Surveillance Sampling Programme - Project Outline

Purpose and Scope

Based on FSA and OL intelligence a number of key sampling areas of interest were identified and developed into sampling and analysis groups. A range of means were used to identify commodities for sampling including FSA surveillance tools, horizon scanning and policy and scientific expertise.

A targeted shopping basket approach for sampling was also designed to run alongside this years targeted surveillance sampling programme. These commodities had been identified as frequently purchased foods for which there were known previous risks (such as authenticity issues) as well as some additional commonly consumed foods such as bread and milk and therefore important to have base line intelligence on.

The project aimed to provide representative surveillance across England and Wales. All samples were purchased by the OLs from businesses selling to the general public either in store or online.

The samples were divided between the OLs for analysis according to the analytical capabilities of each laboratory. Each OL used analytical methods that are routinely employed for enforcement purposes and reported the samples against appropriate legislation for the food product and the tests undertaken.

The HSS project team worked in partnership with the FSA throughout the project to respond to any emerging issues and allow the project scope to be reviewed as the wider food sampling landscape evolved.

Sampling Priorities

A total of 32 commodities were identified as sampling priorities. Of these, 19 were grouped as surveillance and 13 as basket of food commodities.

Surveillance Commodities

Table 1: Surveillance Commodities and Analysis

Commodity	Commodity Category	Hazard or area to be tested	Analysis
BBQ / marinaded single species meat	Meat	Authenticity	PCR for 7 species SQ banded (sheep, pork, beef, horse, goat, turkey & chicken)

Commodity	Commodity Category	Hazard or area to be tested	Analysis
Bio-based FCMs (melamine formaldehyde or alternatives incorporating bio material e.g. bamboo)	Food contact materials	Contaminants	Formaldehyde by acetic acid simulation followed by colourimetry
Black pepper	Herbs and spices	Authenticity Contaminants	Microscopy Aflatoxin by HPLC
Cereal product i.e. breakfast cereals	Grain	Contaminant: Unauthorised ingredient Composition	Colours quantitative by HPLC Melamine SPE/HPLC with UV detection Milk by ELISA Mycotoxins - DON & ZON by HPLC Cadmium by ICP
Chilli	Herbs and spices	Authenticity Contaminants	Microscopy Aflatoxin by HPLC Ochratoxin A by HPLC Sudan Dyes by HPLC
Salmon 50% composite, 50% salmon pieces	Meat	Authenticity	Fish species by PCR-RFLP. Salmon
Garlic powder/puree	Herbs and spices	Allergens	Peanut by ELISA
Ginger	Herbs and spices	Contaminants	Aflatoxin / Ochratoxin A by HPLC
Herbal supplements	Supplements	Contaminants	Metals testing by ICP or AAS
Paprika	Herbs and spices	Authenticity Contaminant	Microscopy Aflatoxin by HPLC Ochratoxin A by HPLC Sudan Dyes by HPLC
Premium / artisan Gin	Alcohol	Composition Contaminants	Alcohol / Methanol by GC
Leafy vegetables	Fresh produce	Contaminants	Lead, cadmium, mercury & arsenic by ICP or AAS
Quinoa	Grain	Contaminants	Cadmium and lead by ICP or AAS
Speciality meats (Goat, Game, exotic)	Meat	Authenticity	DNA Sequencing - all species including rare
Vodka	Alcohol	Composition Contaminants	Alcohol / Methanol by GC
Soya latte sampled directly from coffee shops	Free from	Allergens	Milk by ELISA
Wheat Flour	Grain	Allergens	Mustard by ELISA
Wheat products (wheat germ, durum wheat, rye grain, rye flakes)	Grain	Contaminants	Cadmium by ICP

Basket of Foods

Table 2: Basket of Food Commodities and Analysis

Commodity	Commodity Category	Hazard or area to be tested	Analysis
Basmati rice	Grain	Authenticity	Basmati varieties by PCR micro satellite
Bread	Grain	Allergens	Soya by ELISA Milk by ELISA Sesame by ELISA
Cheese	Dairy	Authenticity	Fat, fat in dry matter, milk fat (butyric acid) Species DNA by PCR
Dairy Free From	Free From	Allergens	Milk by ELISA
Gluten Free From	Free From	Allergens	Gluten by ELISA
Milk	Dairy	Composition	Fresh milk fat content
Olive oil	Oil	Authenticity	Extinction by solvent dissolution and UV, peroxide value by fat extraction, solvent dissolution and titrimetry, and fat profile by esterification and GC

Commodity	Commodity Category	Hazard or area to be tested	Analysis
Orange Juice	Soft drink	Composition	SO2, added colours, BRIX, Compliance against FIR
Oregano	Herbs & spices	Authenticity, Contaminants	Microscopy Aflatoxin by HPLC Metals by ICP or AAS Ochratoxin A by HPLC
Pasta	Grain	Authenticity	Non - Durum wheat - ELISA Determination of common wheat and durum wheat
Peanut free from	Free from	Allergens	Peanut by ELISA
Turmeric	Herbs & spices	Authenticity, Contaminants	Microscopy Aflatoxin by HPLC Ochratoxin A by HPLC Metals by ICP or AAS Artificial colours Lead chromate by ICP
Vegan products	Free from	Allergens	Milk by ELISA