxide value is a measure of the oil quality and increases as the oil degrades. Oxidation and the formation of peroxides can continue after bottling especially if the packaged food is exposed to oxygen, light and elevated temperatures. This sample had a best before date 09/2023 and was purchased on 09/07/2024 so it is possible that the raised peroxide level was due to storage conditions rather than the original oil quality.

Another bottle labelled as extra virgin olive oil did not meet the requirements for “extra virgin olive oil” as the peroxide value (22.7mEq/kg fat) exceeded the maximum permitted limit of 20.0.

One bottle of olive oil had both composition and labelling non compliances. Both the peroxide and acidity levels were found to be below the levels declared on the label but still exceeded the maximum quality characteristics for a refined olive oil. The acidity also exceeded the maximum permitted for an olive oil composed of refined olive oil and virgin olive oils. Additionally, the specific extinction at 268nm was below the maximum permitted for refined olive oil and an olive oil composed of refined olive oil and virgin olive oils but was above the maximum permitted in virgin or extra virgin olive oils. The sample was simply described as “Olive Oil” which was insufficient.

A sample described as an Olive Oil failed to meet the required labelling standards as it included information that should only be given for an extra virgin olive oil.

3.1.7. Cow's Milk

Thirty cow's milk samples were tested for fat content and associated labelling checks. The compliance rate was 80% with 6 samples being found to be non-compliant for composition.

According to The Drinking Milk (England) Regulations (2008), whole milk must have a fat content of at least 3.5% (w/w). Three whole milk samples were found to contain 6%, 7.7%, and 25% less fat than the minimum permitted.

The Drinking Milk (England) Regulations (2008) also prescribe that semi-skimmed milk must have a fat content between 1.5% and 1.8%. Of the semi-skimmed milk samples tested, one had 20% more fat than the maximum permitted, while 2 samples contained 8% and 32% less fat than the minimum permitted.

3.1.8. Free From Products

A total of 60 'free from' products were tested for the presence of the relevant allergen – peanuts or milk, or cereals containing gluten, and their labelling was assessed against retained Regulation (EU) No 1169/2011 (EU, 2011), enforced by The Food Information Regulations in relation to the allergen information.

For each 'free from' claim 20 samples were analysed and there was an overall 85% compliance rate. No undeclared allergens were detected in any of the samples tested. However, 9 samples had allergen labelling issues.

Four products were labelled as 'free from gluten'. Commission Implementing Regulation (EU) No 828/2014 of 30 July 2014 on the requirements for the provision of information to consumers on the absence or reduced presence of gluten in food (EC, 2014), prescribe that the only statements which can be used are 'gluten-free' and 'very low gluten' provided conditions are met. 'Free from gluten' is not a prescribed statement therefore the labelling does not meet these requirements.

The Food Information Regulations enforces retained Regulation (EU) No 1169/2011 on the provision of food information to consumers. Article 21 of Regulation (EU) No 1169/2011 prescribes the name of the substance or product as listed in Annex II shall be emphasised through a typeset that clearly distinguishes it from the rest of the list of ingredients, for example by means of the font, style or background colour (EU, 2011). This requirement was not met in 5 samples (2 dairy free products, 2 gluten-free and one peanut free) as the allergenic ingredient was either not emphasised at all or inconsistently emphasised. In addition, one of these samples also had ingredients, which are not identified as an allergen within Annex II, listed in bold typeface. Another sample did not bear an allergy advice warning statement explaining the significance of the bold emphasised ingredient to a purchaser/consumer, and therefore did not adhere to the voluntary allergen labelling guidance published in March 2013 by the British Retail Consortium and the Food and Drink Federation (BRC, 2013).

3.1.9. Uncooked Basmati Rice

The authenticity of 30 Basmati rice samples was checked using the detection of PCR micro satellite markers and the compliance rate was 87%.

Three samples failed authenticity tests because they exceeded the maximum 7% non-Basmati rice content specified in the British Retail Consortium's Code of Practice (COP) for Basmati Rice (July 2022) (BRC, 2022). These samples contained 17%, 32%, and 100% non-Basmati varieties.

Additionally, one of these samples, along with a fourth non-compliant sample also deemed as inauthentic, failed to comply with the COP requirement that if a label specifies a particular variety, the Basmati rice content should be at least 97% of that variety. The stated specific Basmati varieties in these samples were found to be 31% and 79%.

3.1.10. Vegan Cakes and Desserts

A total of 30 cakes and desserts labelled as vegan and without any PAL (e.g. 'may contain') for milk or egg were tested for the presence of these allergens. The labels of the samples were also reviewed in relation to allergens. There was an 87% compliance rate. Undeclared egg protein was not detected in any samples, but undeclared milk protein was detected in one.

A vegan vanilla ice cream labelled as 'dairy free' was found to contain milk protein (0.4 mg/kg casein). According to Article 14 of Regulation 178/2002 (EC, 2002) and The Food Safety and Hygiene (England) Regulations (2013), the sample was non-compliant due to the presence of the undeclared milk allergen and missing allergen labelling.

Three additional samples, 2 ice-creams and one carrot cake, were unsatisfactory regarding allergen labelling. The allergenic ingredients were either not emphasized at all, not fully emphasized, or inaccurately stated, which could mislead consumers about the presence of allergens.

3.1.11. Orange Juice

A total of 30 orange juice samples were tested for the presence of unauthorised colours, composition (Brix), sulphur dioxide and related labelling checks. The compliance rate was 97%. All samples were satisfactory regarding the compositional analysis and no unauthorised colours were found.

One Smooth Orange Juice was non-compliant for labelling. The nutrition claim "no added sugars" was made, but all fruit juices can make this claim as sugar is not a permitted ingredient (Directive 2012/12/EU, amending Directive 2001/112/EC (EU, 2012), as enforced by The Fruit Juices and Nectars (England) Regulations (2013) and retained Regulation (EU) No 1169/2011 (EU, 2011), article 7 as enforced by The Food Information Regulations) and nutrition claims must be meaningful and not misleading to consumers.

3.1.12. Pasta

Pasta claiming to be made from durum wheat was tested for authenticity. The compliance rate for the 30 samples was 97%.

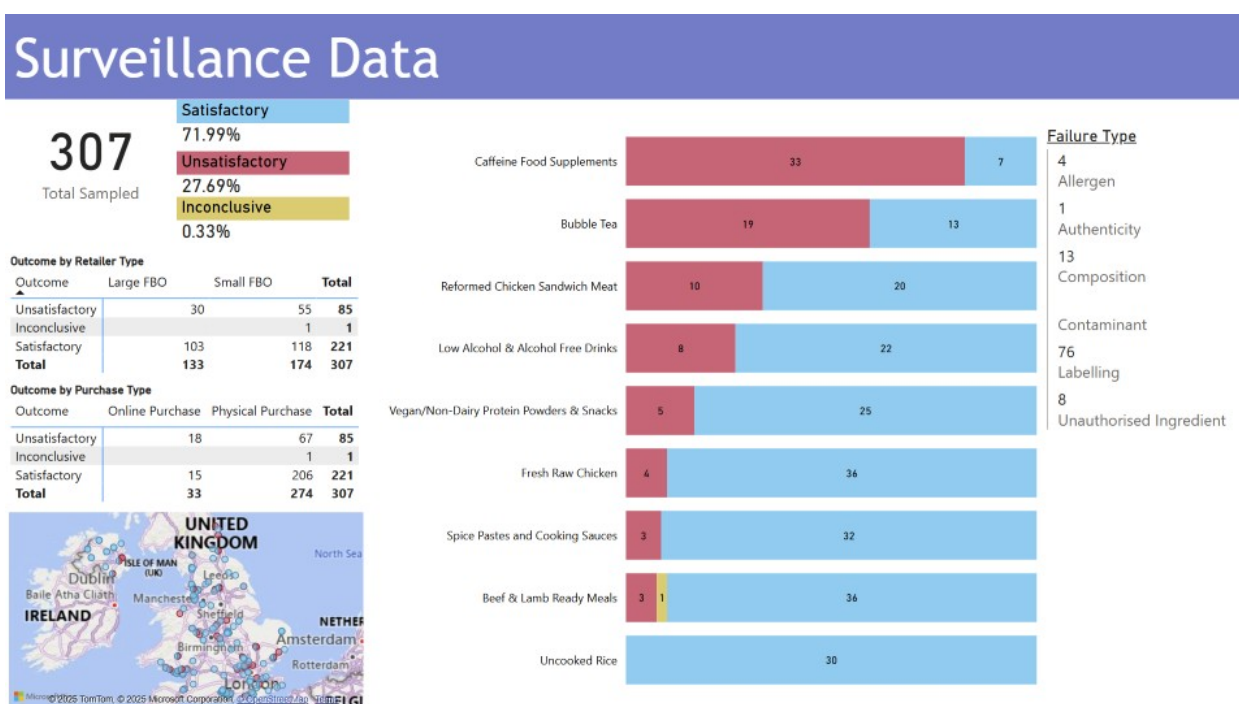


Figure 3. Summary of Surveillance Data

Durum wheat speciation was analysed using the R-Biopharm DUROTEST S ELISA Membrane Kit which uses a monoclonal antibody specific for the protein friabilin, which is only present in non-durum wheats. The presence of common wheat at a level greater than 3% was found in one pasta sample making it unsatisfactory for authenticity.

3.1.13. Turmeric

Samples of turmeric were tested for aflatoxins, ochratoxin A, heavy metals and unauthorised ingredients including colours. Of the 30 samples tested 29 were reported as satisfactory giving a compliance rate of 97%. All samples were satisfactory regarding their content of mycotoxins and heavy metals.

The use of preservatives, sweeteners and colours in food is controlled by The Food Additives, Flavourings, Enzymes and Extraction Solvents Regulations enforcing retained Regulation (EC) No 1333/2008 of the European Parliament and of the Council on food additives (EU, 2008). Sudan dyes are not permitted food colours, and as such if detected would be classified as an unauthorised ingredient. Sudan I, a genotoxic and carcinogenic dye, which should not be present in food was detected in one turmeric sample.

3.2. Surveillance

A total of 307 samples from 9 surveillance commodity types had compliance rates with legislation ranging from 18% to 100%.

[Figure 3](#) Summary of Surveillance Commodities Data shows that 307 surveillance samples were taken. Of those tested for compliance 221 samples were compliant, 85 were non-compliant, and one sample returned inconclusive results. The graphic includes:

- A distribution map showing the surveillance sampling coverage across England, Wales and Northern Ireland. There is a fairly even spread with no hot spots identified.
- A stacked bar chart of the different surveillance commodities showing the number of compliant and non-compliant samples for each type. For example, Caffeine Food Supplements are shown to have 7 compliant and 33 non-compliant outcomes, and bubble tea is shown to have 13 compliant and 19 non-compliant outcomes.
- A table listing the retail outlets and the total number of surveillance samples taken from each, broken down as the number of compliant and non-compliant results. For example, of the total 307 samples 174 were taken from small FBOs, of which 118 were compliant.
- A second table shows the split of online and physical purchases. For example, of the total 307 surveillance samples, 33 were purchased online, and of the 221 compliant samples 206 were physically purchased.

3.2.1. Caffeine Food Supplements

Caffeine containing food supplements, such as capsules, tablets, powders, chews, and gummies, were tested for their caffeine content and assessed for labelling compliance. The overall compliance rate was found to be 18%, with 33 out of 40 samples being non-compliant.

Caffeine is commonly included in various food supplements to enhance focus, energy, and performance. However, excessive caffeine intake can have negative health effects. The European Food Safety Authority (EFSA) advises that healthy adults should not consume more than 400mg of caffeine per day (EFSA, 2015).

The testing revealed that 7 samples had caffeine levels outside a reasonable tolerance of 20% of the stated amount (whilst there is no legal tolerance for caffeine, 20% is the tolerance that used to be applied to nutrition claims prior to EU exit as outlined in The European Commission Health and Consumers Directorate-General with regard to the setting of tolerances for nutrient values declared on a label, December 2012 (EC, 2012)).

For instance, a pre-workout formula and a high-caffeine energy support tablet contained 27% and 37% more caffeine than declared, respectively. If taken at the maximum dosage as per the label instructions, these products would equate to 127% and 200% of the EFSA recommended daily intake. Additionally, 5 samples were found to be deficient in caffeine by between 32% and 78% and 6 of these 7 samples also had labelling irregularities.

Labelling was assessed against 3 regulations: The Food Information Regulations, The Nutrition and Health Claims Regulations and The Food Supplements Regulations. The assessment found that 30 samples were non-compliant with The Food Information Regulations, 22 samples with The Nutrition and Health Claims Regulations, and 11 samples with The Food Supplements Regulations. Overall, 29 samples had labelling offenses, with 9 samples being non-compliant with all 3 regulations.

Under The Food Information Regulations, 6 samples did not provide any caffeine warning as required, and a further 22 samples either did not correctly position the warning on the label, or word the caffeine warning in accordance with the regulations.

3.2.2. Bubble Tea

A total of 32 bubble tea samples were tested for the presence and use of unauthorised additives, including unauthorised or excess colours, additives, sweeteners and preservatives. The samples included 13 pre-packed retail products and 9 takeaway drinks from food outlets which were tested as a whole drink and 10 bubble tea kits which were tested as 2 components: the bubbles or 'boba' and the liquid drink.

A labelling compliance assessment was also conducted on the prepacked drinks and kits, which also checked for the inclusion of konjac flour which is unauthorised for use within the boba components. The takeaway bubble tea samples did not have any labelling for assessment.

The overall compliance rate was 41%, with 8 samples found to contain unauthorised ingredients or permitted ingredients at excess levels.

The use of preservatives, sweeteners and colours in food is controlled by The Food Additives, Flavourings, Enzymes and Extraction Solvents Regulations. Undeclared sucralose sweetener was detected in 3 samples, (2 kits and one prepacked drink). Additionally, one takeaway sample contained the sweetener, Acesulfame K. This is permitted to be used in energy reduced or no added sugar 'flavoured drinks' when the product has an energy value that is reduced by at least 30 percent compared to a 'full sugar' equivalent product. However, the product was not identifiable as being 'energy reduced' so further investigation would be needed to determine whether the use of the sweetener was permitted.

Colours (Sunset Yellow and Quinoline Yellow) at levels exceeding the prescribed maximum were found in 2 samples (one pre-packed and one kit) and one bubble tea kit contained undeclared artificial colours (Tartrazine and Allura Red). A pre-packed drink contained undeclared colours (Tartrazine and Patent Blue), and its labelling also indicated the presence of the unauthorised additive konjac. The same regulations permit the use of the preservative sorbic acid in jelly confectionery up to a maximum concentration of 1500 mg/kg. In one pre-packed sample, the popping juice bubbles represented 13% of the whole sample, resulting in sorbic acid levels of 1833 mg/kg in the popping juice bubbles component. This exceeded the maximum permitted amount.

Of the 23 samples assessed for labelling compliance against The Food Additives, Flavourings, Enzymes and Extraction Solvents Regulations, 3 kits and one prepacked drink were unsatisfactory because they omitted the required mandatory colour warning statement 'may have an adverse effect on the activity and attention in children'.

When assessed against The Food Information Regulations, 18 samples were found to be unsatisfactory, including 11 pre-packed drinks and 7 kits, with multiple labelling irregularities noted. Eleven of these irregularities were associated with insufficiently precise naming of the food, including missing 'with sugar(s) and sweetener(s)' statements, or not labelled as 'energy reduced', which could mislead consumers. Incorrect or missing Quantitative Ingredient Declarations were reported on 7 samples, and 2 samples had incorrectly formatted allergen advice.

Other labelling issues included incorrectly formatted or missing durability information, additive categories or functions, nutritional information, business addresses, ingredients lists, non-adherence to rounding guidelines, and the use of font smaller than permitted.

3.2.3. Reformed Chicken Sandwich Meat

Reformed chicken sandwich meats were tested for species authenticity by DNA, and all 30 samples were found to be compliant in this regard. The samples also underwent a full labelling assessment, with 10 reported to be non-compliant, giving an overall compliance of 67%.

The main labelling non-compliance in this category concerned the naming of the food. The Food Information Regulations enforce certain provisions of retained Regulation (EU) No 1169/2011 (EU, 2011), requiring that consumers know the true nature of the food and can distinguish it from similar foods. According to these regulations 'meat products, meat preparations and fishery products which may give the impression that they are made of a whole piece of meat but actually consist of different pieces combined together by other ingredients, including food additives and food

enzymes or by other means, shall bear the indication “formed meat”. A total of 9 samples were identified as formed meat but were not labelled as such.

Additionally of these 9 samples, 8 had water listed as the second ingredient. From this, and other information in the sample ingredients lists, the Public Analysts indicated in their opinion that water might have been present in quantities exceeding 5%. If water is present in excess of 5% the name of the food should indicate this, but this was not done.

Another sample that failed to be named in a way that indicated the true nature of the food was labelled as “chicken sausage with mechanically separated chicken meat and olives”. The list of ingredients bore quantitative ingredients declarations for mechanically separated chicken meat and chicken of 48% and 13% respectively. The Products Containing Meat etc. Regulations prescribe that a product bearing the reserved description “sausage” made from chicken should contain a minimum of 26% chicken meat. For these regulations ‘meat’ is defined as the skeletal muscles of mammalian and bird species recognised as fit for human consumption with naturally included or adherent tissue but does not include mechanically separated meat. This sample cannot therefore bear the description “sausage”.

The list of ingredients for an oven roasted chicken breast product and a wafer thin cooked chicken product declared the presence of ‘aroma’. Aroma is not a prescribed ingredient category and should, in line with Annex VII of retained regulation (EU) No 1169/2011, be designated as ‘flavouring’ (EU, 2011).

Under the same regulations, another sample’s labelling was non-compliant because it bore a business name, but no business address.

3.2.4. Low Alcohol and Alcohol Free Drinks

‘Low alcohol’ and ‘alcohol-free’ claimed drinks, excluding spirits and fermented drinks such as kombucha, were tested for alcohol content, and the unauthorised ingredient, benzoic acid. A labelling review in relation to the analysis carried out was also undertaken. The 30 samples gave an overall compliance rate of 73% with 8 samples reported as unsatisfactory. Benzoic acid was not detected in any samples.

A cider claimed to be “Alcohol Free” and “alc no more than 0.05% vol”. However, the determined alcohol content of 0.19 ml/100ml (%vol) was almost four times this declared maximum value making the sample non-compliant in terms of composition.

Labelling irregularities associated with the analysis undertaken were identified for all 8 of the unsatisfactory samples.

The definition of 'alcohol-free' products as outlined in the closed consultation titled 'Updating Labelling Guidance for No and Low-Alcohol Alternatives: Consultation' (published 28 September 2023) on the government website, specifies that these products should have an ABV content not exceeding 0.05% (Office for Health Improvement and Disparities, 2023). Using this guidance 6 of the 30 samples assessed declared alcohol levels of less than 0.4% or less than 0.5% ABV and thus used misleading descriptors such as 'Alcohol Free' or 'Non-Alcoholic.'

A sample which satisfied the alcohol requirement for an 'alcohol free' claim and bore an alcoholic strength declaration of 0.0% vol was non-compliant due to the inclusion of "non-alcoholic pasteurized beer" in its name. The Department of Health and Social Care guidance with respect to low alcohol descriptors states that the term 'Non-Alcoholic' should not be used in conjunction with a name commonly associated with an alcoholic drink (Department of Health and Social Care, 2018).

3.2.5. Vegan/Non Dairy Protein Powders and Snacks

A total of 30 samples of non-dairy protein powders and bars without PAL (e.g. may contain) for milk and egg were tested for these allergens, their protein content and associated labelling checks. The compliance rate was 83% with 5 samples reported as non-compliant.

Undeclared milk protein was detected in 2 samples, a packet of dark chocolate peanut butter cups (1100 mg/kg total milk) and a vegan protein powder (28.6 mg/kg total milk).

Food can only be claimed as a source of protein if at least 12% of its energy value is provided by protein, according to The Nutrition and Health Claims Regulations, which enforce retained Regulation (EC) No 1924/2006 (EU, 2006). A sample, Sesame Halva, claimed to be a 'good source of natural protein.' However, the protein level found was only 10% of the declared energy value, failing to meet the claim criteria.

Protein content discrepancies were found in 4 samples, which made them non-compliant with labelling regulations. These samples contained 18% to 31% less protein than declared on the product label.

3.2.6. Fresh Raw Chicken

The compliance rate for the 40 fresh raw chicken tested for water content and related labelling checks was 90%.

The Food Information Regulations which allow for the enforcement of certain provisions of retained Regulation (EU) No 1169/2011 (EU, 2011) state that 'In the case of meat products and meat preparations which have

the appearance of a cut, joint, slice, portion or carcase of meat, the name of the food shall include an indication of the presence of added water if the added water makes up more than 5% of the weight of the finished product’.

In total 4 samples, all without any indication of added water on the label, were found to contain a calculated apparent water content of 5% or more. Of these, 3 were sold as prepacked and described as class A, the fourth was labelled “British Chicken Breast Fillets”.

3.2.7. Spice Pastes and Cooking Sauces

Thirty-five spice pastes and cooking sauces without PAL for peanut or cashew were tested for the presence of these allergens. The labelling was assessed against retained Regulation (EU) No 1169/2011 (EU, 2011), enforced by The Food Information Regulations in relation to the allergen information.

The overall compliance rate for this commodity was 91% with 2 samples indicating the presence of undeclared peanut, and one sample found to be non-compliant with regards to allergen labelling.

Spices and cooking sauces are compound foods with many ingredients including seeds and spices. The test kits used for the detection of peanut and cashew have been validated by the manufacturer for cross-reactivity against several food commodities including a variety of seeds and spices. However, this cross-reactivity validation was not documented for all the listed ingredients in the samples tested. Therefore, it is not possible to conclude if the positive detection responses were due to cross-reactivity or peanut presence. The results were shared with the FSA and the responsible Local Authorities for further investigation.

Substances or products causing allergies or intolerances listed in Annex II of retained Regulation (EU) No 1169/2011 (EU, 2011), enforced by The Food Information Regulations must be identified in the list of ingredients with special emphasis. For one spice sauce, the list of ingredients included the allergens sulphur dioxide, wheat, soya, and mustard; however, their presence had not been emphasised.

3.2.8. Beef and Lamb Minced Ready Meals

Minced beef and lamb ready meals, 20 of each, were sampled and tested for authenticity of meat species by DNA and related labelling checks.

The overall compliance rate for the 40 samples was 90%. A sample of lamb lasagne was non-compliant for authenticity as it contained meat species other than lamb, with both cow (5%) and pig (0.1%) detected. Low levels of other species DNA could be due to poor practice or cross contamination,

Science & Research Data



Figure 4. Summary of Science and Research Data

rather than deliberate inclusion. The label of this prepacked for direct sale meat product was also missing a QUID declaration for meat and as such failed to meet The Food Information Regulations.

A cottage pie and a minted lamb hotpot also failed to provide a meat QUID and were similarly non-compliant for labelling.

Inconclusive results were recorded for a beef lasagne sample, as it was not possible to extract sufficient DNA for speciation testing. While a laboratory QUID assessment was outside the scope of the project testing suite, it was noted that the QUID was assessed to be 4% of the sample's weight. This was significantly less than the declared 16%. This information was shared with the FSA and the responsible Local Authority for further investigation.

3.2.9. Uncooked Rice

A set of 30 samples of uncooked rice (excluding microwave rice) were analysed for total and inorganic arsenic. All samples were found to be satisfactory, giving a 100% compliance rate.

3.3. Science and Research

A total of 70 samples were taken across 2 commodity test areas. The analysis undertaken for the commodity 'UK produced ham and bacon' had legislative limits to assess compliance. The results for these have therefore been shown as satisfactory/unsatisfactory in [Figure 4](#). The analysis areas for the samples of 'processed pork products and ripened cheese' did not have legislative limits to assess compliance.

[Figure 4](#) Summary of Science and Research Data shows that 70 samples were taken. Of those tested 35 samples returned nothing to note, 32 were satisfactory and 3 were unsatisfactory. The graphic includes:

- A distribution map showing the surveillance sampling coverage across England, Wales and Northern Ireland. There is a fairly even coverage with no hot spots identified.
- A bar chart of the different Science and Research commodities showing the number of samples that were satisfactory and unsatisfactory with regards to relevant legislation and also those with nothing to note where there are no regulatory limits for the analytes tested. For example, 35 processed pork products and ripened cheese samples were taken and none returned noteworthy results.
- A table listing the retail outlets and the total number of Science and Research samples taken from each, broken down as the number of satisfactory (including those with nothing to note) and unsatisfactory results. For example, of the total 70 samples 45 were taken from small FBOs, of which 3 were unsatisfactory.
- A second table shows the split of online and physical purchases. For example, of the total 70 Science and Research samples, one was purchased online, and of the 67 satisfactory samples (including those with nothing to note) 66 were physically purchased.

3.3.1. UK Produced Ham and Bacon

Thirty-five samples of UK produced hams and bacon were procured. As it was the curing process that was of interest, not the origin of the meat, the sampling specification required the sample to have been brined / had nitrates added at a UK producer. Products claiming to be nitrate/nitrite free were excluded from the project.

Samples were tested for compositional compliance for nitrate and nitrite levels and also underwent a related labelling check. Of the 35 samples tested, the compliance rate was 91% with 3 samples being reported as non-compliant for composition.

The Food Additives, Flavourings, Enzymes and Extraction Solvents Regulations permit bacon cured by immersion in curing solution to contain not more than 175 mg/kg of nitrite (expressed as sodium nitrite) and not more than 250 mg/kg of nitrate (expressed as sodium nitrate, NaNO_3) as residual levels at the end of the production process. All 3 non-compliant

samples were bacon and had nitrate contents of between 327 and 761 mg/kg NaNO₃, which is greater than the permitted maximum as stated by the regulations.

3.3.2. Processed Pork Products and Ripened Cheeses

Processed (cured or dried) pork products (e.g. salami, chorizo, dry-cured ham) and Ripened (including mould ripened) cheeses, aged cheeses and blue cheeses were all suitable products for this commodity. Thirty-five samples in total were tested for the presence of mycotoxins. The cured meats¹⁸, were tested for aflatoxin B1 and ochratoxin A, and 17 aged cheeses for aflatoxin M1 and ochratoxin A.

No limits are currently prescribed in legislation for these food types however, for all meat and cheese samples tested for aflatoxin B1 / M1 or ochratoxin A, no mycotoxins above their limits of quantitation level of the analytical methods employed were found. The limit of quantitation is the lowest concentration of mycotoxins that can be determined in a sample with acceptable precision (repeatability) and accuracy under the stated conditions of the test.

Furthermore, this meant for all cheese samples tested the aflatoxin M1 level was also below the maximum 0.050 µg/kg level laid down by assimilated Commission Regulation (EU) 1881/2006 setting maximum levels for certain contaminants in foodstuffs (EC, 2006).

4. Discussion

The Food Standards Agency works across England, Wales and Northern Ireland to protect public health and consumers wider interest in food and has the mission 'Food you can trust'. The food system is evolving, particularly now that the UK is outside of the EU, and it is essential that consumers have confidence that their food is safe and is what it says it is.

This fifth national surveillance sampling programme determined the extent of compliance in targeted food commodities throughout England, Wales and Northern Ireland. Everyday foods that households buy regularly and largely had potential known safety and authenticity risks were targeted in the basket of food. Of these 77% were found to be compliant with regards to the tests carried out. The surveillance group of samples included commodities for which sampling is useful to inform the FSA's knowledge of risk based on intelligence and information on the global food market. 72% of these foods were satisfactory for the tests undertaken. It should be noted that as the sampling was targeted, with a focus on foods that

intelligence showed were likely to be of higher risk, the compliance rates should not be viewed as being reflective of actual non-compliance levels in the UK market.

The overall compliance rate for samples analysed within the basket of food and surveillance sections of this project is 75% and one sample gave an inconclusive result. The 70 samples taken for the Science and Research category, which did not all have regulatory standards for compliance assessment, have not been included in the compliance figures.

Non-compliances were classified into 6 hazard areas which have been summarised in the following sections.

4.1. Allergens

Around 6% of the UK adult population are estimated to have a clinically confirmed food allergy (FSA Patterns and Prevalence of Adult Food Allergy (PAFA) Report (FSA, University of Manchester, et al., 2024)) and they rely on correct food labelling to manage risk and make safe, informed choices.

This programme tested 190 foods for undeclared allergens including cereals containing gluten, milk, egg, peanut, cashews and sesame. Allergens were indicated to be present in 8 samples.

Of the 115 samples tested for milk, 5 samples (4%) were found to contain this allergen which was not declared on the label. The 5 samples comprised of 2 breads, one vegan snack, one vegan protein powder and one vegan dessert.

The potential presence of undeclared peanut was indicated in 2 spice pastes and a bread product indicated the potential presence of undeclared sesame. However, these 3 results may be false positives due to potential cross-reactivity with ingredients in the product.

4.2. Authenticity

Food authenticity is about ensuring that food offered for sale is of the nature, substance, and quality expected by the purchaser. Consumers need to have trust in the food they buy and be confident that they can make informed choices based on diet, personal taste or cost.

Premium products may be at greater risk of adulteration due to the higher prices they command. A total of 260 samples were tested for authenticity and 94% were reported as authentic.

When examined microscopically, 5 of the 30 oregano samples were found to contain other leaves in addition to oregano.

Basmati rice has a unique aroma and flavour, and its cooking qualities make it a premium product. 13% of basmati rice samples tested were found to contain more non-Basmati rice varieties than is permitted.

Out of the 30 pasta samples claiming to be made from durum wheat one was found to be unsatisfactory for authenticity with common wheat suggested to be present at a level greater than 3%.

Also, 4 pork sausages were found to contain meat other than pork. The levels were low suggesting the presence was indicative of poor practice or cross contamination rather than deliberate inclusion. Similarly, one lamb mince ready meal contained other meat species, meaning the product was not what the buyer was expecting.

4.3. Composition

It is important that food matches its description and contains the ingredients or nutritional content that the label claims, so consumers can make informed choices. Compositional aspects of 405 samples were tested, and 87% were compliant.

Compositional testing was conducted on orange juice which was found to be satisfactory in this regard. However, 23% of chicken ready meals and 23% of pork sausages contained less meat than declared on the label. Additionally, the fat content of milk was incorrect in 1 out of 5 samples tested.

The claimed levels of caffeine in supplements were inaccurate in 18% of the samples tested. For olive oil samples, 17% did not match the defined profile for olive oils, and extraneous leaf matter exceeded permitted levels in 5 out of 30 oregano samples. Furthermore, 10% of fresh raw chicken samples contained undeclared added water.

Levels of nitrates and nitrites greater than permitted were found in 3 samples of UK produced bacon. Additionally, 3 minced meat samples did not meet the claimed fat content or required collagen-to-meat protein ratios.

A low alcohol drink was found to contain higher alcohol levels than claimed, and a non-dairy protein snack did not meet the claim related to protein content.

Non-compliant composition in these 51 samples means that consumers are not receiving the products they expect or potentially pay a premium for.

4.4. Contaminants

A food contaminant is any substance found in food that could potentially cause harm to consumers. These contaminants can be biological, chemical, or physical. They might naturally occur in the food or be introduced during its production, handling, or storage. This project looked for chemical contaminants, such as mycotoxins (in cured pork products, aged cheese, oregano and turmeric), heavy metals (in oregano, turmeric and rice) and physical contaminants such as debris (in oregano).

Mycotoxins are naturally occurring toxic compounds that are produced by different types of fungi, often due to inadequate storage, handling or processing of food. These toxins can contaminate food and pose serious health risks to humans and animals, hence the importance of monitoring their presence in the food supply.

Heavy metals enter the food supply via various pathways including agricultural practices, industrial pollution and food processing. Exposure to heavy metal levels in food can lead to serious health issues such as cancer, kidney damage, and neurological problems.

Mycotoxins and heavy metals were not detected at levels of concern in any of the 125 samples tested.

Physical contamination was the primary reason for non-compliance of oregano samples. Of the 30 samples examined 8 were found to contain foreign bodies including insect fragments or insect eggs, plastic, and fragments of shell, stone or soil like material.

All the turmeric samples were compliant with regards to contaminants.

4.5. Unauthorised Ingredient

Unauthorised ingredients, which have not been evaluated and approved, can pose significant health risks to consumers. The use of food additives is strictly defined in law and additives are only authorised following a robust safety assessment. This includes what foods an additive can be used in, at what maximum level and any specific conditions of use. Therefore, all food businesses must ensure that any ingredients used in their products are approved and safe for consumption and meet any specific requirements detailed in legislation.

A total of 122 tests for unauthorised ingredients were conducted, resulting in a compliance rate of 93%. However, 25% of bubble tea samples were found to contain excessive or unauthorised food additives. These issues included the use of non-permitted sweeteners, undeclared or excess

colours, excessive levels of preservatives, and the presence of Konjac in the jelly pearls which is an unauthorised for use in a confectionary product due to the potential choking hazard.

Sudan dyes are synthetic chemical dyes that are not permitted for use in food due to their potential carcinogenic health risks. Sudan I was detected in one turmeric sample.

Orange juice was assessed for unauthorised colours and was found to be 100% satisfactory in this regard. Additionally, low alcohol and alcohol-free drinks were tested for the presence of the preservative benzoic acid, which was not detected.

4.6. Labelling

All food is subject to general food labelling requirements and any labelling provided must be accurate and not misleading. Prepacked food requires a food label that displays certain mandatory information. The FSA provides information on the packaging and labelling requirements on their website (FSA, 2023).

Eighteen commodities were assessed for labelling. Labels were assessed in relation to the specific analysis undertaken with 4 commodities undergoing a full labelling assessment, namely bread, reformed chicken sandwich meat, bubble tea and caffeine supplements. Unsatisfactory labelling was identified on 21% of the food products assessed.

Caffeine supplements had specific labelling issues associated with non-permitted health claims and missing caffeine warnings which were noted on a high proportion of samples.

Across the wider study most of the labelling irregularities were related to nutritional information with information either missing or incorrectly presented. There were also a number of issues with allergen labelling. Standardisation of allergen labels is important to enable easy and consistent relaying of allergen information to sensitive individuals.

Additionally, many commodities had problems with the name of the food not being sufficiently precise. Many products also had incorrect or missing declarations such as for meat content, protein levels, and added water, all of which can mislead consumers.

Other unsatisfactory labelling issues mainly related to technical aspects of labelling, such as format or wording not in accordance with the relevant regulations.

4.7. Retail Outlet Types

Thirty eight percent of basket of food and surveillance category samples were purchased from large FBOs including supermarkets and wholesalers, and these samples showed the highest level of compliance in this survey with 82% being considered satisfactory by the Public Analysts.

For the same categories of samples, 62% were purchased from small retail outlets, with a compliance rate of 71% meaning almost 1 in 4 were reported as unsatisfactory by the Public Analysts.

Additionally, 6% were purchased online, mainly from small FBOs. The online samples had an overall compliance rate of 54%, with more than half of the non-compliant online purchases being caffeine supplements. The compliance rate for physical in store purchases was higher at 77%.

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Supplementary Materials

FS900525 -Appendices

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