

FSA Sampling Template and Data Standards

1. Introduction

The Food Standards Agency (FSA) is responsible for ensuring food is safe and is what it says it is. To do this, the FSA coordinates several sampling programmes to receive data in collaboration with partners such as local and port health authorities.

This document describes the data and metadata standards that the FSA expect partners directly sampling on behalf of the FSA to follow. Guidance is also included to ensure the correct use of the template so the FSA can utilise the data to its maximum potential. This template was originally adapted from the 2-tab UKFSS template and has been adjusted based on user feedback. The FSA has tried to maintain consistency with the UKFSS template and data standards where possible to ensure stronger collaborative potential between government departments.

2. Basic Technical Standards

The FSA requires all suppliers to provide sampling data in machine readable formats. Currently, the acceptable formats are comma separated values (.csv), excel format (.xlsx) and open-source spreadsheet (ods).

Data provided to the FSA must be in the unicode encoding standard UTF-8.

The template has been designed to be a single table, following feedback from Local Authorities. The columns and rows from the template should not be altered in order to preserve the processing pipeline which converts the input data to open document format for publishing. However, if there is a specific requirement the template does not fulfil, the FSA data team can be contacted to evaluate the possibility of updating the template (data@food.gov.uk).

3. Template Overview and Meta data

The following table (Table 1: Field Types) outlines the field names in the template and what data types are expected.

For some fields, vocabulary is controlled fully or partially. Use of the controlled vocabulary is encouraged as much as possible but understand that needs may not always be met, so have labelled these fields as having a partial vocabulary. Partial vocabulary fields allow samplers to enter their own entries whilst also being able to select from a drop down. The source of the controlled vocabulary will be linked where possible. Some vocabulary has been created from internal FSA resources which do not have a publicly linked copy but have been inserted in the appendix.

The FSA encourages samplers to fill as many fields as possible, including non-optional fields in cases where the relevant information is easily available. Optional fields have the term '(optional)' denoted

in the name of the field, all other fields are compulsory. This allows greater intelligence to be derived from the samples and provides greater value to the FSA and local authorities.

An alternative version of the template with only core fields is provided if appropriate for the sampling programme.

Table 1: Field Types

Index	Field Name	Description	Data Type	Controlled Vocabulary	Vocabulary Source/Options
1	Sample Number/ID	A unique identifier for the analysis, which is resolvable within the testing laboratories' records	String	No	
2	Sampler Name	Name of the authority performing the sampling. This should not include the name of a person.	String	Partially	
3	Commodity	General name of the commodity/product sampled	String	Yes	https://www.food.gov.uk/research/research-projects/list-of-commodity-codes-and-categories (Appendix 1)
4	Country of Origin	Country where the commodity was produced	String	Partially	ISO-3166: https://www.iso.org/iso-3166-country-codes.html
5	Commodity Description	Detailed description of the commodity/product sampled, including brand, type of product, etc.	String	No	

6	Condition	The thermal condition of the product	String	Yes	1. Ambient 2. Chilled 3. Frozen 4. Hot 5. Other
7	Date of Sampling	Date when the sample was taken	Date format DD-MM-YYYY	No	
8	Overall Result for Sample	Satisfactory or non-satisfactory according to the laboratory report and legislation in place	String	Yes	1. Satisfactory 2. Unsatisfactory 3. Inconclusive 4. NA
9	Batch Number	Batch number or Lot number	String	No	
10	Food or Feed	Product food or feed categorisation	String	Yes	1. Food 2. Feed 3. FCM 4. Composite
11	Feed Category Indication	Type of feed. Field only applies if product is feed	String	Yes	1. Feed Material 2. Feed Additive 3. Bioproteins 4. Pre-Mixtures 5. Complete/Complementary Feed 6. Unspecified 7. Feedingstuffs
12	Border or Inland	Where sampling took place	String	Yes	1. Border 2. Inland
13	Commodity Code (Optional)	8 or 10-digit CN code of the commodity being sampled as declared by the importer/agent to HMRC	String	No	
14	POAO or FNAO	Product of animal origin or food not of animal origin categorisation	String	Yes	1. POAO 2. FNAO
15	Ready to eat or needs	If product is ready to eat or	String	Yes	1. RTE 2. NFP

	further processing	needs further processing.			
16	Manufacturer	The name the manufacturer of the product	String	No	
17	Consignor (Optional)	Business exporting/selling the goods (e.g. supplier/establishment of origin)	String	No	
18	Consignee (Optional)	Business importing/buying the goods (e.g. importer/receiver of the goods)	String	No	
19	Import Agent (Optional)	Business/agent responsible for importing the goods on behalf of the consignee	String	No	
20	Distributor (Optional)	Business responsible for distributing product	String	No	
21	Point of Entry to UK	Place of first entry of the Commodity in UK's territory	String	No	
22	Local Authority of sample	The local authority of where the sample was taken. This is solely the location of the sample, and not the sampler.	String	Yes	Food Standards Agency Codes : reference-number/ authority
23	Premise Name	Name of premise where the commodity was collected/bought /controlled, depending on the relevant option.	String	No	

24	Premise Address	Address of premise where the commodity was collected/bought /controlled, depending on the relevant option. We require the information in the format: Door Number Street Address, Town Name Postcode	String	No	
25	Premise Type	Type of premise.	String	Yes	System Documentation for Laboratories — UKFSS Documentation documentation
26	Laboratory	Name and address of laboratory that conducted the analysis	String	No	
27	Hazard	Hazard being tested	String	Partially	FSA incidents Team (Appendix 2)
28	Hazard Indicator	The specific indicator which is being tested for to determine the hazard	String	Partially	
39	Analytical Method	Analytical method used (if known)	String	No	
30	Is method accredited?	Indication of whether the method used is accredited or not	Binary	Yes	Yes/No
31	Accepted hazard/test level (Optional)	The minimum level of hazard detection which constitutes a failure outlined in legislation.	Any	No	

32	Limit of Detection	The lowest level of detection to determine presence	Any	No	
33	Limit of quantification	The minimum concentration required to give a quantified result	Any	No	
34	Test Result	Lab result for specific indicator test	Any	Yes	1. Satisfactory 2. Unsatisfactory 3. Borderline Pass
35	Units	Unit of measurement of test.	Any	No	
36	Test Outcome	Test status for specific hazard indicator.	String	No	
37	Additional comments	Additional comments on sampling test.	String	No	
38	Labelling (Optional)	Result of labelling tests (if conducted)	String	Yes	1. Satisfactory 2. Unsatisfactory 3. NA
39	If failure reported, who to?	Name of organisation or person that failure was reported to	String	No	
40	Date of failure report	Date when failure was reported	Date format DD-MM-YYYY	No	
41	Follow up outcome	Action taken by the result of this sample	Any	No	

4. General Guidance

To ensure a streamlined processing of sampling data, you **must not edit or delete columns**.

Each row pertains to one sample. An example has been provided at the top of the template to use as guidance. Space for each sample has been demarcated by a thick border. This means that samplers only need to provide the description of the sample once, and then provide the list of hazards that pertain to that sample.

Each hazard indicator cell should only contain ONE test and not multiple tests in one cell. An example has been provided below.

DO:

Hazard Indicator
Test being carried out by lab
Aflatoxin B1
Aflatoxin G1
Ochratoxin A
Endosulfan
Dimethoate

DO NOT:

Hazard Indicator
Test being carried out by lab
Aflatoxin B1,Aflatoxin B2, Total Aflatoxin

The FSA understands that some samples have a high number of tests and will require the next demarcated block to be used to capture further information. For example, in the following table, sample 1234 goes beyond the demarcated border to capture the hazard and the sampler has used the next demarcated block to add more information. In this case, only the sample number needs to be completed in the next demarcated block, however, the sampler can choose to copy the sample details to the next row if they wish to do so:

Sample Number	Hazard	Hazard Indicator	Test result
1234	Illegal dyes	Para Red	Positive
	Illegal dyes	Sudan I	Negative
	Aflatoxin	Aflatoxin G1	<0.2
1234	Ochratoxin	Ochratoxin B	<0.2
5678	Veterinary residues	Oxacillin	2

If you have too many samples for the template, please use another copy of the template instead of copying the template. This ensures the controlled vocabulary and formatting are maintained.

Lab reports and images if available cannot be inserted into the template. It suggested sending these separately if required or asked for.

Appendix:

APPENDIX 1 –

Commodity category descriptions

Category Name:	Potential Subcategories:	Category Definition:
Feed	Overall category definition:	Feed is allocated as either FNAO or POAO and is categorised as a single outstanding 'feed' group, some feed may also be included in other categories if it can be used for both food and animal feed.

		Includes some items marked unfit for human consumption or inedible as these codes may still be classed as food or feed
	Seeds for growing	Items marked as seeds for growing may be used in animal feed or may not be food or feed at all
Non-food items	Plastic kitchenware	Includes plastic kitchenware and food contact materials, currently there is 1 code in the list

POAO categories:

Beef	[x]	Includes beef, bovine animals and their products
Composite	Overall category definition:	Composite products are where POAO and FNAO are mixed, this includes mixed products (for example meat filled pasta) and ambiguous categories (for example plant and animal fats, soapstocks, residues from treatment of fatty substances, food preparations)
	Mainly FNAO containing POAO	Includes food preparations, products that may contain milk
	Oils and fats	Includes animal or vegetable fats and oils, products such as 'margarine with less than 10% milk'
Dairy	Overall category definition:	Includes dairy products such as yogurt, cream, cheese, milk, buttermilk, whey
	Milk	Includes products specified as milk
Eggs	[x]	Includes only bird eggs (not fish eggs, turtle eggs, etc)
Fish	Overall category definition:	Includes all fish and seafood (shellfish, prawns, lobster, etc)
	Fish	Includes fish and their products
	Seafood	Includes shellfish, prawn, lobster etc
	Fish-based oils	Includes supplements such as cod liver oil
	[Additional categories]	Potential for many additional subcategories to be developed
Other Animal	Overall category definition:	All single or mixed meat / animal fat products that do not allocate into one of beef, pork, sheep, poultry are assigned here, includes insects and products, gelatin
	Single species	Includes single species not allocated into lamb, beef, poultry or pork
	Sea mammals	Includes whale, dolphin and seal meat
	Mixed species	Includes mixed species (for example sausage of beef and lamb), unspecified meats or products that could be from multiple animals
Other POAO	[x]	Includes all non-meat POAO that are not eggs or dairy, includes meat POAO items, includes honey
Pork	[x]	Includes pork, swine animals and their products, includes lard
Poultry	[x]	Includes domesticated bird meat and products
Sheep	Overall category definition:	Includes sheep, lamb and goat meat and products
	Sheep	Includes any sheep or lamb product, including crude wool grease and lanolin
	Goat	Includes goat meat or product

	Goat and sheep mix	Includes mixed meat or product of sheep and goats
FNAO categories:		
Additives and extracts	[x]	Excludes infant foods Includes agar, pectin, thickeners, sweeteners, any other additives, extracts Some extracts are in supplements instead if considered as such
Beverages	Overall category definition:	Includes all drinks and beverages
	Beverages	Excludes infant foods, alcoholic drinks, mineral and tap water, flavoured water, sparkling water Includes unprocessed coffee and tea, soft drinks, fruit drinks, fizzy drinks, mate, fruit juices, smoothies May contain products which have minimal POAO mixed in with FNAO
	Alcoholic beverages	Includes all alcoholic drinks such as beer, wine, spirits May contain products which have minimal POAO mixed in with FNAO
	Bottled water	Includes water: sparkling, mineral, tap, with added sugar or flavourings Excludes all other beverages and infant foods
Cereal and grains	[x]	Excludes infant foods even where contain cereal or rice etc, oils derived from cereals and grains (see fats and oils) Includes dairy alternatives like oat milk, cereals but if description is a breakfast cereal / product then this is in mixed FNAO as usually more complex, porridge is included here though, flour unless from a vegetable or fruit etc, oats, rice, barley etc. Includes maize but excludes sweetcorn
Condiments	[x]	Excludes infant foods, jar sauces like curry - see mixed FNAO, pesto - see mixed FNAO, oils and flavoured oils (see fats and oils) Includes generic 'sauces' where there is no specification on what it is, stock cubes, soy sauce, vinegar, salt, chutney, mayonnaise Tomato sauce is assumed to be ketchup which is included here
Confectionery	[x]	Excludes infant foods, dried fruit, sugar itself, sugar cane or beet, desserts, pastries etc. Includes sweets, chocolate, cocoa after processing like cocoa powder, paste etc, jams, jellies, fruit pastes, crystallised fruit May contain some nut or seed products such as nougat, halva, coated nuts or fruits etc. May contain products which have minimal POAO mixed in with FNAO
Fats and oils	Overall category definition:	Excludes infant foods Includes spreads, oils, veggie lard

	Microbial	Fats and oils from microbials, which are neither animals nor plants
Fruit	[x]	Includes all fruit that is dried, fresh, frozen Excludes infant foods even where contain fruit, oils derived from fruit (see fats and oils), apricot kernels and other fruit seeds like melon seeds (see nuts and seeds), jams, fruit juices, confectionery etc. Includes dairy alternatives like coconut milk, coconut generally, copra (dried sections of coconut, cocoa beans before processing)
Herbs and spices	[x]	Includes fresh herbs, spices, dried spices mostly where possible to distinguish (for example if peppers are dried or not), dried ginger, dried, crushed, ground peppers and chillies, fennel, cumin, coriander seeds etc, vanilla Excludes fresh peppers and chillies, fresh garlic, fresh ginger etc.
Infant food	[x]	Includes kids and baby foods / drinks Not infant formula May contain products which have minimal POAO mixed in with FNAO
Mixed FNAO	[x]	Includes products that are mixed across FNAO categories Made up of ingredients Includes products with a majority FNAO composition - ready meals, sandwiches, whole products not defined in another group, pasta, doughs, prepared foods, bread, biscuits (sweet and savoury), pastries, desserts, cakes Excludes infant foods May include some vegetable, fruit, cereal, nuts, seed, herb, spice, sugar, confectionery products which are considered composite FNAO items
Nuts and seeds	[x]	Excludes infant foods, nut and seed oils (see fats and oils), confectionery products for example nougat, feed Includes alfalfa and amaranth seeds here not in cereals and grains, Includes apricot kernels and other fruit seeds here not in fruit, Includes egusi seed, fruit and nut mixes here not in fruit, nut flours, nut butter etc, seeds except spices like cumin seeds, hop cones, mixed nuts
Pulses	[x]	Excludes infant foods even where contain pulses, peas (see vegetables) Includes flours derived from pulses, chickpeas, lentils etc, broad beans, dried, cooked, raw tinned etc, soya beans
Sugar and syrups	[x]	Excludes infant foods, sugar cane or beet, confectionery Includes sugar such as brown, white, syrups such as molasses, glucose, fructose, date etc
Supplements	[x]	Excludes infant foods, energy drinks which are in beverages Includes plants / leaves known to be supplements e.g. neem / margosa flower, some extracts if considered a

		supplement, coca leaf, poppy straw, any other supplements, CBD etc
Vegetables	Overall category definition:	Includes all veg that is fresh, frozen, dried unless a spice Includes potatoes Includes tomatoes Excludes maize but includes sweetcorn Raw and cooked Excluding herbs, infant foods even where contain veg, vegetable oils and vegetable flavoured oils like garlic oil (see nuts and oils), beverages, plantain, chutneys. Includes flours made from veg like cassava flour and corn / maize flour, cornmeal (polenta) etc, mushrooms and other fungi, fruits eaten as veg for example tomatoes, olives. Also peas, fresh ginger, tonka beans, locust beans, sugar beet, sugar cane, seaweed, root, tubers, salad veg / fruit, jackfruit. Sometimes unclear if peppers are dried Preserved in oil, vinegar, salt
	Flour	Includes flour made from vegetables

APPENDIX 2 -

Hazard Categories

Hazard group	Definition
allergens	The detection of one or more of the 14 allergens in a product that should not otherwise be present. The allergen could be present in the product, but undeclared, incorrectly labelled (e.g. products not labelled to reflect allergen presence), not emphasised correctly (e.g. not in Bold font or not in English), or contain false claims (e.g. claiming a product is gluten free).
biotoxins	Substances which are both toxic and have a biological origin. Includes shellfish toxins (e.g. ASP, DSP) and plant toxins (e.g. tropane alkaloids, pyrrolizidine alkaloids).
chemical contamination	Substances not intentionally added to food, usually as a result of production processes or contamination of the product e.g. during cooking, storage, transportation or handling. Does not include those already in other categories such as mycotoxins, heavy metals and pesticides.

industrial contamination	Contaminants present in the environment from current and historical manufacturing. Includes Dioxins and PCBs, and .Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)
composition	Where the (intended) composition of a product has been compromised e.g. adulteration / substitution, excessive levels of permitted substances, unapproved ingredients (not including Novel Foods)
feed additives	Unauthorised presence or quantity of feed additives (e.g. coccidiostats, histomonostats, binders, enzymes)
food additives and flavourings	Unauthorised use or exceedance of the permitted levels of an additive (e.g. antioxidants, colours, emulsifiers, preservatives, sweeteners)
foreign bodies	Presence of any biological/non-biological matter that is not designed or intended to be in the product.
fraud	Counterfeit goods, fraudulent documents, etc.
GMO	Presence of unauthorised genetically modified organisms
heavy metals	Excess levels of heavy metals (e.g. cadmium, copper, lead)
labelling	Inaccurate labelling (other than related to allergens), including absent or incorrect best before/use-by dates, absent or incorrect precautionary statements, and absent or incorrect storage or cooking instructions.
migration	Migration of chemicals from a food contact material into the food product, or the constitution of a food contact product contains substances that are harmful or banned (includes bamboo fibres, melamine, primary aromatic amines)
mycotoxins	Presence of mycotoxins including aflatoxins, ochratoxin, patulin toxins, and zearalenone
non-compliance	Product has been imported illegally (unapproved product, transport or importer) or without correct documentation
non-pathogenic micro-organisms	Presence of organism that does not cause harm to humans, but which can be used as an indicator of poor hygiene practices or processes. Includes Aerobic Colony Count (ACC), Enterobacteriaceae, and certain strains of listeria and E. coli
novel foods	Presence of unauthorised novel foods (e.g. CBD, 5-HTP, insects)
organoleptic aspects	Product has a smell, colour or taste that casts doubt on its freshness or quality.
packaging	Defective packaging that may affect the quality of a product or make it hazardous (e.g. damage, risk of breakage, bulging)
parasitic infestation	Product is infested with parasites e.g. Anisakis, Trichinella, Toxoplasma
pathogenic micro-organisms	Presence of a micro-organism capable of causing disease, e.g. campylobacter, E. coli, listeria, salmonella

pesticide residues	Presence of pesticides that are banned or exceed their maximum residue limit (e.g. Chlorate, Dimethoate, Ethylene Oxide)
poor or insufficient controls	Issues relating to the absence or lapse of an adequate food safety management system, e.g. poor HACCP, poor hygiene, poor temperature control
radiation	Undeclared radiation, or food not irradiated in an approved facility
residues of veterinary medicinal products	Presence of residues such as Oxytetracycline or Testosterone
TSEs	Presence of specified risk materials that should have been removed from the food chain (e.g. spinal column)