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For food law enforcement authorities in England, port health authorities in England, and other interested parties

## National Monitoring Plan (NMP) sampling priorities for 2021-22

**Summary:** This is the revised UK National Monitoring Plan (NMP) sampling priorities table for the import of products of animal origin (POAO) for the period April 2021 to March 2022.

Dear colleagues,

I am attaching the revised UK National Monitoring Plan (NMP) sampling priorities table for the import of products of animal origin (POAO) for the period April 2021 to March 2022 which becomes effective from 1 April 2021.

The objective of the NMP is to make sure that food imported into the UK complies with relevant legislation, and to detect residues, pathogenic organisms or other substances dangerous to humans, animals or the environment. The NMP is updated annually and is based on the nature of the products and the risk they represent, taking into account all relevant monitoring parameters such as frequency and number of incoming consignments, and results of previous monitoring.

Should you have any queries, please do not hesitate to contact the Imported Food team by email [Imported.Food@food.gov.uk](mailto:Imported.Food@food.gov.uk) clearly marked: "NMP sampling priorities table 2021-22" on the subject line.

Yours sincerely,

Beatriz Lopez-Melgar  
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Imports & Exports Unit

## National Monitoring Plan (NMP) – Imported POAO sampling priorities between April 2021 & March 2022

	High priority
	Medium priority
	Low priority

<b>Bovine</b>
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Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Bovine	<i>Salmonella</i> (screen for AMR where possible), <i>E. coli</i> (screen for AMR where possible), <i>Shiga toxin producing E. coli</i> (STEC), <i>Listeria monocytogenes</i>	Minced meat and meat preparations intended to be eaten <b>raw</b> (e.g. steak tartare). Minced meat and meat preparations intended to be eaten <b>cooked</b> .
High	Bovine	<i>Hormonal growth promoters</i> (particularly trenbolone and zeranol)	Raw meats.
Medium	Bovine	<i>E. coli</i> (screen for AMR where possible), STEC	Fresh meats intended to be eaten <b>cooked</b> .
Medium	Bovine	<i>Veterinary medicine residues: Anthelmintics including Benzimidazoles (Albendazole), Abamectin, Doramectin, Moxidectin and Ivermectin</i>	Corned beef including from Brazil, and cooked beef. Raw beef and bovine casings. [Care should be taken when reporting these results to make clear the legislation or other basis for sampling. In particular bovine meat and fat samples collected in 2021 should not be recorded as taken under Regulation (EU) 2019/533].

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Low	Bovine	<i>Lead / Cadmium</i>	Include offal (kidney and liver).
Low	Bovine	<i>Dioxins/PCBs</i>	Limits for bovine meat and liver.
Low	Bovine	<i>BaP and PAH</i>	Smoked meat and heat-treated meat products (flame-grilled burgers are high risk although unlikely to be imported). Raw meats are not susceptible to BaP contamination.

Ovine

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Ovine	<i>Veterinary medicine residues: Nitrofurans &amp; Chloramphenicol</i>	Sheep casings, from China in particular. Frozen lamb.
High	Ovine	<i>Salmonella (screen for AMR where possible), E. coli (screen for AMR where possible)</i>	<b>Ready-to-eat</b> minced meat, meat preparations and meat products intended to be <b>eaten raw</b> .
Medium	Ovine	<i>Salmonella (screen for AMR where possible), E. coli (screen for AMR where possible)</i>	Minced meat and meat preparations intended to be <b>eaten cooked</b> , raw lamb.
Low	Ovine	<i>Lead / Cadmium</i>	Meat and offal – maximum levels in place.
Low	Ovine	<i>Dioxins/PCBs</i>	Limits for meat and liver.
Low	Ovine	<i>BaP and PAH</i>	Smoked meat (although FSA are not aware of smoked lamb product being imported).

**Poultry**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Poultry	<i>Anti-Microbial Resistance (AMR)</i>	<p><b><u>Raw poultry products</u></b>            Viable counts of <i>Salmonella</i> on samples should be determined using standard procedures. <i>Salmonella</i> isolated from viable counts should be tested for antimicrobial sensitivity by performing MICs against them for the following antibiotics, according to current EU protocols for methodology: Ampicillin (A), Chloramphenicol (C), Cefotaxime (CTX), Cefpodoxime (CPD), Ciprofloxacin (Cp), Gentamicin (G), Amikacin (AMK), Nalidixic Acid (Nx), Neomycin (Ne) and Tetracycline (T).            Multi-drug resistance will be determined as isolates resistant (using appropriate breakpoints) to 3 or more antibiotic of separate classes.</p> <p><b><u>Cooked poultry and other ready-to-eat poultry products</u></b>            Viable counts of <i>E. coli</i> on samples should be determined on MacConkey agar and MacConkey agar + 1 mg/L cefotaxime according to current EU protocols. However, viable counts should additionally be determined using a commercial ESBL agar. Isolates with an AmpC and or ESBL phenotype from MacConkey agar + 1 mg/L cefotaxime or the commercial ESBL agar should be verified as such if required using appropriate genetic (e.g. PCR or WGS) or phenotypic (e.g. appropriate MICs or sensitivities) methods.  <b>Please also report the results of all AMR tests (positive or negative) to:</b>  <a href="mailto:microriskassessment@food.gov.uk">microriskassessment@food.gov.uk</a></p>
High	Poultry	<i>Carbapenemase, AmpC, ESBL</i>	<p><i>E. coli</i> producing carbapenemase/AmpC/ESBL in <b>raw</b> poultry. AmpC/ESBL phenotype <i>E. coli</i> to be isolated on MacConkey agar + 1 mg/L cefotaxime and carbapenem resistant <i>E. coli</i> to be isolated on two commercial chromogenic carbapenem agars according to current EU protocols. Viable counts for <i>E. coli</i> to be determined on MacConkey agar and MacConkey agar + 1 mg/L cefotaxime according to current EU protocols.  <b>Please also report the results of all AMR tests (positive or negative) to:</b>  <a href="mailto:microriskassessment@food.gov.uk">microriskassessment@food.gov.uk</a></p>

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Poultry	<i>Veterinary medicine residues: Coccidiostats &amp; antimicrobials (Nicarbazin, Lasalocid, Diclazuril) Nitrofurans &amp; Chloramphenicol</i>	Raw poultry (chicken, duck, turkey, guinea fowl and goose). In the recent past also detected in fresh and salted chicken. Nicarbazin detected in cooked chicken. Cooked poultry (chicken, duck from Thailand and China), and salted/marinated chicken from Brazil and Thailand.
High	Poultry	<i>Salmonella, E. coli, Listeria monocytogenes</i>	Cooked poultry (chicken, duck from Brazil, Thailand and China), including cooked breaded frozen poultry, and other potentially <b>ready-to-eat</b> poultry products.
Medium	Poultry	<i>Salmonella, E. coli, Listeria monocytogenes</i>	Minced meat, meat products and meat preparations intended to be <b>eaten cooked</b> , including salted/marinated chicken from Brazil and Thailand (but not for <i>Listeria monocytogenes</i> ).
Low	Poultry	<i>Lead / Cadmium</i>	Meat and offal – maximum levels in place.
Low	Poultry	<i>Dioxins/PCBs</i>	Chicken liver is very low risk.

**Swine**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Swine	<i>Veterinary medicine residues: Nitrofurans, chloramphenicol and other antimicrobials. Beta-agonists (particularly ractopamine)</i>	Hog casings, from China in particular. The US in particular, but also other countries, use ractopamine in pork production.
High	Swine	<i>Salmonella (screen for AMR where possible), E. coli (screen for AMR where possible), Listeria monocytogenes</i>	<b>Ready-to-eat</b> minced meat, meat products.
Medium	Swine	<i>Salmonella (screen for AMR where possible), E. coli (screen for AMR where possible), Listeria monocytogenes</i>	Minced meat and meat preparations intended to be <b>eaten cooked</b> .
Low	Swine	<i>Lead / Cadmium</i>	Meat and offal – maximum levels in place.
Low	Swine	<i>BaP and PAH</i>	Smoked pork meat products (sausage, bacon), also including <b>cooked</b> smoked sausage products. Raw meats are <b>not</b> susceptible to BaP contamination.
Low	Swine	<i>Dioxins/PCBs</i>	Lower limits apply than for beef and lamb, so there is a higher risk of non-compliance than other meats, although the health risk is actually lower.

**Bivalve molluscs, echinoderms, tunicates & gastropods**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Bivalves, echinoderms, tunicates & gastropods	<i>Salmonella, E. coli</i>	<b>Live</b> bivalve molluscs and <b>live</b> echinoderms, tunicates and gastropods.
High	Bivalves, echinoderms, tunicates & gastropods	<i>Salmonella</i>	<b>Cooked</b> molluscan shellfish.
Medium	Bivalves, echinoderms, tunicates & gastropods	<i>Biotoxins – PSP, ASP, Lipophilic toxins including DSP</i>	<b>Live</b> bivalve molluscs and <b>live</b> echinoderms, tunicates and gastropods. [With PSP (Paralytic Shellfish Poisoning) being potentially fatal, priority ranking could be increased to High for areas where PSP events are recurrent].
Medium	Bivalves, echinoderms, tunicates & gastropods	<i>Biotoxins - new species</i>	Different species being imported (NZ green lipped mussels, Canadian scallops, different clams' species, geoduck, Atlantic scallops). However, risk from toxins the UK is not familiar with likely to cause testing issues (methods for toxin testing probably not all developed yet) and new threats to public health.
Medium	Bivalves, echinoderms, tunicates & gastropods	<i>Vibrio</i>	Pathogenic vibrio such as <i>Vibrio vulnificus</i> and <i>Vibrio parahaemolyticus</i> may pose a risk, particularly in <b>live</b> bivalve shellfish.
Low	Bivalves, echinoderms, tunicates & gastropods	<i>Norovirus &amp; Hepatitis A</i>	Norovirus and hepatitis A may pose a risk, in particularly in <b>live</b> bivalve shellfish such as oysters. Whilst the risk exists in imported shellfish, there are at present no agreed limits or legislation in place. As a result, there would be <b>no requirement for action</b> on products found to contain such a hazard.
Low	Bivalves, echinoderms, tunicates & gastropods	<i>Heavy metals: lead, cadmium and mercury (including methylmercury), BaP and PAH, Dioxins/PCBs</i>	<b>Live</b> bivalve molluscs and <b>live</b> echinoderms, tunicates and gastropods. <b>Bivalve shellfish</b> are prone to PAH contamination.



**Fish products and crustaceans**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Fish products & crustaceans	<i>Salmonella</i>	<b>Cooked</b> crustaceans.
High	Fish products & crustaceans	<i>Listeria monocytogenes</i> , <i>Clostridium botulinum</i>	Smoked fish (salmon) intended to be <b>eaten raw</b> . <i>C. botulinum</i> in <b>vacuum</b> pack only.
High	Fish products & crustaceans	<i>Veterinary medicine residues</i>	<ul style="list-style-type: none"> <li>Crustaceans: test for chloramphenicol, sulphonamides, nitrofurans and antimicrobials.</li> <li>Farmed products, particularly from Vietnam and India, and to a lesser extent China: test for antimicrobials (including trimethoprim, macrolides) and dyes (e.g. malachite green and crystal violet and their metabolites).</li> </ul>
High	Fish products & crustaceans	<i>Cadmium</i>	Checks should include molluscs, cephalopods and sardines. Crustaceans (white meat only) and muscle meat of fish would be <b>low</b> priority.
High	Fish products & crustaceans	<i>Mercury (total mercury and methylmercury)</i>	Mercury accumulates in all fish, particularly larger predatory oily fish. RASFF reports are common in imports from Asia / Indonesia, so priority should be considered for species from those areas.
High	Fish products & crustaceans	<i>Histamine</i>	In <b>tuna</b> , and other fishery products from fish species associated with a high amount of histidine.
Medium	Fish products & crustaceans	<i>Lead</i>	Checks should include cephalopods. Maximum levels exist for muscle meat in fish, crustaceans (white meat only).

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Medium	Fish products & crustaceans	<i>Irradiation</i>	In <b>dried</b> fish.
Low	Fish products & crustaceans	<i>Nematodes</i>	Parasitic infestation in <b>wild-caught fresh</b> fish only.
Low	Fish products & crustaceans	<i>BaP and PAH</i>	Dried/smoked fish and fishery products. Does not apply to fresh fish, crustaceans or cephalopods.
Low	Fish products & crustaceans	<i>Dioxins/PCBs</i>	Oily fish only. Fish liver – limits set at a level that would indicate a moderate rate of non-compliance but rarely consumed in UK.

Eggs

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Medium	Eggs	<i>Veterinary medicine residues</i>	Test for antimicrobials and coccidiostats.
Medium	Eggs	<i>Dioxins/ PCBs</i>	Limits apply only to hen eggs and hen egg products. Free range/organic eggs in particular are known to accumulate dioxins.
Low	Eggs	<i>Salmonella</i>	<b>Ready-to-eat foods</b> containing <b>raw</b> egg, excluding products where the manufacturing process or the composition of the product will eliminate the <i>Salmonella</i> risk.
Low	Eggs	<i>Salmonella</i>	Egg products, excluding products where the manufacturing process or the composition of the product will eliminate the <i>Salmonella</i> risk.
Low	Eggs	<i>Enterobacteriaceae</i>	Egg products, at the end of the manufacturing process.

**Milk and milk products**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
High	Milk & milk products	<i>Listeria monocytogenes</i>	Cheeses made from <b>raw</b> milk, or milk that may have undergone a <b>lower heat</b> treatment than pasteurisation.
Medium	Milk & milk products	<i>Salmonella, E. coli</i>	<ul style="list-style-type: none"> <li>• Cheeses, butter and cream made from <b>raw</b> milk or milk that has undergone a lower heat treatment than pasteurisation.</li> <li>• Milk powder and whey powder.</li> <li>• Ice cream containing milk ingredients, excluding products where the manufacturing process or the composition of the product will eliminate the salmonella risk.</li> <li>• Dried infant formulae and dried dietary foods for special medical purposes intended for infants below six months of age.</li> </ul> <p>Dried follow-on formulae.</p>
Low	Milk & milk products	<i>Coagulase-positive staphylococci</i>	<ul style="list-style-type: none"> <li>• Cheeses made from <b>raw</b> milk.</li> <li>• Cheeses made from milk that has undergone a lower heat treatment than pasteurisation.</li> <li>• Ripened cheeses made from milk or whey that has undergone pasteurisation or a stronger heat treatment.</li> <li>• Unripened soft cheeses (fresh cheeses) made from milk or whey that has undergone pasteurisation or a stronger heat treatment.</li> </ul>
Low	Milk & milk products	<i>Staphylococcal enterotoxins (to be carried out on samples with coagulase positive Staphylococci test results greater than 10<sup>5</sup> cfu/g)</i>	<ul style="list-style-type: none"> <li>• Cheeses made from <b>raw</b> milk.</li> <li>• Cheeses made from milk that has undergone a lower heat treatment than pasteurisation.</li> <li>• Ripened cheeses made from milk or whey that has undergone pasteurisation or a stronger heat treatment.</li> <li>• Unripened soft cheeses (fresh cheeses) made from milk or whey that has undergone pasteurisation or a stronger heat treatment.</li> </ul>

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Low	Milk & milk products	<i>Fungal moulds and yeasts</i>	Some alerts in the last year.
Low	Milk & milk products	<i>Enterobacter sakazakii</i>	Dried infant formulae and dried dietary foods for special medical purposes intended for infants below six months of age.
Low	Milk & milk products	<i>Aflatoxin M1</i>	Raw milk, heat treated milk and milk for the manufacture of milk-based products. Infant formulae and follow-on formulae, including infant milk and follow-on milk.
Low	Milk & milk products	<i>Lead / Cadmium</i>	Milk and milk products, including infant formula and follow on formula.
Low	Milk & milk products	<i>Glycidyl esters and 3-MCPD and its esters</i>	Infant formula and follow on formula.

**Equine**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Medium	Equine	<i>Veterinary medicines residues</i>	Testing for Phenylbutazone (Bute), targeted to equines from Mexico and South America in general.
Medium	Equine	<i>Salmonella</i>	<b>Ready-to-eat</b> minced meat, meat products and meat preparations intended to be <b>eaten raw</b> .
Low	Equine	<i>Salmonella</i>	Minced meat and meat preparations intended to be <b>eaten cooked</b> .
Low	Equine	<i>Lead / Cadmium</i>	Include offal (kidney and liver).

**Animal fats and marine oils**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Low	Animal fats and marine oils	<i>Dioxins/ PCBs</i>	Animal fats and marine oils are included in Regulation (EC) 1881/2006 as amended. Limits are as for the source animal except for mixed animal fat, which may be at higher risk of non-compliance because the limits are lower than those for beef/lamb/poultry fat.
Low	Animal fats and marine oils	<i>3-MCPD esters and Glycidyl esters</i>	Marine oils.

**(Processed) animal protein products**

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Low	(Processed) Animal & marine protein products	<i>Salmonella</i>	<ul style="list-style-type: none"> <li>• Gelatine and collagen (Microbiological criterion 1.10 in Annex I of Regulation (EC) 2073/2005 specifically gelatine).</li> <li>• Supplements glucosamine/chondroitin if there are suspicions.</li> </ul>
Low	(Processed) Animal & marine protein products	<i>Heavy metals: lead, cadmium, mercury, chromium, arsenic, copper, zinc, hydrogen peroxide</i>	Gelatine (and collagen) if there are suspicions.

## Honey

Priority Ranking	Product Category	Hazard	Specific sampling guidance
Medium	Honey	<i>Veterinary medicine residues: Antimicrobials (including Chloramphenicol, Nitrofurans)</i>	<ul style="list-style-type: none"> <li>• The Animal and Plant Health Agency (APHA), an executive agency of the Department for Environment, Food and Rural Affairs (Defra), is responsible for the animal health aspects of imports of honey - See more at: <a href="https://www.food.gov.uk/business-guidance/importing-products-of-animal-origin">https://www.food.gov.uk/business-guidance/importing-products-of-animal-origin</a></li> <li>• A few samples found in 2018 with Amitraz residues.</li> <li>• Honey from China in particular.</li> </ul> <p>[Sampling should be in in line with EC Directive 2002/63. Analysis should be in line with SANTE/11813/2017 or its replacement. Results should be checked for compliance with pesticide MRLs as set under Regulation (EC) 396/2005 as amended. Care should be taken when reporting these results to make clear the legislation or other basis for sampling].</p>



**Pet food**

<b>Priority Ranking</b>	<b>Product Category</b>	<b>Hazard</b>	<b>Specific sampling guidance</b>
High	Pet food	<i>Anti-Microbial Resistance (AMR)</i>	<b>Raw</b> pet food isolates, to be tested according to current EU protocols.
High	Pet food	<i>Salmonella, Enterobacteriaceae</i>	<b>Raw</b> pet food.
Medium	Pet food	<i>Veterinary medicine residues</i>	Chicken or duck fillet.