National statutory surveillance scheme for veterinary residues in animals and animal products: 2024

Residues detected above the reference point to date: 30 September 2024

Sample	Analysed for	No. of analyses	No. of non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l
Calves kidney	Antimicrobials screen 1	81	2	600	1000 chlortetracycline
				3000	9300 tulathromycin
	Antimicrobials screen 4	68	2	1500	2000, 9400 paromomycin
	Florfenicol	67	3	300	890, 3100, 4100 florfenicol
Calves kidney fat	Pyrethroids	45	1	50	480 deltamethrin
Calves liver	Coccidiostats	79	1	30	37 halofuginone
Cattle kidney	Metals	114	8-2 substances in three samples	1000	1200, 4700, 7000, 8100, cadmium
				200	230, 340, 410, 420, 430, 460, 1100 lead
	NSAIDs	282	3	10	13 diclofenac
				Presence	280 ibuprofen
				65	170 meloxicam
Cattle milk	Antimicrobials screen 1	356	1	4	12.1 amoxycillin
	Florfenicol	520	3	Presence – prohibited for use in milk producing animals	0.378, 0.985, 1.9 florfenicol
	NSAIDs	95	1	0.1	0.96 diclofenac
Cattle serum	Testosterone	236	2	Presence	0.2, 1.9 beta-testosterone
Cattle urine	Steroid screen 1	801	13-2 substances in three samples	12 male	418 alpha-estradiol
				Presence	1.2, 1.6, 1.8, 2.3, 5.7, 6.5, 7.8 alpha-nortestosterone
				Presence	3.4 beta-boldenone
					0.53, 2400 beta-nortestosterone
				12 Male	14, 17, 19, 19, 74 testosterone
	Zeranol	302	7-2 substances in each sample	Presence	0.9, 1.0, 1.8, 1.8, 2.4, 2.7, 4.7 taleranol
					0.28, 0.52, 0.56, 0.59, 0.82, 0.99, 1.3 zeranol
Fattening cattle serum	Testosterone	263	1	Presence	0.21 beta-testosterone
Fattening cattle urine	Steroids screen 1	834	18-2 substances in three samples 3 substances in one sample	2	2.4, 3.3 alpha-boldenone
				Presence	6.6, 8.5, 9.4, 9.6, 11, 11, 12, 12, 16, 19, 21, 31 alpha-nortestosterone
				Presence	0.61, 0.74, 2.2, 3.8, 11, 11, 31 beta-estradiol
				Presence	0.44 beta-nortestosterone
				12 Male	26 testosterone

Sample	Analysed for	No. of analyses	No. of non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l
	Zeranol	250	6-2 substances in each sample	Presence	0.61, 1.1, 1.3, 1.9, 2.3, 2.4 taleranol
				Presence	0.31, 0.63, 0.82, 0.88, 0.96, 1.5 zeranol
Horse kidney	Metals	1	1	1000	37000 cadmium
Pig kidney	Antimicrobials screen 1	638	1	100	210 sulfadiazine
	Metals	59	1	150	280 lead
Pig liver	Anthelmintics	266	1-3 substances in one sample	500	2200 fenbendazole
					150 oxfendazole sulfone
					100 oxfendazole
Salmon muscle & skin	Dyes	61	1	Presence	25 crystal violet
Sheep kidney	Metals	123	15	1000	1200 cadmium
				200	210, 220, 250, 330, 370, 400, 420, 490, 650, 860, 980, 1200, 1400, 1600 lead
Sheep liver	Anthelmintics	893	6-3 substances in one sample 2 substances in one sample	1500	1700, 4100 closantel
				Presence	4 flubendazole
				Presence	23 (2-amino-1H-benzimidazol-5-yl) (4-fluorphenyl)-methanone
				500	1200 oxyclozanide
				150	1917 rafoxanide
				250	7.2 triclabendazole sulfoxide
					95 triclabendazole sulfone
					230 triclabendazole
Sheep urine	Steroid screen 1	320	13	2	2.5, 2.5, 3.0, 3.2, 4.4, 5.4, 6.1, 6.8, 7.2, 8.8 alpha-boldenone
				Presence	0.47, 0.72, 1.1 beta-nortestosterone

Results of follow-up investigations: 30 September 2024

Medicinal products can be found on the Product Information Database.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Calves kidney	Chlortetracycline 1000 µg/kg 2416431	Great Britain	This is a large-sized, Tesco accredited, cattle farm, with around 1200 animals. Calves are moved here from the calving unit, when they are 3-4 days old, and are kept here until 13-14 months old. The positive calf was in a group of 80 Aberdeen Angus X calves that were housed in the same shed. They were all treated with Chloromed to prevent the spreading of respiratory disease (Pasteurella spp). The calf was moved to a different pen to be monitored because it was underweight. When back to weight it was mistakenly placed in a group intended for slaughter. Medicines were stored appropriately and there were no out of date or illegal drugs present. The residue was caused by the calf being wrongly placed in a group sent for slaughter in May 2024, whilst still within a withdrawal period.
Calves kidney	Florfenicol 4100 µg/kg 2409417	Great Britain	The positive male calf was sent to slaughter from a dealers farm in February 2024, aged 18 days. It had spent less than 24 hours on this medium-sized, Red Tractor assured, cattle farm. They have around 200 animals onsite, and another 520 beef cattle herd within their other holdings. They don't keep breeding stock, cattle are bought in from different markets. The dealer declared he had not given any medication to this specific calf. The FCI document was present and medicine records showed florfenicol products have not been used onsite for 5 years. The dealer was not thought to have treated the animal on the basis of the evidence and absence of the product on the farm. A second investigation took place at the farm of origin; a large-sized cattle farm. Their record keeping is fairly well maintained. Medicines are kept in an unlocked cabinet, in a room that is locked overnight. Bull calves are organic and not treated with antibiotics. The female calves are treated with Resflor (active ingredient florfenicol). Female and male calves are separated in two different sheds, so confusion when treating is unlikely. The animal was not spray marked to indicate treatment and no treatment was recorded in the daybook or medicines record. The presence of the drug on farm means that even if there is no record of use, there is still a risk pathway for the drug to have been given to the animal. In conclusion, the most likely reason for the positive result is the animal was treated in error prior to the purchase by the dealer, and then inadvertently sent for slaughter within the withdrawal period. The residue was over 13 times the MRL, indicating a recent treatment. The withdrawal period for Resflor is 46 days.
Calves kidney	Paromomycin 2000 µg/kg 2409364	Great Britain	This is a medium-sized, Red Tractor accredited, dairy farm. They have around 450 dairy cattle, 196 milking cows, 20 dry cows and the rest are calving heifers and calves. Calving is an all-year-round process. They have a known problem with Cryptosporidiosis, and Parofor (active ingredient paromomycin) is given to the calves. The positive calf was born in February 2024, treated with Parofor and sent to slaughter in March 2024, 2 days after the withdrawal period. No other medicines were administered to this calf while on farm. The cause of the residue is likely to be human error or vagary of the metabolism of the calf.
Calves kidney	Paromomycin 9400 µg/kg 2409369	Great Britain	This is a medium-sized, Red Tractor accredited, dairy cattle and sheep farm. There are around 450 dairy cattle, with 196 milking cows, 20 dry cows and the rest calving heifers and calves. This is an all-year-round calving farm. They have a small number of bull calves that are sent to slaughter at 1-2 months of age. The positive calf was recorded as female and placed in a pen with other females. The farm has a known problem with cryptosporidiosis, and paromomycin is given to female calves. The calf was later moved to the male's pen. The males hadn't been treated and were sent for slaughter, and the female calf was included in error, whilst still one week within the withdrawal period, in February 2024.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Calves kidney	Tulathromycin 9300 µg/kg 2409358	Great Britain	The farm that sent the calf to slaughter, is a small-sized cattle farm. The farmer goes to two or three markets every week to buy calves to send them directly to slaughter the next day. There is a very high turnover. No medicines are kept onsite and there is no reason for this farmer to have administered any drugs to the calf being investigated. The positive calf was bought from market in March 2024 and sent to slaughter the following morning, when the sample was taken. The cause of the residue is likely to be from the farm of origin, which is a large-sized cattle and sheep farm, with 399 dairy cattle, 13 beef cattle and around 200 sheep. Most of the dairy cattle are housed, with the calves separated from the rest of the herd. The beef cattle and sheep graze on the fields. Medicines are stored in a locked room and none of them contained tulathromycin. Their vet disposes of the used and out of date medicines. The vet confirmed that Tullavis 100mg/ml solution for injection (active ingredient tulathromycin) was sold to the farm on 2 occasions. This drug has a withdrawal period of 22 days for cattle in meat and offal. The farmer explained that the drug might have been administered to the calf by mistake. It is only meant to be administered to replacement calves (not to the group of beef calves, to which this animal belongs). The positive calf was sent to market in a group of 8 calves. They were under 42 days and therefore not tested. They usually send just the Friesian bull calves and the beef calves to market. The most likely cause for the residue is the animal was treated in error, then sent for slaughter whilst within the withdrawal period.
Calves liver	Halofuginone 37 µg/kg 2409432	Great Britain	This is a large-sized, Red Tractor assured, cattle farm. They have a 975 dairy cattle herd consisting mainly of Holstein Friesians. It is a closed herd, and they rear their replacements on farm. Cattle are housed during winter and grazed during summer. Cows are milked three times a day, and calving is all year around. Calves are sold at approximately 3 weeks old through a market. The medicine records are fully compliant, and the medicine room is very clean and tidy and permanently locked. Drugs are labelled with the necessary information, including the withdrawal period. Workers with access to the medicine cabinet have been trained in the handling of medicines. Medicines are administrated under the direct instruction of the farmer. Calves are treated with Kriptazen (active ingredient halofuginone), due to previous problems with cryptosporidiosis in the herd. It has a withdrawal period of 13 days for meat. The positive animal was born in January 2024 and transported to market in February 2024. It was sent in a group of 21 calves, some of which were still within the withdrawal period, giving rise to this residue.
Cattle kidney	Cadmium 7000 µg/kg 2409269	Great Britain	This is a small-sized cattle and sheep farm, accredited by Organic Farmers and Red Tractor. They have 28 Belted Galloway cattle and around 25 sheep. As an organic farm, medicine use is kept to a minimum and no medicines are kept onsite. The positive cow was born on farm in May 2005, and slaughtered in January 2024. It grazed it's whole life on farm. The high level of the cadmium residue can be explained by the soil conditions. It is a historic mining area and there are high levels of both cadmium and lead in the soil.
Cattle kidney	Cadmium 1200 µg/kg Lead 430 µg/kg 2409267	Great Britain	This is a medium-sized farm with around 100 cattle and 100 breeding sheep. The positive female cattle was born on farm in May 2022. It was sold at market in January 2024 and taken to the abattoir, where it was slaughtered 4 days later. No issues were identified regarding medicine storage, usage or recording. The high level of cadmium and lead residues can be explained by the local soil conditions. It is a historic mining area and there are high levels of both cadmium and lead in the soil.
Cattle kidney	Cadmium 4700 µg/kg Lead 410 µg/kg 2409257	Great Britain	This is a medium-sized organic farmers and growers accredited farm, with 118 Belted Galloway cattle and around 250 sheep. The positive animal was born in March 2017 and arrived on this farm in October 2018 It stayed on this farm until it was slaughtered in January 2024. The farm is organic and hardly any medicines are given to the animals. There is no medicine kept on the farm either. The high levels of cadmium and lead in livestock coming from this farm can be explained by the soil conditions of this area; this is a historic mining area with high levels of both cadmium and lead in the soil. Therefore, the most probable cause is natural residue from a farm in an old mining area.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle kidney	Cadmium 8100 µg/kg Lead 230 µg/kg 2409275	Great Britain	This is a large-sized, well run, beef cattle farm. The animals are well looked after, with sufficient feed and water. The positive animal was born and bred on farm; it was 5 years old when taken to the abattoir. The animal grazed in fields with a potential source of cadmium and lead. The likely cause of this residue is geochemical accumulation, through grazing on land with high levels of cadmium and lead.
Cattle kidney	Diclofenac 13 µg/kg 2409043	Great Britain	This is a large cattle farm, with around 220 Holstein dairy cattle and 40 Angus-cross beef cattle. The positive animal was a homebred beef cow, born in August 2022, and grazed in the farms fields between April and November. Since November 2023 it had been housed until it was sent for slaughter in March 2024. The farm produces its own grass and grass silage. There is no mixing of medicated feed on farm. They buy the feed and concentrate cake from an agricultural supplier. All feedstuff is kept bagged on site. Records are kept according to the legal requirements. Medicines are administered under veterinary supervision and stored correctly. No diclofenac products were in the medicine cabinet or used on farm, and all medication had the purchase receipts and prescriptions. Animals presented normal body condition and conformation. The only medication given to this cow was wormer in 2023. Cows are usually collected by the farmer's contractor haulier, when sent to slaughter. They normally go directly to the same slaughterhouse, not mixing with other farmer's livestock. It is likely the result obtained was due to cross-contamination of the sample at collection.
Cattle kidney	Ibuprofen 280 µg/kg 2409071	Great Britain	This is a medium-sized cattle and sheep farm. They have a 111 cattle fattening and suckler herd. They buy in store cattle and fatten them for approximately 12 months before sending them to slaughter. All animals are fed silage, straw and mineral supplements. Medicine records are kept electronically. The positive animal was born in April 2022 and purchased from market in April 2023. It was fattened and sent to abattoir in January 2024, where it was sampled. There is no evidence of the usage of ibuprofen, the reason for the residue is unknown.
Cattle kidney	Lead 340 µg/kg 2416348	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Cattle kidney	Lead 420 µg/kg 2416375	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Cattle kidney	Lead 460 µg/kg 2416367	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Cattle kidney	Lead 1100 µg/kg 2409288	Great Britain	This is a medium-sized, Red Tractor accredited, beef farm. There are 254 animals onsite, which operates as a beef cattle herd with breeding stock. They are sold for slaughter when they reach between one to two years of age. Occasionally, animals are sold to other farms. The cattle are fed with hay, straw from the farm and pellets. There are blocks of Himalayan rock salt which could be a possible source of lead contamination. The water supply comes from the mains and a collection tank for spring water in the fields and at the farm. Movement and medicine records were satisfactory. Medicines are stored in a lockable farm office. The positive male calf was born in March 2022 and was sent for slaughter in February 2024. It was only on this farm for 7 months between July 2023 and February 2024. It was housed during this time and didn’t graze outside. There is no evidence of any lead source at this farm, the source of this residue could not be established. The most probable reason for this positive result for lead was environmental contamination at a previous location. The first month at the natal farm and the second farm where the calf stayed a total of 16 months are both high lead areas and likely to account for a large proportion of the residue.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle kidney	Meloxicam 170 µg/kg 2416143	Great Britain	This is a large-sized, Red Tractor accredited dairy farm, with 500 cattle, comprised of approximately 160 milking cows and young stock. Farmland is used for making grass silage and summer grazing, and cattle are housed during winter. Replacements are bought in. Milking cows have concentrates in the parlour. Sheep are only kept during the winter period. Medicated feed is given to young calves (Deccox). The herd is vaccinated for BVD, IBR and Leptospirosis. The farm uses medical treatments for mastitis, pneumonia, and foul. Medicine products are kept in a lockable medicine storage, only accessible by the farmer, his wife and son. All medicines are used in date, and there is no overstock. Expired medicines and empty containers are disposed of by the PVS. Medicine records were satisfactory. Proof of purchase is retained for all medications for at least 5 years. The farmer uses anti-inflammatory drug Metacam (active ingredient meloxicam) to aid recovery and reduce pain in animals. The positive dairy cow, a Holstein Friesian female, was born in March 2013 and bought in October 2015. It was sent to slaughter in April 2024. The likely cause of this residue was due to miscommunication between the farmer and his son resulting in sending the cow to the abattoir two days before the end of the withdrawal period.
Cattle milk	Amoxycillin 12.1 µg/kg	Northern Ireland	The positive cow was from a dairy herd with 136 animals. Movement and medicine records are kept in accordance with legislation. Records show one animal was treated with Betamox injectable (active ingredient amoxicillin) two days prior to sampling. The withdrawal period for milk is 24 hours. 30ml was administered and repeated 24 hours later. Estimation of weight of the animal suggests the correct dosage was given, however the whole dose was injected into one site, this exceeds the maximum dosage per site of 20ml.
Cattle milk	Diclofenac 0.96 µg/kg 2410907	Great Britain	This is a medium-sized, Red Tractor accredited, dairy farm. Aging animals are sold at market, bull calves are kept up to 18 months old. Milk collection is automated, and data is stored online. Milk is monitored for signs of mastitis and cows treated accordingly. Deworming is also recorded, and data kept for a minimum of 5 years. Information for the other animals, sheep, calves and non-lactating cows, are kept in writing and recorded for 3 years. Medicines are kept in a locked cupboard. The private veterinarian supplies the medicines and disposes of expired drugs. This sample was taken by the farmer. The most likely cause of this residue is cross contamination during the handling of animals and/or sample material by a person treated or in contact with this substance.
Cattle milk	Florfenicol 0.378 µg/kg	Northern Ireland	The positive animal came from a herd of 413 dairy cows. Movement and medicine records were kept in accordance with legislation. The herd owner confirmed that a suckler cow suffering pneumonia was injected with Nuflor (active ingredient florfenicol) 46 days prior to sampling. The treated animal was brought into the milking parlour and milk was mistakenly sent to the tank. Four follow up samples were compliant.
Cattle milk	Florfenicol 0.985 µg/kg	Northern Ireland	The positive animal came from a herd of 305 pedigree dairy cows. Movement and medicine records were kept in accordance with legislation. The herd owner confirmed that he used florfenicol in the past to treat pneumonia in calves but does not use it in cows or heifers nearing calving, only in very young calves. Only the herd keeper has access to the medicine cabinet. No evidence of non-compliance was found. One follow-up sample contained florfenicol at 0.574 µg/kg, further follow ups were compliant.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle milk	Florfenicol 1.9 µg/kg 2410929	Great Britain	This is a medium-sized dairy cattle farm, with approximately 417 dairy animals, mainly Holstein. The rest are calves, heifers and dry cows. There have been 122 births in the last 6 months and extra stock is bought in from private farms. The cattle are fed with grazing, hay and nuts. Additional feed is bought from suppliers, no medicated feeding stuffs are used. Water is supplied from a spring or the mains if needed. Movement and medicine records are satisfactory. Medicines and medical equipment are kept separate for calves and dairy cattle. There is a routine vaccination and de-worming programme in place, as per a herd health plan agreed annually with the PVS. Fenflor (active ingredient florfenicol) is kept on site for treating the calves, it's not used for milking cattle. All medicines are purchased from their vet, who also dispose of expired medicines. Milking begins at 5:30 and 15:30 each day, calf feeding starts an hour after milking begins. The dairy company collects the milk from the bulk tank twice a week. A sample of the milk is tested before each collection. There is a regular, thorough cleaning regime in place and routine for milking, feeding and bedding. There are measures in place to prevent medicated milk entering the bulk milk tank. The most probable reason for this positive result is a cross-contamination at the point of sampling in the bulk tank. Inadvertent non-compliance with operational instructions may have led to the farmer handling the sample pot, having dosed an animal earlier in the morning. The amount of antibiotic found in the sample corroborates this. The milk company test for the same day was negative.
Cattle urine	Alpha-nortestosterone 1.6 µg/kg 2415385	Great Britain	This is a small-sized, Soil Association certified, beef cattle farm, with additional animals onsite. Their 101 cattle consists of 39 males and 62 females. Small numbers of animals are purchased from local farms as calves or stores (to be fattened), then sent to slaughter, but most of the stock is homebred. Cattle are fed with high quality grass silage, grown and processed onsite. Cattle graze outdoors in summer and autumn and are housed for winter. Medicines are supplied by their Private Veterinary Surgeon (PVS) and stored in a metal lockable cabinet. Medicine records are kept electronically and available since 2011. Any expired products are returned to the PVS for disposal. There was a record of treating this animal with a dewormer in March 2024, but no evidence of treatment with steroids. The animal was homebred in April 2022, and reared and fattened on farm. It was sent direct to slaughter, by haulier, with 2 other beef cattle in June 2024, when the sample was taken. The journey from the farm to the slaughterhouse was over 50 miles and over an hour. The low level of residue, from a male animal and a long journey under potentially stressful conditions, points to a naturally occurring residue.
Cattle urine	Alpha-nortestosterone 1.8 µg/kg 2407955	Great Britain	This is a medium-sized Red Tractor accredited farm which rears sheep with 520 adult sheep on the farm, cattle stores with 58 Beef breeds are also kept for fattening. The positive animal was a Limousin steer sheep born in September 2022 and then sold to market in October 2023. It was purchased by the farm in January 2024 and slaughtered three days later. They are usually purchased from markets, coming from more than one farm, kept for about 6 months for finishing then sold to markets for slaughter. They are fed home grown hay, oats and beans. Concentrate food is purchased on occasion and purchased mineral supplement also added to feed. The animals are kept in good clean conditions and showed normal calm behaviour during the inspection. Most recent medicine records were complete, with IDs of animals treated; however older records lacked details such as the ear tag number. Medicine usage on the farm is limited to antibiotics and non-steroidal anti-inflammatories for bovine respiratory disease. There was no evidence on farm of the use of anabolic steroids, the probable cause of this residue is from natural levels, triggered by stress during transport/at the market.
Cattle urine	Alpha-nortestosterone 5.7 µg/kg	Northern Ireland	Pregnant female. No further investigation required.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle urine	Alpha-nortestosterone 7.8 µg/kg 2408052	Great Britain	This is a large-sized, Red Tractor accredited, dairy cattle farm, with around 382 cattle, Fleckvieh X and Swiss Brown being the predominant breeds plus a small number of beef cross. Only AI is used as part of the breeding program. Management on the farm is good and records are of a high standard. Medicines were stored appropriately in a locked cabinet, with no out of date or illegal medicines present. No products containing nortestosterone, or anabolic compounds were found. Only medicines prescribed by the private vet are administered to the animals. The positive animal was moved to a collection centre in February 2024. It is most likely that the residue has occurred naturally. It may be explained by a minor injury sustained in transit or at the collection centre, or the possibility the cow was in the early stages of pregnancy.
Cattle urine	Alpha-nortestosterone 2.3 µg/kg Alpha-estradiol 418 µg/kg	Northern Ireland	The positive animal was purchased into a beef finisher herd and was on farm for 16 months prior to sampling. The farm herd gets animals at around 4 months old. No obvious concerns, follow-up samples were compliant.
Cattle urine	Beta-boldenone 3.4 µg/kg Beta-nortestosterone 2400 µg/kg 2408076	Great Britain	This is a large-sized, Red Tractor accredited, beef cattle farm with 700 cattle. Approximately 300 fattening cattle graze outside (from 6 to 14 months old) and the rest are housed for fattening and finishing (from 16 to 36 months old). The cattle are vaccinated for IBR and black leg and are dewormed. The 600 acres of farmland is used for making grass & maize silage, whole crops (barley) and for cattle grazing in the summer. The cattle are housed during the winter. The farmer buys in beef cattle for fattening (approximately 16 to18 months old). They are fed with the grass and maize silage, barley, and a mix of proteins, concentrates and minerals. Medicines are kept in lockable storage and are all in date. Any out-of-date medicines and empty containers are disposed of by their Private Veterinary Surgeons (PVS). Medicine Records are up to date and medicines invoices are kept for at least 5 years. The positive Limousin cross cow was born in May 2022 and bought in August 2023 in a group of 120 male and female cattle. These were never grazed but were housed in the same shed. The sampled cow was sold in January 2024 at market and sent to slaughter in February 2024, when the sample was taken. It had been running with the stock bulls 60 days prior to being sold and could have been pregnant. It had not been treated for the previous 2 months and animals remaining on the farm from the same management group had no conformation changes or abnormal muscling. It is likely the boldenone has arisen following faecal contamination of the sample or was of endogenous (natural) origin, as it is possible that certain plant sterols can be metabolised to produce boldenone in urine. It may also be due to an early undetected pregnancy.
Cattle urine	Taleranol 0.9 µg/kg Zeranol 0.28 µg/kg 2425815	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Taleranol 1.0 µg/kg Zeranol 0.59 µg/kg 2415618	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Taleranol 1.8 µg/kg Zeranol 0.56 µg/kg 2404655	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Taleranol 1.8 µg/kg Zeranol 0.82 µg/kg 2408330	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Taleranol 2.4 µg/kg Zeranol 0.52 µg/kg 2408315	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Taleranol 4.7 µg/kg Zeranol 0.99 µg/kg 2415626	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle urine	Taleranol 2.7 µg/kg Zeranol 1.3 µg/kg 2415611	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Cattle urine	Testosterone 14 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.
Cattle urine	Testosterone 17 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.
Cattle urine	Testosterone 19 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.
Cattle urine	Testosterone 19 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.
Cattle urine	Testosterone 74 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.
Fattening cattle serum	Beta-testosterone 0.21 µg/kg 2401084	Great Britain	This is a medium-sized, FABBL accredited, beef cattle farm. Medicines are acquired from their vet or local retailer. Medicine records are kept in two formats, one is computer based and the other in a pocket notebook. Although there were some discrepancies between the two. Medicines are stored inside a disused fridge that is kept in a locked building. Some of the medicines were open and out-of-date, although there was no evidence they had been used to treat animals. Medicines administered to the positive cow are routinely used in beef production, such as dewormers, BVD vaccines and the PPD (purified protein derivative) test (for TB). The positive cow is a home bred animal and was born in April 2020. It is in good health and the same size and shape as its herd mates of the same age. The sample was collected in March 2024 when the cow was heavily in calf, and this is the likely reason for the residue. Conclusion natural origin.
Fattening cattle urine	Alpha-boldenone 2.4 µg/kg Alpha-nortestosterone 16 µg/kg 2400583	Great Britain	This is a large-sized sheep and beef cattle farm. The cattle are kept for breeding purposes and at the end of their productive life, they are sent for slaughter as cull cows, via market or directly to the slaughterhouse. The cattle are fed with hay, silage and Berrystock cakes. The only medicines used are antibiotics and anti-inflammatory drugs to treat lameness in cattle, or wormers for sheep. Any expired medicine is taken to the vet practice and disposed of accordingly. The cattle are kept in two locations, one with approximately 15 cattle, Aberdeen Angus X and Hereford breeds. At the other location they keep the pregnant cows. The sample was taken from a cow at the pregnant group site. It is likely therefore, the positive residue result is due to the animal being in-calf at time of sampling.
Fattening cattle urine	Alpha-boldenone 3.3 µg/kg Alpha-nortestosterone 31 µg/kg Beta-nortestosterone 0.44 µg/kg 2409941	Great Britain	This is a medium-sized cattle farm, with a mix of 61 British and Holstein Friesians. Cattle are grass fed during the day and brought in overnight when they are fed home-produced silage. The grass has been seeded along with clover. It is supplemented with bought in feed nuts and straw. Replacement cattle are bought in. Medicine records are in good order. The medicine cupboard was lockable, and medicines were in date and licensed for use in cattle. The positive calf was born in May 2024 and the sample taken the next day. It was not treated with any medication. The mother had only been treated with an intramammary antibiotic and sealant in March 2024. None of the cattle had abnormal musculature. The most likely reason for the residue detected is due to the recent birth of the calf, 1 day prior to the sample collection.
Fattening cattle urine	Alpha-nortestosterone 6.6 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 8.5 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 9.4 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 11 µg/kg	Northern Ireland	Pregnant female. No further investigation required.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Fattening cattle urine	Alpha-nortestosterone 11 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 12 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 19 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 21 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 12 µg/kg Beta-estradiol 11 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Alpha-nortestosterone 9.6 µg/kg Beta-estradiol 31 µg/kg	Northern Ireland	Pregnant female. No further investigation required.
Fattening cattle urine	Beta-estradiol 0.61 µg/kg	Northern Ireland	Beta-estradiol can be present when very high levels of alpha-estradiol are present. No further investigation required
Fattening cattle urine	Beta-estradiol 0.74 µg/kg	Northern Ireland	Beta-estradiol can be present when very high levels of alpha-estradiol are present. No further investigation required
Fattening cattle urine	Beta-estradiol 3.8 µg/kg	Northern Ireland	Beta-estradiol can be present when very high levels of alpha-estradiol are present. No further investigation required
Fattening cattle urine	Beta-estradiol 11 µg/kg	Northern Ireland	Animal calved two weeks prior to sampling. No further investigation required.
Fattening cattle urine	Taleranol 0.61 µg/kg Zeranol 0.31 µg/kg 2401133	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Taleranol 1.1 µg/kg Zeranol 0.63 µg/kg 2418639	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Taleranol 1.3 µg/kg Zeranol 0.82 µg/kg 2418634	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Taleranol 1.9 µg/kg Zeranol 0.88 µg/kg 2401136	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Taleranol 2.3 µg/kg Zeranol 1.5 µg/kg 2418645	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Taleranol 2.4 µg/kg Zeranol 0.96 µg/kg 2418632	Great Britain	Low levels of zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus. At this level of residue, a statistical model based on research has confirmed this to be the case. No further investigation was required.
Fattening cattle urine	Testosterone 26 µg/kg	Northern Ireland	Bull status confirmed. No further investigation required.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Horse kidney	Cadmium 37000 µg/kg 2426781	Great Britain	This is a small beef cattle farm with a herd of 25. There are 20 horses on site for showing and breeding and some sheep are purchased in the spring, fattened up and sent to slaughter in the summer. Cattle are fed grass and silage, the sheep graze. Additional feed is bought in, but no medicated food is used. Some horses are purchased for slaughter, they stay a few days in the stables and are then sent to an abattoir. They are fed silage or haylage, not concentrate, and mains water. Horses for breeding and showing are vaccinated against equine influenza annually. They only receive medication if it is prescribed by a veterinary surgeon. Medicines are sourced from a supplier and locked away. Medicine records were only available from May 2024. The positive animal was sent from the farm to the abattoir in July 2024, when the sample was taken. The meat was not used for human consumption. The horse was 13 years old and likely to have grazed in an area of mining activity and high natural levels of cadmium in the soil, resulting in the high residue.
Pig kidney	Lead 280 µg/kg 2407890	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Pig kidney	Sulfadiazine 210 µg/kg 2407325	Great Britain	This is a medium-sized, Red Tractor and RSPCA accredited, pig farm. It is an indoor commercial pig unit for fattening pigs. They arrive when they are 4 weeks old and stay onsite for approximately 20 weeks and are then sent to slaughter when they reach 110kg in weight. The premises can accommodate 2 batches of pigs, one of 1600 pigs and another of 1800. There is a difference in age of 12 weeks between the two batches. The pigs are split into 6 buildings per batch. There are 6 siloes on the farm, 2 of them receive feed for the younger stock and 4 of them receive feed for the older stock. Medicated feed is bought in. Due to a streptococcal infection, the younger stock were fed a Sulfoprim 15% Premix, at a concentration of trimethoprim 50mg and sulfadiazine 250mg, with a withdrawal of 7-10 days. It should not have been fed to the older stock. The older pigs were transported internally in a livestock trailer used to transport the younger stock during the period they were medicated through their feed. The older pigs were exposed to the detected substance via the urine of younger stock. The trailer wasn't cleaned between the different uses. Injectable drugs are also used on site in addition to medication in water and feed. They are stored refrigerated in the farm's office. Animals that are treated individually are marked with spray paint and aren't selected for slaughter. Out of date medicines, used needles and empty containers are collected and disposed of by a contractor. The positive pig was part of a batch of 201 finished pigs sent to the abattoir in January 2024. The trailer urine exposure is a possible explanation for the residue, but it is more likely the buildings are not dedicated to a specific age group and the siloes were not cleaned or flushed with non-medicated feed, or possibly medicated feed was delivered to the wrong silo.
Pig liver	Fenbendazole 2200 µg/kg Oxfendazole sulfone 150 µg/kg Oxfendazole 100 µg/kg 2414850	Great Britain	This is a medium-sized, RSPCA accredited pig finisher farm, with 1200 pigs. Pigs arrive on farm, as stores, at around 35 kg in weight. They are housed in 4 large straw-based sheds, with adlib feeders, some automated, others filled manually. Feed comes from a supplier, with 2 rations throughout, the first medicated with fenbendazole. The pig and feed supplier provides fieldsmen who regularly inspect the pigs and administer most of the injectable medication. They instruct the farmer if any additional medication is to be given. Medicine and medicated feed records were available. A batch of pigs were delayed being sent to slaughter for 2 weeks, and a new batch of pigs arrived plus a delivery of medicated feed. It is likely the residue is due to unintentional feeding of the medicated ration to the positive animal being sent to slaughter.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep kidney	Cadmium 1200 µg/kg 2406656	Great Britain	The positive ewe was born at a large established sheep and cattle farm, with 800 breeding ewes and offspring, and around 40 calving cows. Some sheep are kept indoors during the winter, and most are sold at auction. Medicine records were handwritten and in good order, but the medicines store was a disorganised cupboard which could not be locked. Multiple expired medications were found. Sheep had been dipped in mid-2023 and some dewormed. The farmer reports that the ewe in question was most likely kept indoors for the last 3 months before sale being fattened on feed from a supplier. They use their own groundwater supply. Adjacent to the holding is a military firing range. A large section of moor in the west part of the holding was used for tank shell target practice during the 1940s. It is possible this has been contaminated. The positive ewe was sold at market in January 2024 and sent to slaughter a week later. In the week between purchase and slaughter, she was grazed in a field by the new owner. It is likely that cadmium, in bioavailable form (acid moor soil), was being taken in naturally at grazing leading to this residue finding.
Sheep kidney	Lead 210 µg/kg 2406616	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 220 µg/kg 2425188	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 250 µg/kg 2406626	Great Britain	This is a small-sized, city farm with multiple species. The positive animal was a homebred male lamb and was intended for slaughter. The animal was sent from this CPH to an abattoir in January 2024. The sheep are fed with grazing, hay, and energy feed that can be used all year round to provide supplementation for ewes, rams, and lambs. No medicated feed is given to the animals. A full check was conducted on the veterinary medicine record – all was seen as satisfactory, and the withdrawal periods for the vet meds always observed. The cause of this residue is due to environmental pollution, with the farm in an area of old mining fields.
Sheep kidney	Lead 330 µg/kg 2417608	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 370 µg/kg 2406622	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 400 µg/kg 2417648	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 420 µg/kg 2406645	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.
Sheep kidney	Lead 490 µg/kg 2417643	Great Britain	It should be noted that the GB Maximum Residue Level (MRL) for lead in sheep offal is 500 µg/kg. The respective EU MRL is 200 µg/kg, and so the GB laboratory tests to 200 µg/kg as the more conservative value. Whilst this sample is technically compliant against the GB MRL, the farm of origin has still been subject to an investigation to satisfy EU export obligations.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep kidney	Lead 650 µg/kg 2406649	Great Britain	This is a large sheep farm, with a medium-size beef cattle enterprise. Cattle are bought at 10-11 months old and sold at two years of age for finishing. Cattle are housed in winter (Nov-Jan) and only a small number graze around the farm. The sheep flock is made up of 1300 north country and Welsh mule breeding ewes plus their offspring. Additional store lambs are bought every year (500 bought this year). Lambing is indoors and sheep graze around the farm all summer and then weaned lambs are turned onto stubble turnip fields. The main water source is a borehole. The positive lamb was born in spring 2023. It was in a batch of 62 lambs transported to the abattoir in February 2024 and slaughtered the day after. Partridge shooting takes place in two of the grazing areas, and in May 2023 a local blaze may have released particles in the immediate surrounding area. However, the area has a long past of lead mining, and environmental contamination of the soil is a more likely source. The probable cause of this residue is geochemical accumulation, through grazing on land with high levels of lead.
Sheep kidney	Lead 980 µg/kg 2406610	Great Britain	This is a small, Farm Assurance accredited sheep farm, with 300 ewes, 66 store lambs and around 45 baby lambs. Sheep are kept for breeding, fattening and wool, and replacements are reared on farm. Lambing is between April and May and approximately 400 lambs are reared every year. They are sold finished, from 8 to 12 months old and some are kept as replacements. Sheep are grazed all year round and only brought in for lambing. They are occasionally fed locally grown silage. Medicine storage and records were inspected and appeared fully compliant. All animals are vaccinated with Heptavac, ewes are wormed twice a year and lambs monthly. The positive animal was born in March 2023 on farm. It grazed in nearby fields and was transported in March 2024 by the owner, to the abattoir, along with 48 other sheep. It was kept in a group of 100 sheep, only 7 of which are left. There is known shooting activity in the area and the sheep have grazed in fields that have spent lead pellets deposited. It is possible that this animal may have ingested lead pellets while grazing or less likely, soil contamination on a grazed patch. Absence of typical signs of lead toxicity suggest this could be an isolated incident.
Sheep kidney	Lead 1200 µg/kg 2406618	Great Britain	This is a medium-sized, Red Tractor accredited, permanent pasture farm, rearing beef cattle and sheep. Cattle and sheep are never kept in the same fields. There are 182 sheep (3 stud Rams, 86 ewes and 93 lambs). They are a mixture of Charollais, Blue Texel and Hampshire crossbreeds. They are all homebred with only rams bought in. The sheep spend all year round on the pasture and are only brought into the sheds 1-2 weeks before lambing. They go out again within 48 hrs of having lambed. Lambing occurs between February and March. Lambs spend all their life in the pasture, except for the first 48 hours after birth. They are fed a commercial lamb creep feed which is bought in ready-made. Homegrown silage and hay may be given in winter to supplement them. Lambs are sold at market between 4-12 months of age, dependent on their weight. Until they reach 12 months of age, they only have the flock mark tag number. There is a herd health plan set up with their vets. Medicine records were satisfactory, and medicines were kept locked in a cupboard. Any requiring disposal are done so via their vets. The positive sheep was in a batch of 38 sold to a dealer in February 2024, kept at the dealers for only 5 days, then sent for slaughter. The amount of residue suggests the positive sheep may have had a longer term low-level subclinical chronic exposure. The farm of origin is in an area with a history of lead mining and is susceptible to localised flooding. It is likely that the source of the lead contamination was environmental.
Sheep kidney	Lead 1400 µg/kg 2406615	Great Britain	This is a medium-sized sheep farm with just over 100 sheep. They are mainly homebred, but replacements are bought in locally. Sheep graze outdoors and are only taken in, if under treatment. They are provided with extra feed (pellets) and mineral licks. Lambing is done outside on the fields. Sheep are sold at market for store, meat and wool. Medicines are stored in a box in a room off the farmer’s home office. The movements, mortality and medicine records kept on site, were satisfactory. The positive sheep was part of group of 8 cull ewes sent to market at just over a year old. There was no obvious source of lead, but the farm and particularly other grazing areas nearby have high lead levels, and the area is reported to flood regularly. The probable cause of this residue is geochemical accumulation, through grazing on land with high levels of lead.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep kidney	Lead 1600 µg/kg 2406661	Great Britain	This is a medium-sized sheep and cattle farm. The 29 suckler Luing cattle are home bred, crossed with a Simmental bull for spring calving. Cattle are housed for as short a period as possible, last year housed in late December and back out on grass in March/April. The sheep flock is made up of 450 Swaledale breeding ewes, plus their offspring. Lambing is indoors. Medicine records are kept on an app and are in good order. No issues were found in the medicines store. The positive animal was born in spring 2023. It was sold via market in October 2023 to another farm, then sent for slaughter in March 2024. Both locations have naturally occurring high lead soil levels. No other obvious sources of the lead were found. The likely cause of this residue is geochemical accumulation, through grazing on land with high levels of lead.
Sheep liver	Closantel 1700 µg/kg 2406128	Great Britain	This is a medium sized, SAI Global affiliated, sheep farm. They have 430 ewes, 370 hogs, 16 tups and 120 replacements/lambs, and they buy in around 500 sheep per year. The positive animal was a homebred hog, from a batch of 34 with the same herd mark, that was sent with others as a group of 71 to slaughter in January 2024. The 71 came from a field of 222 animals that were treated with Flukiver and Noromectin, at the same time in December 2023. Flukiver's active substance is closantel and the animal was given a larger dosage than the recommend 1ml per 5kg weight of animal. The farmer confirmed he always used 10ml per animal for both drugs, not taking into consideration the different recommendations of dosage from each box. The treatment, at the same time as the additional wormer, may also have had a bearing as the liver would be unable to clear the drug metabolically at the same rate. Therefore, the likely cause of the residue is an unintended drug overdose.
Sheep liver	Closantel 4100 µg/kg 2405721	Great Britain	This is a large-sized, FAWL accredited, sheep farm. The sheep are kept outside all year round and fed grass and cake that is kept in bags. They are not grazing on common land, but some incidents of escaped sheep have been observed. Sheep are mostly homebred, and rams are usually bought as replacements. Medicines are provided by their vet or from an agricultural supplier. Withdrawal periods are recorded in a medicine record book and expired products are returned to the vet for disposal. Medicines are stored in a lockable fridge. The farmer advised they have become organic, and the use of medicines is very limited and under strict conditions. The positive sheep was treated with the wormer Flukiver (active ingredient closantel). The medicine was administered orally via drench. Withdrawal period for meat is 42 days, and the animal was taken to slaughter 101 days after the drug was administered. The dosage recorded applied to sheep with an estimated weight of 50 kg, no weighing equipment was used. The sheep was taken directly to the abattoir in a batch of 17 animals in February 2024, by the owner in his own transport, and slaughtered the next day. It is possible that an overdose of the medicine was administered due to imprecise knowledge of the animal's weight. It is less likely that the sheep escaped into the neighbouring holding and was treated again with the same medicine.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep liver	Oxyclozanide 1200 µg/kg 2406258	Great Britain	This is a large, FABBL accredited, sheep farm. They buy sheep to fatten, then sell direct to slaughter or market. No breeding takes place at the farm. In the last 12 months they bought approximately 12.000-13.000 lambs through local markets. From the market, sheep are grazed in order to rest for 2-3 days then brought to the farm and weighed. Depending on their weight some of the sheep are treated (dosed) for fluke and then separated in different pens inside the sheds. The sheep that are heavy/fat enough are not treated with any medicine, they are kept for 2-3 weeks and then sent direct to slaughter or sold via a local market. All the sheep treated for fluke are kept on the farm for at least 4-6 weeks until they reach the right weight. They mark all the treated sheep with red spray on the head (red head). They use Levafas Diamond (oral suspension) and occasionally Alamycin LA, (both have the active ingredient oxyclozanide) bought from farm shop suppliers and from their private vet. Medicines are in date and stored in a dedicated lockable cabinet. All treatments are recorded in a medicine record book, but the ID of individual animals for big lots of sheep is not recorded, only the total number of animals. 873 sheep were treated for fluke at the start of 2024 (withdrawal period for Levafas is 5 days). It is possible the ovine animal was still in the withdrawal period when sent to slaughter and could be the reason for the residue. The positive female animal was part of a group of 90 sheep, sent to slaughter in February 2024. The likely of cause of the residue is the animal has been sent for slaughter whilst accidentally failing to observe the full withdrawal period.
Sheep liver	Rafoxanide 1917 µg/kg	Northern Ireland	A remote investigation was completed in March 2024. This animal was purchased at market in February 2024 less than 24 hours before sampling, herd keeper submitted a statement that they did not administer any medications during this time. Herd keeper has a high turnover of sheep purchased at mart then taken to slaughter within a day or two. The seller has not adhered to withdrawal period (72 days) and did not declare treatment at sale. Follow up to go ahead with seller. Five follow up samples from current owner all compliant.
Sheep liver	Triclabendazole sulfoxide 7.2 µg/kg Triclabendazole sulfone 95 µg/kg Triclabendazole 230 µg/kg 2404412	Great Britain	This is a medium-sized, Farm Assured, beef cattle and sheep farm. It is a family farm, and the standard of management is good. The medicine records were neat and tidy, including all information required. Out of date medication is disposed of by the PVS. The animal was accidentally dosed in February 2024 at the same time as the other hoggs on the farm. The positive animal was transported by the owner to the abattoir via market in February 2024. It was slaughtered the next day, when it was sampled. Accidental human error was the cause of this incident due to miscommunication between personnel on farm.
Sheep urine	Alpha-boldenone 2.5 µg/kg 2416676	Great Britain	This is a small-sized sheep farm, with around 15-20 ewes with lambs on foot, about 40 sheep in total. Medicines are stored in a cabinet in a locked garage. Medicine records are recorded in a diary with only 2024's records available. There are no steroid substances recorded in the diary and none found in the drugs cabinet. All drugs administered were past their withdrawal period. The positive sheep was sent for slaughter in April 2024, for the farm's own consumption. The low-level residue, from a male sheep, has likely arisen following faecal contamination of the sample or was of endogenous (natural) origin, as it is possible that certain plant sterols can be metabolised to produce boldenone in urine.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep urine	Alpha-boldenone 3.0 µg/kg 2423916	Great Britain	This is a medium-sized farm, both Red Tractor and FAWL accredited. They have a 221 dairy cattle herd consisting of 120 milkers, 45 heifers, 15 calves, 40 stores and 1 bull. They graze on grass in the summer and are housed in the winter and fed on silage. Cake is added as a supplement all year round, but no medicated food is given. Stores, 15-20 months old, are sold at market and barren cows are sent to slaughter. They also have 282 sheep, made up of 12 rams, and 270 ewes and lambs. They are kept outdoors all year round except for the lambing season, January to March. They are fed on grass, and cake is provided during the lambing season. No medicated food is used. They buy 2 or 3 rams per year and sell ewes at market and send lambs around 4 months old to slaughter. Medicines are stored in a metal lockable cabinet. They are provided by the Private Veterinary Surgeon (PVS) or from another approved supplier. Medicines are normally finished when used, but any expired bottles are sent to their PVS. Medicine and movement records and medicine invoices are stored electronically. The positive animal was part of a group of 53 homebred lambs sent to the abattoir in June 2024 and slaughtered the next day, when the sample was taken. The most likely cause of the residue detected is either faecal contamination of the sample or endogenous (natural) origin, as it is possible that certain plant sterols can be metabolised to produce boldenone in urine.
Sheep urine	Alpha-boldenone 3.2 µg/kg 2416628	Great Britain	The farm of origin for the sampled animal is a medium-sized sheep farm, with 106 ewes and 200 lambs. The lambs are not grown but sold at market or to other farmers. Medicines are kept in the refrigerator inside the house and some in the shearing shed. Records are kept for at least 5 years and their private veterinarian supplies the medicines. No evidence of incorrect use of medications was found and records are adequate. There is no reason to suggest the sampled animal was treated with steroids on this farm. The positive animal was sold at market in December 2023. The new owner has a large-sized, Red Tractor accredited sheep farm with around 1700 sheep, rising to 3000-4000 in spring. Young sheep are usually purchased in autumn, kept for fattening for 3-6 months, and sold for meat production around May. Additionally, there are around 200 ewes kept specifically for breeding purposes. The sheep are kept on the farmland and on Temporary Land Association areas. Sheep are reared outside all year round. Their primary food source is grass pasture. Most of the fields are used to grow grass and clover mixes. Medicines are kept in a lockable garage and records are up to date on computer. Disposal and purchase records are in compliance with regulations. Movement records confirmed the positive sheep was sold at market in May 2024 and sent to slaughter 3 days later. The sheep on farm showed no indications of anabolic steroid use or evidence of illegal substances. Farm systems, pastures, and animal locations suggest that the presence of the detected hormone is likely natural. The residue might have arisen due to faecal contamination of the sample or other endogenous (natural) origins, such as feeding the lambs with clover during grazing on field.
Sheep urine	Beta-nortestosterone 0.47 µg/kg 2404325	Great Britain	This is a large-sized, QMS accredited, sheep farm. They have around 1400 ewes and 2500 lambs, although numbers vary throughout the year. Stock is bought from local markets and sent to local abattoirs. Animals are kept in good clean condition and showed normal calm behaviour. Medicine records were satisfactory. The positive sample originated from a castrate homebred male that according to the records didn't receive any treatment. All treatment given is agreed with the PVS. Medicine is kept in a safe box in the farmer's car and matched treatment recorded in the records. When medicines are not in use, they are kept in a locked room at the farm, which only the farmer has access to. The animal was transported in the farmer's own transport, in February 2024, to the abattoir. It was a 16-mile journey and took 90 minutes. The animal was then kept in lairage for over 12 hours and slaughtered the next day, when the sample was taken. The stress of the journey and lairage is likely to have caused the low-level residue finding, which is of natural origin.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Sheep urine	Beta-nortestosterone 0.72 µg/kg 2404996	Great Britain	This is a large-sized, FAWL accredited, cattle and sheep farm. They buy store cattle for rearing and fattening, and keep 420 ewes. These are lambed indoors and reared on grass. The medicine cabinet, associated records and movement records were in good order. One bottle of Colvasone (active ingredient dexamethasone) was found in the medicine cabinet. This was used for joint-ill in lambs, sometime previously. It is unlikely that corticosteroid use would have any effect on the nortestosterone reading. The animal was brought onto this holding in January 2021, sold at market in March 2024 and slaughtered two days later. The elevated level of nortestosterone is likely to have been a natural occurrence, due to a minor injury, transit stress or a possibly pregnancy. There is no evidence of illegal steroid use on the farm.

Pending investigation reports Great Britain:

Species & Matrix	Residue detected & concentration (RIM Ref)	RIM reference
Calves kidney	Florfenicol 890 µg/kg	2426934
	Florfenicol 3100 µg/kg	2426952
Calves kidney fat	Deltamethrin 480 µg/kg	2427013
Cattle serum	Beta-testosterone 1.9 µg/kg	2425720
	Beta-testosterone 0.2 µg/kg	2425747
Cattle urine	Alpha- nortestosterone 1.2 µg/kg	2422028
	Alpha-nortestosterone 6.5 µg/kg	2422025
	Beta-nortestosterone 0.53 µg/kg	
Salmon	Crystal Violet 25 µg/kg	2400297
Sheep kidney	Lead 860 µg/kg	2406658
Sheep liver	Flubendazole 4.0 µg/kg	2424709
	(2-amino-1H-benzimidazol-5-yl) (4-fluorphenyl)-methanone 23 µg/kg	
Sheep urine	Alpha-boldenone 2.5 µg/kg	2423910
	Alpha-boldenone 4.4 µg/kg	2423845
	Alpha-boldenone 5.4 µg/kg	2423842
	Alpha-boldenone 6.1 µg/kg	2423917
	Alpha-boldenone 6.8 µg/kg	2423788
	Alpha-boldenone 7.2 µg/kg	2416663
	Alpha-boldenone 8.8 µg/kg	2423902
	Beta-nortestosterone 1.1 µg/kg	2423818

Pending investigation reports Northern Ireland:

Species & Matrix	Residue detected & concentration
Fattening cattle urine	Beta-estradiol 2.2 µg/kg

Sampling of animals suspected of containing a residue at the time of slaughter: 30 September 2024

Residues detected above the reference point to date: 30 September 2024

Medicinal products can be found on the Product Information Database.

Sample	Analysed for	No. of Analyses	No. of non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l
Cattle kidney	Antimicrobials screen 1	44	7	50	76.5 amoxicillin
				1000	3060 dihydrostreptomycin
				100	450 gamithromycin
				600	889, 2953 oxytetracycline
				3000	7660, 8720 tulathromycin
Cattle muscle	Antimicrobials screen 1		1	100	625 oxytetracycline

Results of suspect follow-up investigations: 30 September 2024

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle kidney	Amoxicillin 76.5 µg/kg	Northern Ireland	An investigation was undertaken in March 2024. The animal was 13 years old and was born on farm into a dairy and beef finishing herd with 158 animals, sheep also kept onsite. Movement and medicine records were kept in accordance with legislation. The animal was treated by vet for retained foetal membranes post calving in February 2024. Animal was last administered Synulox (active ingredients Amoxicillin trihydrate & Clavulanic acid) in February 2024. Animal was not recovering well so herd keeper sent to slaughter 18 days after last treatment. Herd keeper admitted that he forgot the withdrawal period was longer for meat (42days) than milk (60 hrs). Cause of residue was human error.
Cattle kidney	Dihydrostreptomycin 3060 µg/kg	Northern Ireland	An investigation was undertaken in February 2024. The animal was 3 years old, purchased into a high turnover beef finishing unit in January 2024 2 days prior to slaughter. Movement and medicine records were kept up to date. The herd keeper confirmed they did not administer any medication to the animal. Previous owner provided a letter from their vet to confirm the animal was examined November 2023 and surgical enucleation of the eye was performed. Anaesthesia and pain-relieving medication were administered and 45ml Ultrapen LA (procaine benzylpenicillin) was also given. No record of dihydrostreptomycin administration.
Cattle kidney	Gamithromycin 450 µg/kg	Northern Ireland	The positive animal was 12 months old when it was sent for slaughter. It was homebred into a beef herd of around 50 animals, sheep are also kept on-site. The animal was transported to slaughter separately in the owner's own transport. Movement and medicine records were kept in accordance with legislation. Zactran (active ingredient gamithromycin) was used on the farm to treat lameness in lambs. It has a withdrawal period of 64 days in bovine meat. Although the herd keeper was sure that no bovines had been treated with Zactran, it is likely the residue was due to a mix up in treatment.

Species & Matrix	Residue detected & concentration (RIM Ref)	Region	Cause of residue
Cattle kidney	Oxytetracycline 889 µg/kg	Northern Ireland	The positive animal was 22 months old and part of a 383-fattening herd. It had been purchased 13 months prior to slaughter. The animal was transported to the abattoir on the farms own trailer. Movement and medicine records were up to date and in accordance with legislation. The animal had a sore foot and was treated with 40ml (20ml in 2 sites) of Alamycin LA300 (active ingredient oxytetracycline) which has a 28-day withdrawal period. It was slaughtered 48 days later. The withdrawal period was adhered to; but the manufacturer recommends a dosage of 15ml at one site. Two follow up samples contained oxytetracycline at compliant levels (184 and 541 µg/kg).
Cattle kidney	Oxytetracycline 2953 µg/kg	Northern Ireland	The positive animal was 25 months old and part of a 1680 finishing herd. There is a high turnover of animals and this animal had been purchased 2 days prior to slaughter. The herd keeper said he has never treated the animal while on his farm. The animal was transported to the abattoir in the farm's own lorry. Movement and medicine records were up to date and in accordance with legislation. A follow-up check with the previous herd keeper's medicine records showed this animal was treated with oxytetracycline. All follow up samples were compliant.
Cattle kidney	Tulathromycin 7660 µg/kg	Northern Ireland	The positive animal was 26 months old and purchased into a beef finishing and breeding herd of approximately 1200 cattle. It arrived on site 21 days prior to slaughter. The animal was transported to the abattoir by a haulier with animals from the same herd. Movement and medicine records were up to date and in accordance with legislation. There was no treatment recorded for this animal, but there were two bottles of Draxxin (active ingredient tulathromycin) on farm. One bottle was purchased in January 2024 and had 85ml left, it was recorded in the medicine book that 15ml was used to treat another animal. The second bottle was unopened. The farm manger had no recollection of this animal being treated with any medicines on farm. He was aware of the 22-day meat withdrawal period and that no more than 7.5ml should be administered in one site, from a previous investigation. Follow up samples were compliant.
Cattle kidney	Tulathromycin 8720 µg/kg	Northern Ireland	The positive animal was 29 months old when it was sent for slaughter, separated from the herd in the owner's own transport. Movement and medicine records were kept in accordance with legislation. The source of the residue could not be established.
Cattle muscle	Oxytetracycline 625 µg/kg	Northern Ireland	The positive animal was 7 years 3 months old when it was sent for slaughter. It was born on-site into a suckler herd of 228 cattle. The animal was transported to slaughter separately in the owner's own transport. Movement and medicine records were kept in accordance with legislation. The animal was treated with Hexasol LA (active ingredient oxytetracycline) in June 2024, 39 days prior to sampling, observing the 35-day withdrawal period. A total of 60ml was given to the animal (10mls at 6 different sites), and the live weight of the animal was approximately 700Kg. The herd keeper had spoken with his own vet who confirmed the correct dose was given. The cause of residue was not determined.

Pending suspect investigation reports Northern Ireland:

Species & Matrix	Residue detected & concentration (RIM Ref)