National Monitoring Plan for POAO: Data Analysis Report 2022-23

National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Introduction

This is a summary of the sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

National Monitoring Plan (NMP) data for products of animal origin (POAO) has been sourced from the Import of Products, Animals, Food and Feed System (IPAFFS), GB's replacement for the EU's TRACES system.

NMP samples have been identified where the 'random' button has been selected on the 'checks' tab, as advised by the Food Standards Agency's (FSA) Trade Facilitation Unit. To be aware that not all random samples recorded on IPAFFS are necessarily taken for the NMP, for example those testing for speciation or authenticity are not normally included here. As a result, extracting the NMP data from IPAFFS has necessitated a certain amount of data cleansing.

Overview of sampling carried out

During this period, a total of 2,212 samples were identified as being taken under the POAO NMP. These were against the following hazard categories:

- Veterinary residues
- Microbiological
- Heavy metals
- Chemical contaminants
- Biotoxins

There is also a summary for NMP sampling of dog or cat food and for other product types not for human consumption also classed as pet food. Otherwise, feed for animals destined for the food chain is not included in the NMP.

Figure 1 - Samples taken by hazard

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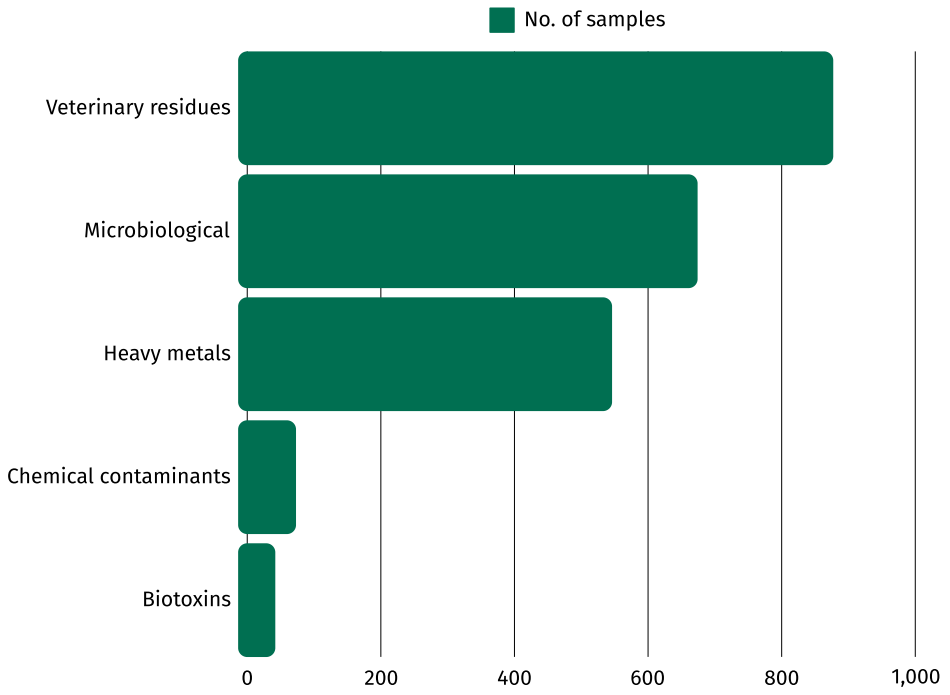

?Hazard	Number of samples	Percentage
Veterinary residues	877	40
Microbiological	674	30
Heavy metals	546	25
Chemical contaminants	73	3
Biotoxins	42	2
Total	2,212	100%

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As we can see in figure 1, the majority of the samples taken were for veterinary residues (877 or 40%), followed by microbiological hazards (674 or 30%); heavy metals (546 or 25%); chemical contaminants (73 or 3%) and biotoxins (42 or 2%). These ratios closely match those in the same categories in the previous twelve-months reporting period, except for veterinary residues where sampling has decreased by 10%, and heavy metals where sampling has doubled. The total amount of sampling (2,212 samples) is an increase compared with the previous period (1,254 samples), possibly to do with continued increased activity since the decline of the Covid-19 pandemic.

As figure 2 shows, consignments from 42 countries were sampled, most frequently from India (304 or 14%), Thailand (289 or 13%), China (281 or 13%), Vietnam (211 or 10%), Sri Lanka (149 or 7%), New Zealand (98 or 4%), Brazil (92 or 4%), Myanmar (88 or 4%) and Pakistan (82 or 4%).

Figure 2 - Percentage of samples taken by country of origin

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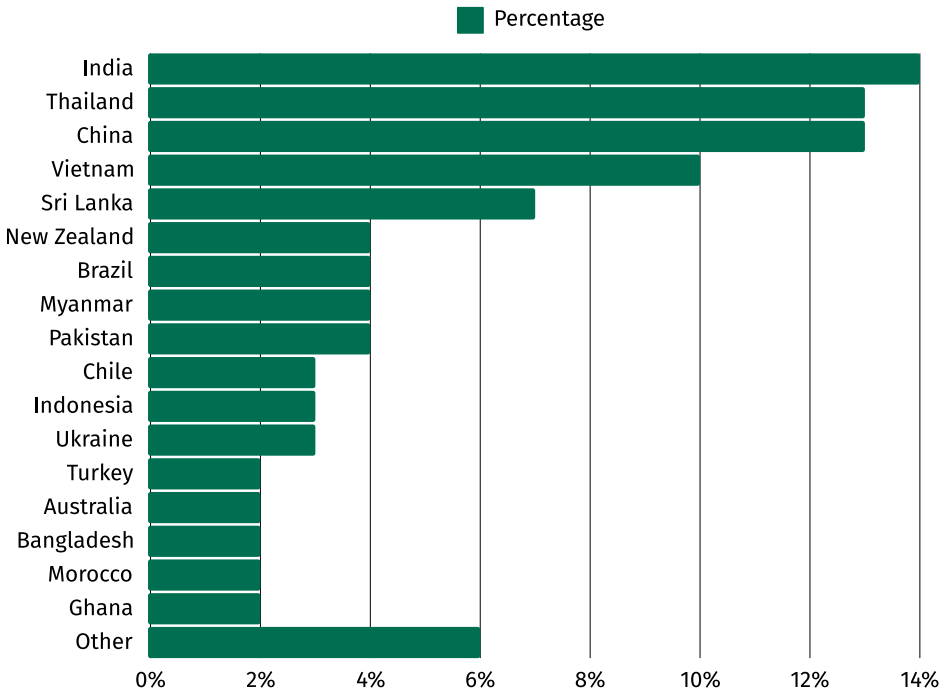

?Country of origin	Number of samples	Percentage
India	304	14%
Thailand	289	13%
China	281	13%
Vietnam	211	10%
Sri Lanka	149	7%
New Zealand	98	4%
Brazil	92	4%
Myanmar	88	4%
Pakistan	82	4%
Chile	76	3%
Indonesia	64	3%
Ukraine	64	3%
Turkey	54	2%
Australia	53	2%
Bangladesh	49	2%
Morocco	48	2%
Ghana	35	2%

?Country of origin	Number of samples	Percentage
Falklands Islands*	20	1%
Serbia*	19	1%
Argentina*	14	1%
Ecuador*	14	1%
United States*	13	1%
Seychelles*	12	1%
South Korea*	11	0%
Macedonia*	8	0%
Papua New Guinea*	8	0%
South Africa*	7	0%
Israel*	6	0%
Peru*	6	0%
Philippines*	5	0%
Mauritius*	4	0%
Mexico*	4	0%
Paraguay*	4	0%
Taiwan*	4	0%
Canada*	3	0%
Nicaragua*	3	0%
Uruguay*	3	0%
Colombia*	2	0%
Namibia*	2	0%
Honduras*	1	0%
Maldives*	1	0%
Venezuela*	1	0%
Total	2212	100%

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Please note, countries that have been sampled at less than 2% are classed together as 'other' in the figure 2 chart.

Samples were taken from 17 product categories. During this period, fish accounted for 617 samples, with 462 for poultry and 427 for crustaceans. Compared with the previous period, in 2021-22 there was higher sampling of fish (330 samples) and crustaceans (199 samples), while poultry sampling remained largely unchanged.

Figure 3 - Samples taken by product category and percentage of total

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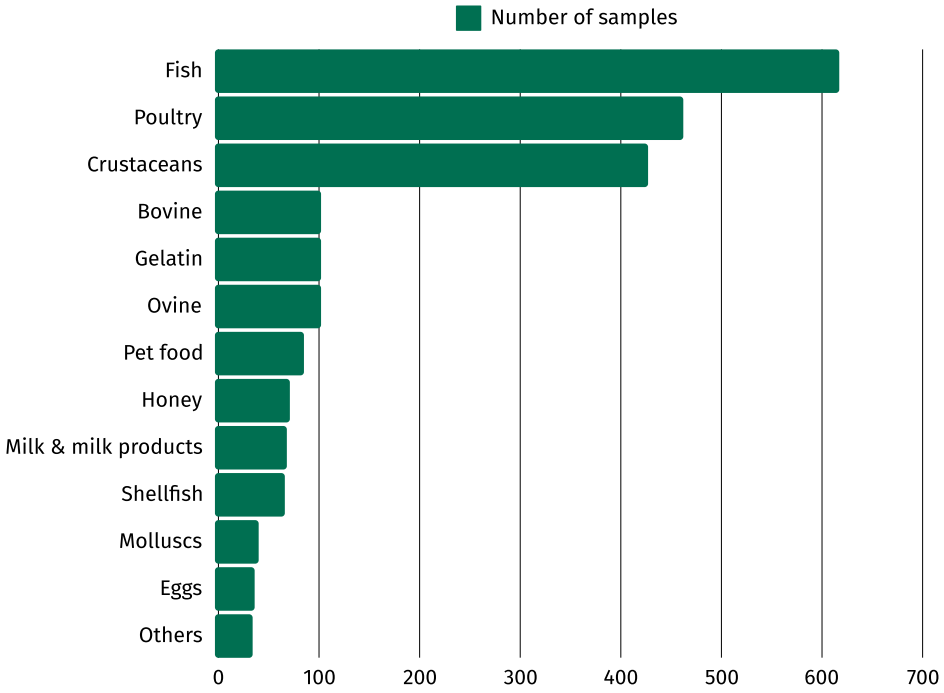

?Country of origin	Number of samples	Percentage
Fish	617	28%
Poultry	462	21%
Crustaceans	427	19%
Bovine	102	5%
Gelatin	102	5%
Ovine	102	5%
Pet food	85	4%
Honey	71	3%
Milk & milk products	68	3%
Shellfish	66	3%
Molluscs	40	2%
Eggs	36	2%
Others	34	2%
Total	2,212	100%

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Of the samples taken, a total of forty-three were found to be non-compliant (1.9% compared to 0.6% in the previous period). There were non-compliances in the following hazard categories: chemical contaminants, heavy metals, microbiological and veterinary residues, compared with eight non-compliances in the previous period.

Figure 4 - Non-compliances by country of origin, product and hazard

?Country	Product type	Product category	Hazard category	Hazard	Non-compliances
Australia	Ovis aries	Ovine	Microbiological	Eschericia coli	4
Bangladesh	Scylla serrata	Crustaceans	Veterinary residues	Pesticide residues	1
Chile	Pesca	Pet food	Microbiological	Enterobacteriaceae	1
China	Invertebrata	Pet food	Microbiological	Enterobacteriaceae	2
Ghana	Clupea harengus Clarias spp, Otra pesca, Sphyraena barracuda, Tilapia spp	Fish	Chemical Contaminants	Benzo-a-pyrene	6
India	Nemipterus spp	Fish	Microbiological	Eschericia coli	1
India	Nemipterus spp	Fish	Microbiological	Staphylococcus coagulase +	1
New Zealand	Ovis aries	Ovine	Microbiological	Eschericia coli (STEC)	2
Pakistan	Pesca (dried fish maws for manufacture of isinglass)	Fish	Microbiological	Salmonella spp.	1
Thailand	Octopus dollfusi	Molluscs	Heavy metals	Cadmium Cd	1
Thailand	Dog or cat food	Pet food	Microbiological	Enterobacteriaceae	1
Ukraine	Aves	Poultry	Microbiological	Salmonella spp.	2
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Aerobic colony count at 30 ºC for 48h	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Coagulase Positive Staphylococci	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Enterobacteriaceae	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Escherichia coli	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Listeria monocytogenes	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Listeria species (total)	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Salmonella species	1
Vietnam	Penaeus vannamei	Crustaceans	Microbiological	Vibrio species	1
Vietnam	Clarias gariepinus Pangasius hypophthalmus, Barbonymus spp, Corica soborna, Eleotris melanosome, Channa striata	Fish	Veterinary residues	Antibacterials	6
Vietnam	Otra crustacea	Crustaceans	Veterinary residues	Antibacterials	1
Vietnam	Clarias macrocephalus	Fish	Veterinary residues	Malachite green	1
Vietnam	Clarias macrocephalus	Fish	Veterinary residues	Malachite green-Leuco	1
Vietnam	Penaeus vannamei, Penaeus Litopenaeus vannamei, Litopenaeus vannamei	Crustaceans	Veterinary residues	Other pharmacologically active substances	3

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National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling for veterinary residues

A summary of the veterinary residues sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 877 samples from 28 countries taken and checked for the presence of veterinary residues. There were thirteen non-compliant results for Antibacterials, Malachite green, Malachite green-Leuco, Other pharmacologically active substances, and Pesticide residues from Bangladesh and Vietnam.

The greatest number of veterinary residue samples were taken from China (153 or 17%), followed by India (120 or 14%), Vietnam (120 or 14%), Thailand (78 or 9%), and Brazil (73 or 8%). Countries marked with an asterisk on the table are shown together as 'other' on the graph chart.

Figure 5 - Samples taken by country of origin and percentage of total

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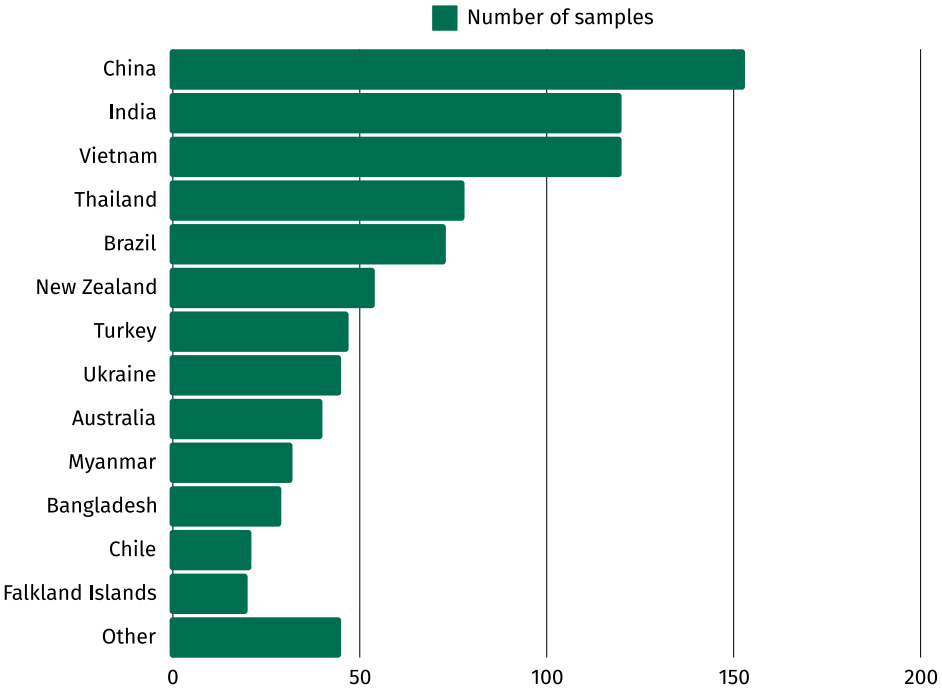

?Country of origin	Number of samples	Percentage
China	153	17%
India	120	14%
Vietnam	120	14%
Thailand	78	9%

?Country of origin	Number of samples	Percentage
Brazil	73	8%
New Zealand	54	6%
Turkey	47	5%
Ukraine	45	5%
Australia	40	5%
Myanmar	32	4%
Bangladesh	29	3%
Chile	21	2%
Falkland Islands	20	2%
United States*	9	-
Israel*	6	-
Ecuador*	5	-
Mexico*	4	-
Philippines*	3	-
Nicaragua*	3	-
Canada*	3	-
Uruguay*	2	-
Namibia*	2	-
Sri Lanka*	2	-
Morocco*	2	-
Indonesia*	1	-
Venezuela*	1	-
Pakistan*	1	-
Honduras*	1	-
Total	877	100%

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Of the samples tested for veterinary residues, the highest numbers were for nitrofurans (124), chloramphenicol (123) followed by tetracyclines (96), avermectins (58), coccidiostats (49), macrolides (43) and antibacterials (42).

Figure 6 - Samples tested for veterinary residues

A table of two columns and 50 rows

?Substance	Number of samples
Nitrofurans	124
Chloramphenicol	123
Tetracyclines	96
Avermectins	58
Coccidiostats	49
Macrolides	43
Antibacterials	42

?Substance	Number of samples
Other Pharmacologically Active Substances	37
Sulfonamides	37
Benzimidazoles	27
Quinolones	27
Dyes	23
Beta-lactamics	22
Pesticides residues	20
Anticoccidials including nitroimidazoles	19
Nitromidazoles (group)	18
Phenicoles	17
Streptomycin	12
Beta-agonists (screening multisubstances)	6
Doxycyclin	6
Oxytetracyclin	6
Sulfamides/Sulfonamidess	6
AMOZ	5
AOZ	5
Chlortetracyclin	4
Moxidectin	4
Sulphadimidine	4
Trimethoprim	4
Malachite Green	3
Aminoglycoside/Aminoside	2
Diclazuril	2
Epi-Chlortetracycline	2
Erythromycin	2
Lasalocid	2
Neomycin	2
Nicarbazin	2
Quinolones/Fluoroquinolones	2
Trenbolone	2
Tylosin	2
Zeranol (Alpha-Zearalanol)	2
Abamectin (Avermectin B1)	1
Anthelmintics	1
Cephalosporins	1
Cupper Cu	1
Malachite Green-Leuco	1
Organochlorine compounds inc PCBs	1
Penicillins (group)	1
Steroids	1
Total	877

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National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling for microbiological contamination

A summary of the microbiological contamination sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 674 samples from 23 countries taken and checked for the presence of microbiological contamination. There were twenty three non-compliant results identified: one each for Aerobic colony count at 30 ºC for 48h, Coagulase Positive Staphylococci, 5 each for Enterobacteriaceae & Eschericia coli, 3 for Eschericia coli (STEC), one each for Listeria monocytogenes, Listeria species (total), Salmonella species, 3 for Salmonella spp., one for Staphylococcus coagulase + and one for Vibrio species, all from Australia, Chile, China, India, New Zealand, Pakistan, Thailand, Ukraine and Vietnam.

The greatest number of microbiological samples were taken from Thailand (192 or 28%), China (114 or 17%), Vietnam (69 or 10%), Indonesia (57 or 8%), Chile (45 or 7%), India (38 or 6%), New Zealand (28 or 4%), Ukraine (10 or 3%) Serbia (19 or 3%), Brazil (17 or 3%), Bangladesh (16 or 2%), Myanmar (16 or 2%) and Australia (13 or 2%). Countries marked with an asterisk in the table are shown together as 'other' on the chart.

Figure 7 - Samples taken by country of origin and percentages of total

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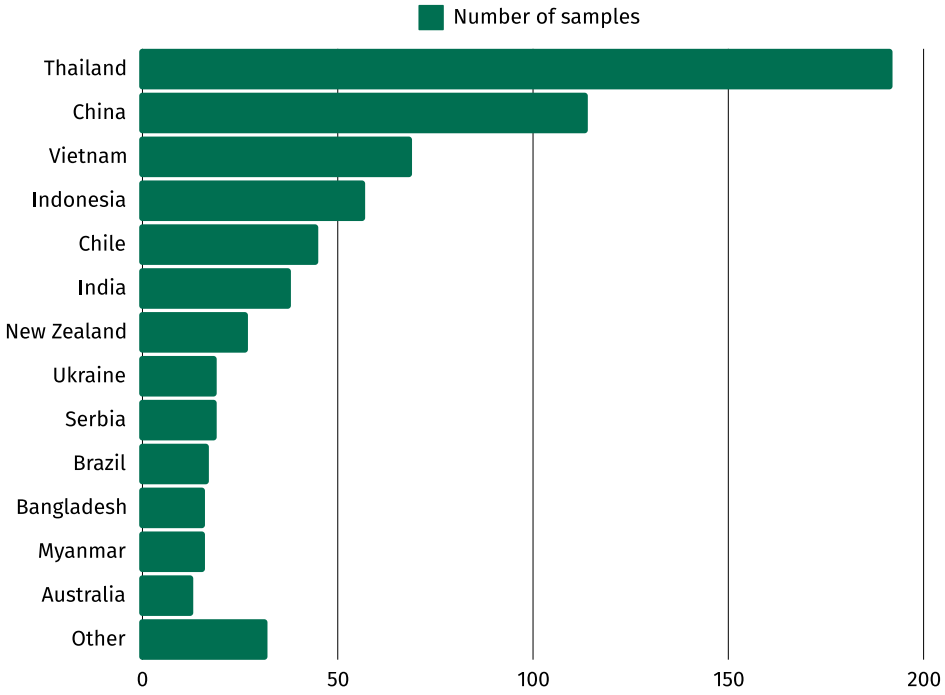

?Country of origin	Number of samples	Percentage
Thailand	192	28
China	114	17
Vietnam	69	10
Indonesia	57	8
Chile	45	7
India	38	6
New Zealand	27	4
Ukraine	19	3
Serbia	19	3
Brazil	17	3
Bangladesh	16	2
Myanmar	16	2
Australia	13	2
South Korea*	9	-
Macedonia*	8	-
United States*	3	-
Turkey*	3	-
Colombia*	2	-
Paraguay*	2	-
South Africa*	2	-
Pakistan*	1	-
Morocco*	1	-
Uruguay*	1	-

?Country of origin	Number of samples	Percentage
Total	674	100%

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Of the samples tested for microbiological contamination, the highest numbers were for Salmonella (122), followed by Enterobacteriaceae (106), Listeria monocytogenes (68), Eschericia coli (67), aerobic microorganisms 30°C (40), Staphylococcus aureus (32) and Clostridium perfringens (26).

Figure 8 - Samples tested for microbiological contamination

?Hazard	Number of samples
Salmonella spp.	122
Enterobacteriaceae	106
Listeria monocytogenes	68
Eschericia coli	67
Aerobic microorganisms 30°C	40
Staphylococcus aureus	32
Clostridium perfringens	26
Listeria spp (excl L. monocytogenes)	24
Aerobic colony count at 30 ºC for 48h	23
Listeria species (total)	22
Salmonella species	20
Vibrio species	19
Coagulase Positive Staphylococci	17
Campylobacter (C.jejuni, C.coli)	13
Campylobacter spp (excl C. jejuni and C.coli)	8
Eschericia coli (STEC)	8
Staphylococci	8
E. coli	6
Listeria spp	6
Salmonella	6
Staphylococcus coagulase +	6
AHD	5
Vibrio parahaemolyticus	5
Vibrio	4
ACC's	2
Coagulase Positive	2
Listeria species	2
Vibrio vulnificus	2
ß-Glucuronidase Positive Escherichia coli	2
Bacillus cereus	1
Staphylococcal enterotoxins	1
Sterility	1

?Hazard	Number of samples
Total	674

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National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling for heavy metals

A summary of the heavy metals sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 546 samples from 22 countries taken and checked for the presence of heavy metals. There was one non-compliant sample for Cadmium Cd from Thailand.

The greatest number of heavy metal samples were taken from India (137 or 25%), followed by Sri Lanka (129 or 24%), Pakistan (66 or 12%), Morocco (40 or 7%) and Myanmar (40 or 7%). Countries marked with an asterisk in the table are shown together as 'other' on the chart.

Figure 9 - Samples taken by country of origin and percentage of total

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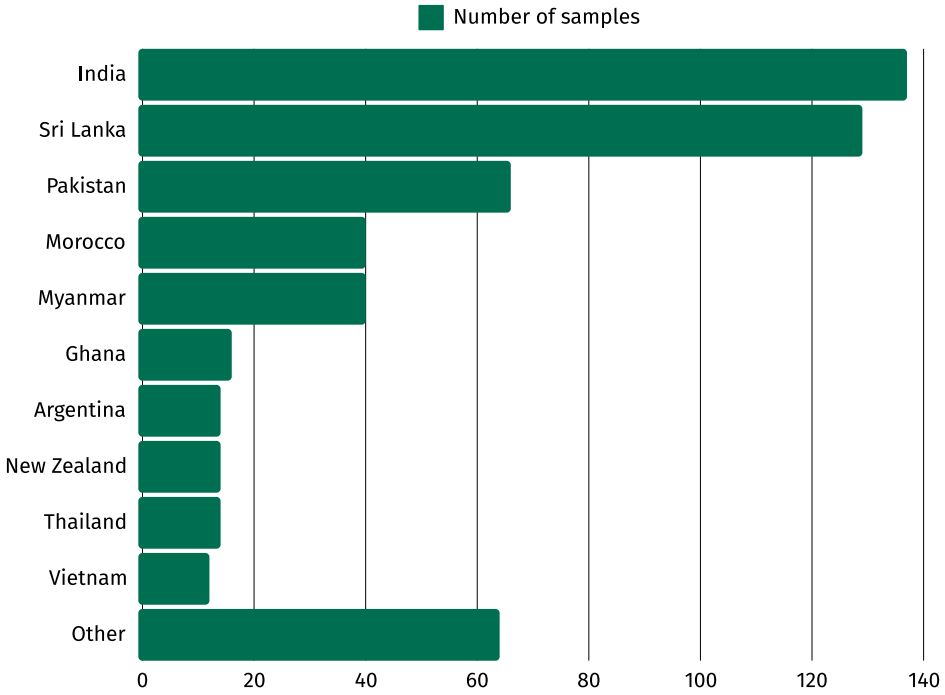

?Country of origin	Number of samples	Percentage
India	137	25%
Sri Lanka	129	24%
Pakistan	66	12%
Morocco	40	7%
Myanmar	40	7%
Ghana	16	3%
Argentina	14	3%
New Zealand	14	3%
Thailand	14	3%
Vietnam	12	2%
Chile*	8	-
China*	8	-
Ecuador*	8	-
Seychelles*	8	-
Papua New Guinea*	7	-
Bangladesh*	4	-
Indonesia*	4	-
Peru*	4	-
South Africa*	4	-
Taiwan*	4	-
Turkey*	4	-
Brazil*	1	-
Total	546	100%

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Of the samples tested for heavy metals, the highest numbers were for cadmium Cd (178) followed by mercury Hg (144), lead Pb (120) and arsenic As (72).

Figure 10 - Samples tested for heavy metals

?Hazard	Number of samples
Cadmium Cd	178
Mercury Hg	144
Lead Pb	120
Arsenic As	72
Zinc Zn	12
Chromium Cr	11
Copper Cu	8
Tin for canned products	1
Total	546

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National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling for chemical contaminants

A summary of the chemical contaminants sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 73 samples from 11 countries taken and checked for the presence of chemical contaminants. There were six non-compliant samples for Benzo-a-pyrene from Ghana.

The greatest number of chemical contaminant samples were taken from Ghana (19 or 26%) followed by Pakistan (14 or 19%) and Sri Lanka (13 or 18%).

Figure 11 - Samples taken by country of origin and percentage of total

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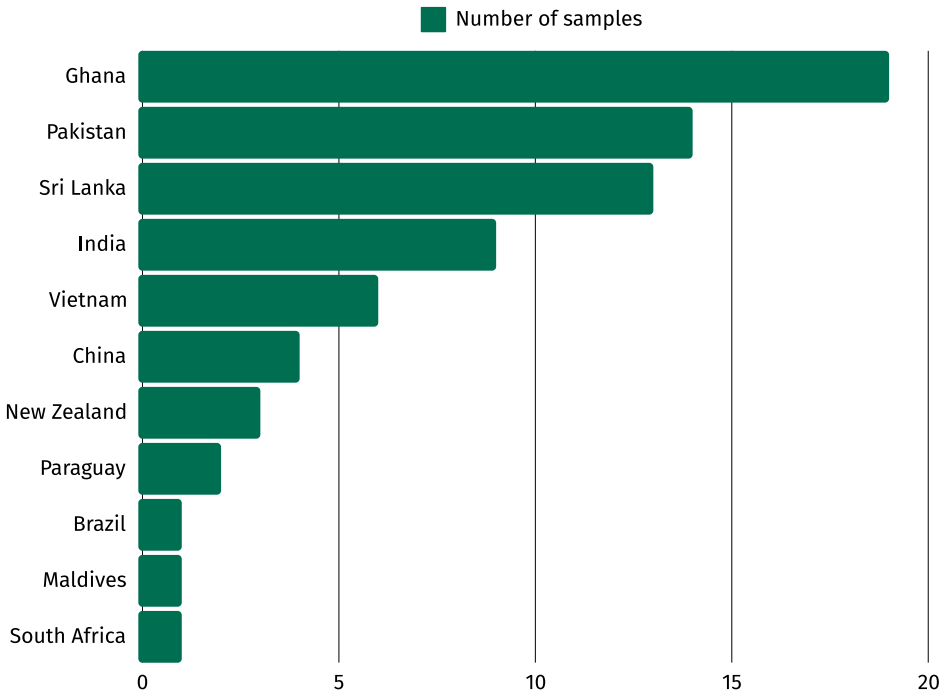

?Country of origin	Number of samples	Percentage
Ghana	19	26%
Pakistan	14	19%
Sri Lanka	13	18%
India	9	12%
Vietnam	6	8%
China	4	5%
New Zealand	3	4%
Paraguay	2	3%
Brazil	1	-
Maldives	1	-
South Africa	1	-
Total	73	100%

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Of the samples tested for chemical contaminants, the highest numbers were for dioxins (21), followed by benzo-a-pyrene (15), and sulphur dioxide (SO2) (10).

Figure 12 - Samples tested for chemical contaminants

?Hazard	Number of samples
Dioxins	21
Benzo-a-pyrene	15
Sulphur dioxide (SO2)	10
Hydrogen peroxide (H2O2)	8
Bisphenol A	5
SEM (semicarbazide)	5
Chlorate and Perchlorate	4
PCB sum	3
Polyphosphates STPP (E452)	2
Total	73

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National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling for biotoxins

A summary of the biotoxins sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 42 samples from 15 countries taken and checked for the presence of biotoxins. There were no non-compliant samples.

The greatest number of biotoxin samples were taken from Morocco (5 or 12%), Sri Lanka (5 or 12%) and Thailand (5 or 12%).

Figure 13 - Samples taken by country of origin and percentage of total

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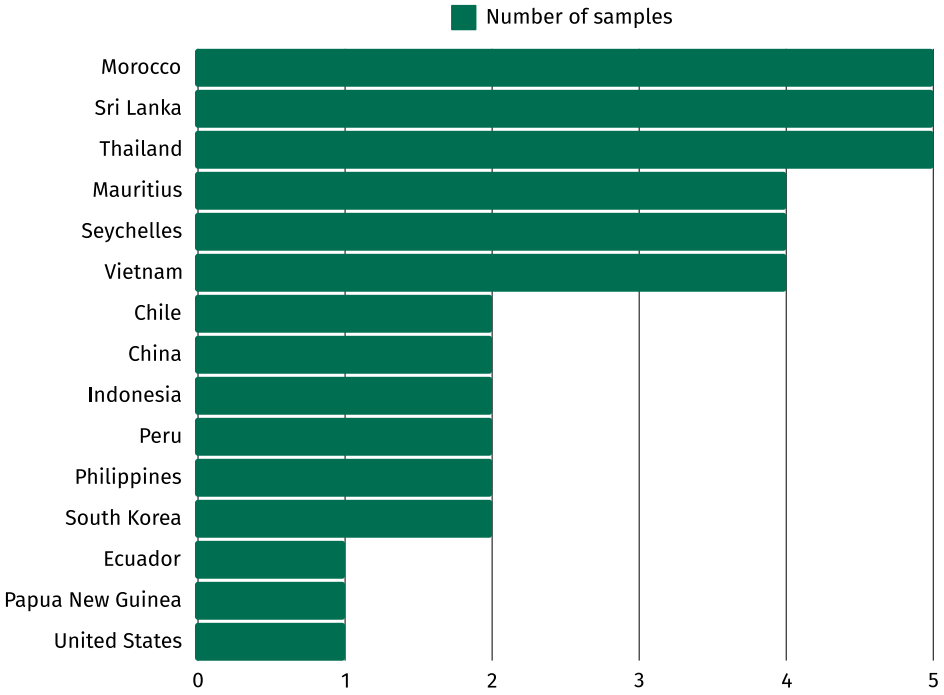

?Country of origin	Number of samples	Percentage
Morocco	5	12%
Sri Lanka	5	12%
Thailand	5	12%
Mauritius	4	10%
Seychelles	4	10%
Vietnam	4	10%
Chile	2	5%
China	2	5%
Indonesia	2	5%
Peru	2	5%
Philippines	2	5%
South Korea	2	5%
Ecuador	1	2%
Papua New Guinea	1	2%
United States	1	2%
Total	42	

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Of the samples tested for biotoxins, only histamine was recorded (42).

National Monitoring Plan for POAO: Data Analysis Report 2022-23 - Sampling of pet food

A summary of dog food, cat food, and other pet food sampling results of imported products of animal origin (POAO) undertaken at UK Border Inspection Posts (BCPs), under the UK's National Monitoring Plan (NMP), between April 2022 and March 2023.

There were 87 samples from 8 countries taken and checked for Enterobacteriaceae and Salmonella spp.

There were four non-compliant results for Enterobacteriaceae from China (2), Thailand (1) and Chile (1). The greatest number pet food samples was taken from China (52 or 60%) and Chile (18 or 21%).

Figure 14 - Samples taken by country of origin and percentage of total

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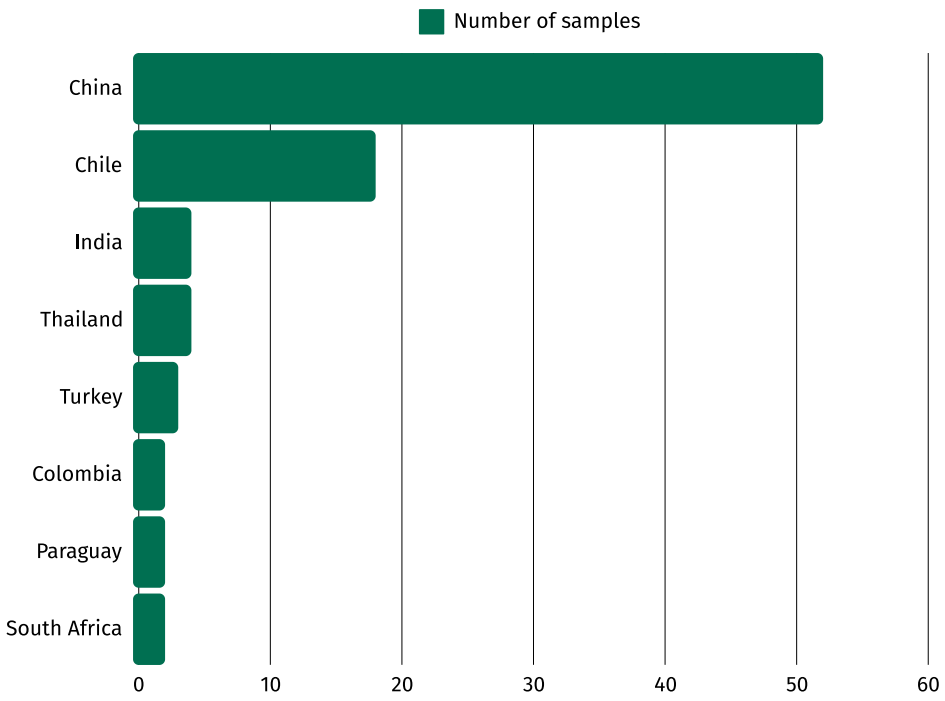

?Country of origin	Number of samples	Percentage
China	52	60%
Chile	18	21%
India	4	5%
Thailand	4	5%
Turkey	3	3%
Colombia	2	2%
Paraguay	2	2%
South Africa	2	2%
Total	87	100%

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Of the samples of dog or cat food tested, the highest number of tests was for Salmonella spp (45).

Figure 15 - Samples of pet food tested

Hazard	Number of samples
Salmonella spp.	45
Enterobacteriaceae	42
Total	87

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