

NATIONAL STATUTORY SURVEILLANCE SCHEME FOR VETERINARY RESIDUES IN ANIMALS AND ANIMAL PRODUCTS: 2015

RESIDUES DETECTED ABOVE THE REFERENCE POINT TO DATE: 31 DECEMBER 2015

Sample	Analysed for	No. of analyses	No. of Non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l (more than one substance may be found in one sample)
Calf Kidney	Antimicrobial (Screen 1)	88	4 substances in 3 samples	600 100 600 1000	1600 (chlortetracycline) 230 (gamithromycin) 6000 (oxytetracycline) 3200 (tilmicosin)
Calf Kidney	Antimicrobial (Screen 4)	90	2	1000	1700, 10000 (dihydrostreptomycin)
Calf Kidney	Florfenicol	91	4	300	710, 750, 800, 2300 (florfenicol)
Calf Liver	Coccidiostats	17	2	Presence	23, 34 (decoquinate)
Cattle Kidney	Antimicrobial (Screen 1)	1201	3	1000 50 3000	4400 (dihydrostreptomycin) 140 (penicillin G) 11000 (tulathromycin)
Cattle Kidney	Metals	64	3	1000	1200, 1200, 2260 (cadmium)
Cattle Kidney	NSAIDs	616	1	Presence	840 (ibuprofen)
Cattle Kidney Fat	OC/PCBs	76	1	10	61 (PCBs)
Cattle Liver	Anthelmintics	504	1	20	51 (nitroxynil)
Cattle Liver	Avermectins	419	1	100	130 (Ivermectin)
Cattle Liver	Beta-agonists	526	1	Presence	0.13 (Clenbuterol)
Cattle Serum	Testosterone	608	1	Presence	0.31, 0.31 (beta-testosterone)
Cattle Urine	Steroids (Screen 1)	2116	34 substances in 30 samples	Presence Presence Presence Male 0.5 / Female 5 Presence Male 12 Female 12	0.4, 0.5, 0.6 (ADD) 2, 2.9, 4.3, 4.8 (alpha-boldenone) 0.29, 0.68 (beta-boldenone) 5.2, 5.4, 6.1, 7.7, 7.9, 8.2, 8.6, 8.7, 9.1, 9.8, 10, 12, 13, 14, 16, 18, 20, 35 (alpha-nortestosterone) 0.4 (beta-nortestosterone) 78 (alpha-estradiol) 22, 31, 32, 42, 62 (testosterone)
Cattle Urine	Thyrostats	373	1	30	50 (thiouracil)
Cattle Urine	Zeranol	694	12	Presence	0.79, 1.2, 1.5 (taleranol) 2.02, 2.02, 2.66, 2.9, 4.9, 8.2, 10.2, 11, 98 (taleranol & zeranol)
Sheep Kidney	Antimicrobial (Screen 1)	2598	4	600	780, 920, 930, 2600 (oxytetracycline)
Sheep Kidney	Metals	51	3	1000	1700, 2200, 2600 (cadmium)
Sheep Kidney Fat	Organophosphates	567	1	700	800 (diazinon)
Sheep Liver	Anthelmintics	959	11	1500 20	1740, 1800, 1840, 1900, 2100, 2150, 2600, 3100, 5400, 14600 (closantel) 25 (nitroxynil)
Sheep Liver	Avermectins	539	1	25	170 (abamectin)
Sheep Urine	Steroids (Screen 1)	488	29 substances in 26 samples	Presence Male 1 / Female 5 Presence Presence Presence	2, 2.1, 2.1, 2.1, 2.4, 2.5, 2.5, 2.6, 2.6, 2.6, 2.7, 2.9, 2.9, 3, 3, 3.4, 3.8, 3.8, 4.1, 4.1, 4.2, 5.2, 9.5, 13 (alpha-boldenone) 29 (alpha-nortestosterone) 0.58 (beta-boldenone) 0.72, 0.78, 0.93 (beta-nortestosterone)
Pig Kidney	Antimicrobial (Screen 1)	1331	1	100	110 (sulfadiazine)
Pig Urine	Thyrostats	99	1	30	33 (thiouracil)
Horse Kidney	Metals	1	1	1000	7600 (cadmium)

Sample	Analysed for	No. of analyses	No. of Non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l (more than one substance may be found in one sample)
Horse Urine	Steroids (Screen 1)	2	2 substances in 1 sample	Male 1 / Female 5 Presence	19 (alpha-nortestosterone) 130 (beta-nortestosterone)
Broiler Liver	Coccidiostats	662	4	8 Presence 600	18 (monensin) 8.8 (salinomycin) 680, 750 (toltrazuril sulphone)
Broiler Muscle	Antimicrobial (Screen 1)	1612	1	100	870 (chlortetracycline)
Hen Egg	Coccidiostats	553	1	150	1700 (lasalocid)
Farmed Salmon	Avermectins	83	1	100	120 (emamectin)
Farmed Deer	OC/PCBs	7	1	1000	1500 (DDE-p,p')
Farmed Partridge	Coccidiostats	4	1	5	660 (lasalocid)
Farmed Pheasant	Metals	4	1	100	43000 (lead)
Milk Cattle	Antimicrobial (Screen 1)	464	1	4	8.1 (amoxicillin)
Milk Cattle	Avermectins	540	2	Presence	1, 4.1 (ivermectin)

ADD: boldione
DDE-p,p': dichlorodiphenyldichloroethylene
PCBs polychlorinated biphenyls

RESULTS OF FOLLOW-UP INVESTIGATIONS: 31 DECEMBER 2015

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle				
Cattle Urine	ADD (boldione) 0.4 µg/l & Alpha-nortestosterone 10 µg/l	N/A	Northern Ireland	No investigation was required.
Cattle Urine	ADD (boldione) 0.5 µg/l	N/A	Northern Ireland	No investigation was required.
Cattle Urine	ADD (boldione) 0.6 µg/l	N/A	Northern Ireland	No investigation was required.
Fattening Cattle Urine	Alpha-boldenone 2 µg/l 1520879	N/A	Great Britain	This animal originated from an educational farm where it was born and reared. The farm is a small enterprise mainly breeding and rearing cattle and sheep. The medicines records were satisfactory and showed the usual vaccine and medicinal use associated this type of farm. There was no evidence of the use of anabolic steroids therefore the most likely cause of this residue is from faecal contamination at the time of sampling.
Cattle Urine	Alpha-boldenone 2.9 µg/l & Alpha-nortestosterone 20 µg/l 1508285	N/A	Great Britain	This farm is comprised of a small herd of extensively grazed beef cattle which are slaughtered locally to supply a butcher shop also run by the farmer. This 42 month old cow was originally meant for breeding and was left to run with a bull, however, during routine TB testing she was aggressive and difficult to handle and the farmer decided to send for slaughter. It is most likely that this animal was in calf at the time of sampling which may have been the cause of these residues.
Cattle Urine	Alpha-boldenone 4.8 µg/l & beta-boldenone 0.68 µg/l 1519893	N/A	Great Britain	This beef farm's medicines records and storage were in good order with no illegal medicines or out of date medicines present. The feed is prepared on farm and consists of ground barley mixed with molasses, protein and mineral powder. There was no evidence of the use of anabolic steroids therefore the most likely cause of this residue is from faecal contamination at the time of sampling.
Cattle Urine	Alpha-estradiol 78 µg/l	N/A	Northern Ireland	No investigation was required.
Cattle Urine	Alpha-nortestosterone 5.2 µg/l	N/A	Northern Ireland	No investigation was required.
Cattle Urine	Alpha-nortestosterone 5.4 µg/l 1528089	N/A	Great Britain	This animal originated from a dairy farm where it had calved once and completed one lactation but was sent to slaughter as a cull as the calf died shortly after birth giving the farmer doubt that this cow would successfully breed. The cow also lost a lot of condition following the birth which may have indicated an underlying problem. The medicines records and storage were satisfactory and indicated only routine medicines. The cause of this residue is most likely from natural levels given the poor condition of the animal.
Cattle Urine	Alpha-nortestosterone 6.1 µg/l 1528140	N/A	Great Britain	This dairy cow originated from a mixed dairy/beef suckler farm which keeps both enterprises separate. Dairy cows are calved all year round and routine medicines and vaccinations were recorded as expected with this type of farm. The farmer decided to slaughter this cow due to high cell count following calving, and was still lactating at the time of slaughter. There was no evidence on farm of the use of anabolic steroid, therefore the most likely cause of this residue is from natural levels.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Fattening Cattle Urine	Alpha-nortestosterone 7.7 µg/l 1500629	N/A	Great Britain	Initial enquiries showed that this animal was in calf at the time of sampling, therefore, the most likely cause of this residue is from natural levels.
Cattle Urine	Alpha-nortestosterone 7.9 µg/l 1528141	N/A	Great Britain	This sample originated from a dairy cow which had a troublesome breeding history. Given the difficulty with breeding and the low milk yield the farmer decided to send for slaughter. There was no evidence on farm of the use of anabolic steroid, therefore the most likely cause of this residue is from natural levels.
Cattle Urine	Alpha-nortestosterone 8.2 µg/l 1519899	N/A	Great Britain	This dairy farm is mainly comprised of home-bred cattle which are grazed in the summer and housed in the winter. The medicines records and storage were in good order. This sample originated from a cow which was heavily pregnant which is most likely the cause of this residue.
Fattening Cattle Urine	Alpha-nortestosterone 8.6 µg/l	N/A	Northern Ireland	Initial enquiries showed that this animal was in calf at the time of sampling, therefore, the most likely cause of this residue is from natural levels.
Fattening Cattle Urine	Alpha-nortestosterone 8.7 µg/l	N/A	Northern Ireland	This animal was recorded as nine months pregnant at the time of sampling. Pregnant females produce α-Nortestosterone naturally. No further action will be taken with this sample.
Fattening Cattle Urine	Alpha-nortestosterone 9.1 µg/l 1512422	N/A	Great Britain	Initial enquiries showed that this animal calved on the day of sampling therefore the most likely cause of this residue is from natural levels.
Fattening Cattle Urine	Alpha-nortestosterone 9.8 µg/l 1500678	N/A	Great Britain	This sample was taken from heifer which had recently calved, therefore it is most likely that the cause of this residue is from residual hormones known to be found naturally during pregnancy.
Cattle Urine	Alpha-nortestosterone 12 µg/l	N/A	Northern Ireland	Initial enquiries showed that this animal was in calf at the time of sampling, therefore, the most likely cause of this residue is from natural levels.
Fattening Cattle Urine	Alpha-nortestosterone 13 µg/l 1500725	N/A	Great Britain	This sample was taken from a heifer in calf which is most likely the cause of this residue.
Cattle Urine	Alpha-nortestosterone 14 µg/l & Alpha-boldenone 4.3 µg/l 1534064			Awaiting investigation report
Cattle Urine	Alpha-nortestosterone 16 µg/l 1508202	N/A	Great Britain	This sample originated from a dairy cow with a good calving history however there were three occasions when more than one cycle of artificial insemination was required. This cow was declared barren three months prior to slaughter but spent this time in a herd with a stock bull present. It is possible that this cow was in calf at the time of slaughter which would cause this natural level.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Fattening Cattle Urine	Alpha-nortestosterone 18 µg/l & Beta-nortestosterone 0.4 µg/l 1512254	N/A	Great Britain	This sample originated from a dairy farm which houses the cows all year round with high husbandry and welfare standards. Medicines usage is relatively low and compliance with withdrawal periods is assured by the robotic milking system. There was no evidence of abuse therefore the cause of this residue is most likely due to natural levels.
Fattening Cattle Urine	Alpha-nortestosterone 35 µg/l 1500626	N/A	Great Britain	This predominantly dairy farm keeps good medicines records and storage area. At the time of this investigation the cow had recently calved indicating that this animal was in calf at the time of sampling which is most likely to have been the cause of this residue.
Cattle Urine	Beta-boldenone 0.29 µg/l 1528026	N/A	Great Britain	This mixed suckler and finishing herd are bought in via market and fed silage, cereals and minerals mixed with straw. The medicines and storage were satisfactory and there was no evidence of the use of anabolic steroids therefore the most likely cause of this residue is from faecal contamination at the time of sampling.
Fattening Cattle Serum	Beta-testosterone 0.31 µg/l 1500896	N/A	Great Britain	This small holding comprised of a 18 head beef suckler herd and all calves are sold as stores at around 6 months of age. No routine vaccinations are given and the medicines records and storage were in good order. This animal is confirmed as in calf and was also the subject of TB testing at the time of sampling which is mostly likely to have caused this natural level.
Cattle Serum	Beta-testosterone 0.31 µg/l 1534264	N/A	Great Britain	This sample originated from a dairy and beef farm. The medicine records and storage were satisfactory and there was no evidence of the use of anabolic steroids. This animal was a barren dairy cow therefore the most likely cause of this residue is from natural levels.
Cattle Kidney	Cadmium 1200 µg/kg 1506776	N/A	Great Britain	This dairy farm houses their stock all year and no grazing takes place. However, the farm uses another holding to rear heifers where grazing is used. This home-bred cow spent its first 2 years grazing there and then brought back to the dairy herd as an in-calf heifer. The majority of feed is home-produced with some blend feed bought in. There was no obvious source of this contamination, but it was noted that this farm frequently floods which affect both the arable land and the housing units. In the locality, the sea and a steel works manufacturer are within 4 miles of the farm and it is possible that waste from either of these sources could have contaminated the feed grown on the arable land during those floods.
Cattle Kidney	Cadmium 1200 µg/kg 1533236	N/A	Great Britain	This sample originated from a 7 year old dairy cow which spent the first few years of life in Holland before coming to the UK. The investigation established that the medicines records and storage were satisfactory and only routine medicines and vaccines were administered. There was no obvious source of contamination on farm, however, there was a cement factory in the local area which may have caused some environmental contamination. Also, there may have been a contamination source in Holland where this cow originated. Given the age of the animal, it is most likely that the cause of this residue is from an accumulation over time through diet.
Cattle Kidney	Cadmium 2260 µg/kg	N/A	Northern Ireland	This sample originated from an 8 year old cow from a beef suckler herd. Movement and medicine records were satisfactory and there were no obvious local environmental contaminants. Given the age of the animal, it is most likely that the cause of this residue is from an accumulation over time through diet.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle Liver	Clenbuterol 0.13 µg/kg	Unknown	Northern Ireland	This animal originated from a beef finishing herd. General farm practice is for animals to be treated on arrival at farm with Bovipast RSP and an Anthelmintic (treated animals are marked with coloured spray). This 27 month animal was purchased 63 days prior to being sampled and medicines records show it having been treated with anthelmintic only. There was no evidence to suggest that this animal was treated with clenbuterol therefore it was not possible to establish the cause of this residue.
Calf Kidney	Chlortetracycline 1600 µg/kg & Gamithromycin 230 µg/kg 1524229	Chloromed 150 mg/g & Zactran	Great Britain	This large dairy farm employed good general management and appeared to keep good veterinary medicines records. The medicines storage contain Chloromed 150 mg/g (chloromectin) & Zactran (gamithromycin), however there was no record of this animal having been treated. The farmer was aware of medicine withdrawal periods however it was quite likely that a farm worker had administered the medicines to this calf without recording it. The calf was subsequently sent for slaughter within the withdrawal period causing this residue. The farmer was given written advice about the requirement for keeping accurate records to avoid such residues in future.
Calf Liver	Decoquinatate 23 µg/kg 1532814	No investigation was required due to low levels.		
Calf Liver	Decoquinatate 34 µg/kg 1532817	No investigation was required due to low levels.		
Cattle Kidney	Dihydrostreptomycin 4400 µg/kg	Pen & Strep Suspension for Injection	Northern Ireland	This animal originated from a beef finisher unit and the investigation showed that the movement and medicines records were satisfactory. They showed that this animal had been treated with Pen & Strep and sent for slaughter 35 days post treatment which was well outside the 23 day withdrawal period. There was evidence of a possible kidney problem which may have affected the metabolic rate and therefore the excretion of this substance. This is the most likely cause of this residue and the farmer has been given written advice on how to avoid such residues in future.
Calf Kidney	Dihydrostreptomycin 1700 µg/kg 1532028	Unknown	Great Britain	The investigation established that the sample originated from a medium sized dairy farm where, on inspection, it was noted that the medicines record were not being kept as required. Only the last 3 digits of ear tag numbers were being recorded and there was not entry for the animal in question. The farmer admitted that it was likely he gave the animal antibiotics but neglected to record it, leading to this animal being sent to slaughter within the withdrawal period. The farmer was given written advice about keeping accurate and complete medicines records and the responsible use of veterinary medicines.
Calf Kidney	Dihydrostreptomycin 10000 µg/kg 1516799	Unknown	Great Britain	This sample originated from a farm which sold this calf to a contractor for the intention of onward rearing however it was subsequently slaughtered. The medicines records showed that this animal was treated with Betamox, although the farmer admits that he could have made a mistake when entering the information and in fact dihydrostreptomycin was administered. The calf was sold within the withdrawal period and the farmer had signed the Food Chain Information Certificate stating that no treatment had been given. The farmer has been given written advice about falsely signing declarations and keeping accurate and complete medicines records.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Calf Kidney	Florfenicol 710 µg/kg 1532901	Resflor 300/16.5 mg/ml Solution for Injection for Cattle	Great Britain	This animal originated from a large multiple herd enterprise with separate rearing units. No beef animals are reared so bull calves are sent for auction less than 42 days old and unsold calves are sent to slaughter. The medicine records show that Resflor 300 was used to treat respiratory disease. It was noted that the records were deficient as the withdrawal period for this product was entered as 35 days, but in fact the correct withdrawal is 46 days. 30 calves were recorded as treated, but no identities were provided, and the dose rate given would have been an overdose for 2 week old calves. It is most likely that this calf was erroneously treated and not recorded and sent for slaughter within the withdrawal period. The farmer has been given written advice about keeping accurate and complete medicines records and the responsible use of veterinary medicines.
Cattle Kidney	Florfenicol 750 µg/kg	Norfenicol	Northern Ireland	The medicine records were satisfactory and showed that this animal was treated with norfenicol injectable 44 days prior to slaughter following the 39 day withdrawal period. However, the farmer had administered 40ml in two sites on two days contrary to the dosage rate on the datasheet which states that no more than 10ml should be given at any site. This significant overdose rendered the recommended withdrawal period inadequate which led to this residue. It was noted that the data sheet dosage recommendations were not repeated on the bottle label. Two follow up samples were taken and both were found to be compliant.
Calf Kidney	Florfenicol 800 µg/kg 1518280	Advocin 180 Danrofloxacin	Great Britain	This calf originated from a well-run dairy farm. The medicines records were computerised, except for wormers which were in a separate book, and in good order as was the medicine storage facilities. The records showed that no treatment had been administered to this calf but it was farm practice to feed waste milk to calves which were designated for sale. A cow was treated with Advocin 180 Danrofloxacin eight days prior to the sale and although the withdrawal period for this product is 4 days, being fed this waste milk is the most likely cause of this residue. The farmer has since ceased this practice and has been given written advice on how to avoid such residues in future.
Calf Kidney	Florfenicol 2300 µg/kg 1506521	Resflor 300/16.5 mg/ml Solution for Injection for Cattle	Great Britain	This bull calf was treated for pneumonia with Resflor but under dosed from an estimated 100kg weight to a 60kg weight. The under dose resulted in a poor recovery and a further two treatments were given, and the animal was erroneously sent for slaughter with the withdrawal period. This oversight occurred because a withdrawal period end date column was missing from the medicines records and the farmer has now added this to avoid similar residues occurring in future. Other than this the medicines records and storage appeared satisfactory. It is possible for compromised animals to have slower metabolic rates and therefore the farmer was advised to exceed the withdrawal period where possible. The farmer has also been given written advice on the requirement for accurate record keeping.
Cattle Kidney	Ibuprofen 840 µg/kg 1507247	Unknown	Great Britain	Due to a discrepancy on the Food Chain Information documentation it was not possible to trace the animal of origin, therefore no investigation was carried out.
Cattle Liver	Ivermectin 130 µg/kg 1505818	Closamectin Pour-on	Great Britain	This mixed arable/beef farm buys in store cattle and finishes them to be sold as fat. The cattle are finished off-grass from home produced cereals and forage. The pasture periodically floods and has permanent wet areas and as a result the cattle suffer from liver fluke. It is usual practice to treat cattle for worms and fluke when taken off pasture for housing. According to the medicines records, the animal which gave rise to this non-compliant residue was treated with Closamectin Pour-on and completed the withdrawal period, and subsequently sent to slaughter 5 days later. If anything, this animal was under-dosed, therefore, the most likely cause of this residue is due to the liver fluke condition which resulted in a poor metabolic rate.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle Liver	Nitroxylinil 51 µg/kg 1517195	Trodat	Great Britain	This small enterprise buys in cattle from the local market and usually grows on for about 3 months, depending on growth rate. On inspection the medicines records were incorrect and did not contain adequate information. Details of individual animals were not recorded and the dates of administration were incorrect. The farm had changed its preferred products from Trodat to Closamectin in the Spring but when the last treatment of Trodat was give the withdrawal period was calculated using the shorter one for Closamectin. The cause of this residue was from inaccurate medicines and using the wrong withdrawal period resulting in this animal being sent to slaughter whilst within the withdrawal period. The farmer has been given written advice on how to avoid such residues in future and this case has been referred to the Rural Payments Agency for consideration.
Calf Kidney	Oxytetracycline 6000 µg/kg 1504591	Terramycin/LA 200 mg/ml Solution for Injection	Great Britain	This calf was slaughtered at 49 days old and was declared as not having received any treatment within the last 28 days by the farmer. The medicines records state that this calf was given a 2 day treatment of Pen & Strep 17 days prior to slaughter which is within the 23 day withdrawal period for cattle. There was no record of any treatment containing oxytetracycline for this animal, however, Terramycin had been used on cows intended for retention and it is most likely that this calf was erroneously treated and sent to slaughter within the withdrawal period. It was usual practice for the farmer to write treatments on a piece of paper for the farm secretary to enter into the medicines records and it is possible that errors occurred during this data transfer. The medicines records for cattle and calves have since been separated. The farmer has been given written advice on how to avoid such residues in future and this case has been referred to the Rural Payments Agency for consideration.
Cattle Kidney Fat	PCBs 61 µg/kg 1519163	N/A	Great Britain	The investigation into this case established that the animal in question was grazed on an old airfield site unto 12 month of age then moved elsewhere for fattening until 22 months of age. There were several potential sources of PBC contamination, namely: debris and buildings used for storing ammunition and used as a bomb disposal site; possible contaminated ground from leaked aircraft fuel; hydraulic fluids etc. Several follow up samples were taken as part of the investigation which included feed, water, kidney fat and blood samples, all of which were compliant. As there was no widespread contamination, the cause of this residue is likely to be from a localised 'hotspot' from which PCBs were ingested.
Cattle Kidney	Penicillin G 140 µg/kg 1504706	Pen & Strep Suspension for Injection	Great Britain	This sample originated from a farm which is in transition from a dairy farm to beef. The cattle are out grazed through the summer and housed during winter months being fed home grown silage and purchased concentrates. The medicines records appeared satisfactory and complete. Only injectable medicines are used on farm therefore there is no possibility of cross contamination via feed. The records show that Pen & Strep had been administered to other cattle 36 days prior to the slaughter of this cow which is outside the 23 day withdrawal period. This animal was sent to slaughter due to a twisted stomach condition and although there is no records of the use of medication it is possible that this animal was treated and sent for slaughter within the withdrawal period. The farmer has been given written advice on how to avoid such residues in future.
Cattle Kidney	Tulathromycin 11000 µg/kg 1531223	Draxxin	Great Britain	The investigation established that there were some deficiencies with the medicines records kept on this farm. It consisted of hand written notes which did not contain batch number information, withdrawal periods or disposal dates. The entry for this calf treatment was written in different hand writing to all the others and it transpired that this treatment was administered on the farmer's day off and as he had not given it did not think to check the records before sale, which led to this animal being slaughtered within the withdrawal period. The farmer was given written advice on the requirements for keeping complete and accurate medicines records.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle Urine	Taleranol 0.79 µg/l 1508770			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 1.2 µg/l 1528600			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 1.5 µg/l 1528611			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 1.4 µg/l & zeranol 0.62 µg/l (2.02 µg/l) 1520537			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 1.5 µg/l & zeranol 0.52 µg/l (2.02 µg/l) 1528609			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 1.7 µg/l & zeranol 0.96 µg/l (2.66 µg/l) 1520528			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 2 µg/l & zeranol 0.9 µg/l (2.9 µg/l) 1528613			No investigation required as research has shown that 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.
Fattening Cattle Urine	Taleranol 3.4 µg/l & zeranol 1.5 µg/l (4.9 µg/l) 1521114			No investigation required as research has shown that 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.
Fattening Cattle Urine	Taleranol 6.4 µg/l & zeranol 1.8 µg/l (8.2 µg/l) 1521111			No investigation required as research has shown that 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.
Cattle Urine	Taleranol 6.7 µg/l & zeranol 3.5 µg/l (10.2 µg/l)			No investigation required as research has shown that 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.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Fattening Cattle Urine	Taleranol 7.2 µg/l & zeranol 3.8 µg/l (11 µg/l) 1521105	No investigation required as research has shown that 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.		
Cattle Urine	Taleranol 80 µg/l & zeranol 18 µg/l (98 µg/l) 1528590	N/A	Great Britain	On inspection of the medicine records it was noted that improvements could be made. The farmer has been given written advice on the requirement for keeping complete and accurate records. There was no evidence of the use of this substance on farm and therefore the cause of this residue is likely to be contamination as research has shown that zeranol and fungal metabolites may be present in the urine of animals that have ingested feeding-stuffs contaminated with the fusarium fungus.
Cattle Urine	Testosterone 22 µg/l	N/A	Northern Ireland	The investigation established that this animal was a bull and therefore was erroneously sampled.
Cattle Urine	Testosterone 32 µg/l	N/A	Northern Ireland	This animal was born on farm from a breeding herd. Movement and medicine records were satisfactory and showed usual wormers and vaccinations associated with this type of farm. The farmer thought that this animal may not have been castrated and with no evidence of anabolic steroid use the cause of this residue is likely to be a natural level. Six animals were later sampled at slaughter and all were found to be compliant.
Cattle Urine	Testosterone 42 µg/l	N/A	Northern Ireland	The investigation showed that the medicine records were satisfactory and that there was no evidence of the use of anabolic steroids. The head keeper was adamant that animal was an uncastrated bull. Five animals were later sampled and all were found to be compliant. Therefore, the cause of this residue is likely to be a natural level
Cattle Urine	Testosterone 62 µg/l	N/A	Northern Ireland	The investigation established that this animal was a bull and therefore was erroneously sampled.
Fattening Cattle Urine	Thiouracil 50 µg/l 1521088	N/A	Great Britain	This sample originated from a 14 day old calf on a dairy farm with very good medicines record and storage facilities. Calves are fed whole milk and later on with a coarse mix and hay silage. The coarse mix contained rapemeal, which is most likely the cause of this residue. Also, the dairy cows were fed turnips for the month prior to sample collection which may have contributed to the presence of thiouracil through the milk.
Calf Kidney	Tilmicosin 3200 140 µg/kg 1524221	N/A	Great Britain	This is an extensive hill farm with a large lamb enterprise and over 300 cattle sucklers and calves. The cattle are not over wintered at this farm and are moved to linked farms for this. The sampled calf had shown signs of illness and was treated with Betamox LA and Tylan on several occasions over a week. As the calf did not improve it was decided to send it to the abattoir and the withdrawal periods for these medicines had been observed at the time of slaughter. Although the medicines records and storage appeared satisfactory, no entry was made for antibiotic use nor was any antibiotics found in the medicines store. The most likely cause of this residue is due to an unrecorded treatment and submitting for slaughter within the withdrawal period. The farmer has been given written advice on the requirements for keep complete and accurate records to avoid such residues in the future. This case has also been referred to the Rural Payments Agency for consideration.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Pigs				
Pig Kidney	Sulfadiazine 110 µg/kg 1504289	N/A	Great Britain	This sample originated from a farm which rears both cattle and pigs. The small cattle herd is comprised exclusively of young stores with no breeding animals which graze on sites surrounding the farm. In separate housing facilities is a permanently housed breeding, rearing and fattening pig unit which are sent directly to slaughter after finishing. Pig feed is bought in and is made of barley, wheat, oat, rapeseed meal, sunflower seed meal and bakery by products. The medicines storage and records appeared satisfactory and up to date. There were no medicines containing sulfadiazine on site but Norodine 24 Solution for Injection (for calves and pigs) which contains sulfadiazine was entered in the medicines records for treatment of calves some years ago. It is possible the that feed had been contaminated prior to purchase, or it is possible that unrecorded medicinal use has occurred on farm, however, it is not possible to adequately determine the cause of this residue.
Pig Urine	Thiouracil 33 µg/l 1528551	N/A	Great Britain	This pig enterprise consists of a closed herd of 700 sows and growing pigs. They are fed four different diets, depending on age and lot, bought in from a mill which contains rapeseed as one of the ingredients. All medication is prescribed by the vet to be incorporated into feed. The cause of this residue is most likely to be natural through consumption of brassica rich feed.
Sheep				
Sheep Liver	Abamectin 170 µg/kg 1505706	Startect Dual Active Oral Solution	Great Britain	This residue from a farm which treated the lambs with Startect Dual Action Oral Suspension and although the withdrawal period was observed it is most likely that this residue was caused by an inadvertent overdose. The medicines records and storage were adequate although the farmer was advised to record batch numbers with treatments and to ensure that out of date medicines were kept separately from those in use. The farmer was given written advice on how to avoid such residues in future.
Sheep Urine	Alpha-boldenone 2 µg/l 1534220	N/A	Great Britain	The medicines records was satisfactory and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.1 µg/l 1508437	N/A	Great Britain	This farm generally sells the store lambs, but sometimes ewes are kept, and sometime lambs are fattened to sell as hoggets. The medicine records were satisfactory but inspection of the storage showed out of date medicines kept with current ones. The farmer was given written advice about the requirements for adequate medicines storage. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.1 µg/l 1520172	N/A	Great Britain	This sample originated from a large estate comprised of 8 flocks of sheep. Even though there was some discrepancy in the abattoir paperwork the excellent farm movement records ensured the correct identification of the original flock. The sheep graze all year and lambs are kept as store lambs until 12 months of age then sold as fat. The medicines records showed only a small number of medicines used mainly wormers, some antibiotics and vaccines. However, it was noted that dosage rates and withdrawal periods had been entered incorrectly and the farmer was given written advice on the requirement for keeping accurate records to avoid residues in future, and to ensure all staff administering medicines refer to the product label. There was no evidence to suggest the use of anabolic steroids therefore the cause of this residue is likely to be due to faecal contamination at the time of sampling.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Urine	Alpha-boldenone 2.1 µg/l 1534558	N/A	Great Britain	This mixed cattle and sheep farm has a 500 head flock of ewes which are winter fed of grass silage, corn and a standard ewe mix bought in from mills. From spring ewes are out-grazed on permanent pasture land. The medicines records and storage we satisfactory and show the usual medicinal use for this enterprise. There was no evidence to suggest the use of anabolic steroids therefore the cause of this residue is likely to be due to faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.4 µg/l & beta-boldenone 0.58 µg/l 1534173	N/A	Great Britain	This enterprise consists of 950 blackface ewes. The tup lambs are housed during part of the winter and fed on haylage and concentrates. Lambs not required for breeding are sold for slaughter. There was no evidence to suggest the use of anabolic steroids therefore the cause of this residue is likely to be due to faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.5 µg/l 1528382	N/A	Great Britain	This animal originated from a mixed cattle, sheep and arable farm with one horse on site. The sheep are fed bought in nuts and grass. The medicines records and storage were satisfactory and all medicines were licenced in the UK. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.5 µg/l 1534176	N/A	Great Britain	This breeding farm out-grazes all year round and uses only a natural mating system. The medicine records were inspected and found to be missing some information regarding withdrawal periods and the farmer was given verbal and written advice about the requirement for keeping accurate and complete records. No evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.5 µg/l 1534178	N/A	Great Britain	This farm supplies its own shop and restaurant and the surplus sold through market. The lambs are finished on grass and no supplements or concentrate are given. No evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.6 µg/l 1534196	N/A	Great Britain	The sheep on this farm are extensively grazed and supplemented with hay, silage and concentrates. Medicines records and storage were satisfactory and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.6 µg/l 1534177	N/A	Great Britain	This breeding flock of 320 ewes are fed mainly on grass and silage with ewes with twins are supplemented with nuts. Medicines records and storage were in good order and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.7 µg/l 1528388	N/A	Great Britain	This small holding uses only routine worming treatments with the occasional antibiotic use when required. The sheep are grazed all year with supplementary feed in the winter. The medicines records was satisfactory and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.9 µg/l 1528384	N/A	Great Britain	This sample was taken from an uncastrated male lamb which had only been fed grass and its mother's milk. The medicines records were in good order and showed treatments expected with this type of farming. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 2.9 µg/l 1528374	N/A	Great Britain	The medicines records was satisfactory and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Urine	Alpha-boldenone 3 µg/l 1528372	N/A	Great Britain	This sample originated from a mixed cattle and sheep farm which keeps the sheep outside all year with the exception of lambing and finishing. Sheep are given concentrates to supplement their diet over Winter. The medicines records and storage were significantly inadequate as no records had been kept for over a year and the store was unlocked and unhygienic. The farmer was given written advice by way of an Improvement Notice on the requirement of keeping complete and accurate records and appropriate storage conditions. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 3 µg/l 1528381	N/A	Great Britain	This lamb came from an upland farm which fattens off grass only. Few medicines were stored on farm and the medicines records showed only those treatments and vaccinations that would be expected on this type of farm. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 3.4 µg/l 1528405	N/A	Great Britain	This mountain farm keeps a small suckler herd and sheep on the main premises. Lambs are mostly rough grazed with supplementary feeding stuff provided in the winter months. At the time of the investigation no medicines were kept on farm and the medicines records were in good order. There was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 3.8 µg/l 1508445	It was not possible to adequately determine the origin of this animal therefore an investigation into this non-compliant could not be carried out.		
Sheep Urine	Alpha-boldenone 3.8 µg/l 1528352	N/A	Great Britain	This farm was also the origin for 1528333. This medium sized breeding farm kept good medicines records and storage facilities which showed only routine vaccination and wormer treatments. The sheep are on grass after weaning and fed supplementary rolled barley pre-lambing in the early spring. No anabolic steroid abuse was suspected therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 4.1 µg/l 1528406	N/A	Great Britain	This animal originated from a lowland farm which out-winters the lambs providing supplementary creep feed and nuts. The medicines records and storage were in good order and there was no evidence of the use of anabolic steroids therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 4.1 µg/l & beta-nortestosterone 0.72 µg/l 1534209	N/A	Great Britain	This sample came from a sheep which was held in a temporary lairage farm for several weeks before slaughter. No medicines, medicated feeding stuffs or feed additives were used and no anabolic steroid abuse was suspected. Therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 4.2 µg/l 1534197	N/A	Great Britain	This small enterprise has both sheep and cattle. The medicine and movement records were satisfactory and showed the usual types of medicines associated with this type of farm. No anabolic steroid abuse was suspected therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 5.2 µg/l 1534231	N/A	Great Britain	This sheep originated from a seemingly well-run fully organic farm. Being organic medicines usage is limited apart from regular use of wormers and fly strike treatments as the area is prone to both. Sheep are out all year, including lambing, and no concentrates are provided. No anabolic steroid abuse was suspected therefore the cause of this residue is most likely from faecal contamination at the time of sampling.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Urine	Alpha-boldenone 9.5 µg/l 1528333	N/A	Great Britain	This farm was also the origin for 1528352. This medium sized breeding farm kept good medicines records and storage facilities which showed only routine vaccination and wormer treatments. The sheep are on grass after weaning and fed supplementary rolled barley pre-lambing in the early spring. No anabolic steroid abuse was suspected therefore the cause of this residue is most likely from faecal contamination at the time of sampling.
Sheep Urine	Alpha-boldenone 13 µg/l 1528334	It was not possible to adequately determine the origin of this animal therefore no investigation was carried out.		
Sheep Urine	Alpha-nortestosterone 29 µg/l & Beta-nortestosterone 0.93 µg/l 1508424	N/A	Great Britain	This animal was submitted for slaughter by a sheep dealer who buys batches of sheep from markets and keeps them for 3-10 days before selling direct to abattoirs. The dealer was advised that keeping animals for less than 6 days breached the standstill rules however this issue was already being considered by Trading Standards. The most frequent treatments used on farm are oxytetracycline for lameness and also wormers. Any treated sheep is penned separately until the withdrawal period has elapsed. The medicines records were inadequate with missing information regarding batch numbers, purchases, ID of animals treated and other examples. There was no evidence of the use of anabolic steroids therefore the most likely cause of this residue is natural levels. The farmer was given written advice on the requirements for keeping complete and accurate records.
Sheep Urine	Beta-nortestosterone 0.78 µg/l 1534211	It was not possible to adequately determine the origin of this animal therefore no investigation was carried out.		
Sheep Kidney	Cadmium 1700 µg/kg 1526964	N/A	Great Britain	This ewe was about 5 years old at the time of slaughter and came from a farm which, according to the geochemical atlas, has high topsoil levels of cadmium. There was no evidence of illegal or accidental administration of cadmium, therefore the most likely cause of this residue is from an accumulation of environmental contamination over time.
Sheep Kidney	Cadmium 2200 µg/kg 1518579	N/A	Great Britain	This mainly sheep farm grazes the sheep at grass all year round and are provided concentrate and fodder beet for approximately 4 weeks from April to May. Home produced silage is also given during January to April. The medicines records were satisfactory and there was no evidence of illegal or accidental administration of cadmium, therefore the most likely cause of this residue is from an accumulation from contaminants in feed and the environment.
Sheep Kidney	Cadmium 2600 µg/kg 1506799	N/A	Great Britain	The medicines and movement records on this farm were in good order and showed the usual treatments expected with this enterprise. The farmer grazes sheep on active Ministry of Defence land that is used for shelling practice the debris of which is most likely the cause of this residue.
Sheep Liver	Closantel 1740 µg/kg	N/A	Northern Ireland	This animal originated from a breeding and fattening flock and the movement and medicines records were satisfactory. The investigation established that closantel was not used by this producer and the majority of animals are purchased and slaughtered within one week. Follow up samples were taken, all of which were confirmed to be compliant. It is most likely that there was an ID error at the time of sampling therefore it was not possible to adequately determine the origin of either this animal or the cause of the residue.
Sheep Liver	Closantel 1800 µg/kg 1505274			This animal was imported from Northern Ireland.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Liver	Closantel 1840 µg/kg	Closamectin Solution for Injection	Northern Ireland	This animal originated from a 400 to 500 lamb finishing flock. Medicine records were available, however, it was noted that a better system was needed to identify animals to the batches recorded. There was a problem in identifying the ear tag of this animal and therefore it was not possible to determine the date of treatment. Several batches of follow up samples were analysed, three of which confirmed as non-compliant. The farmer has been given written advice on the requirements for keeping full and complete medicines records and how to avoid such residues occurring in the future.
Sheep Liver	Closantel 1900 µg/kg 1505302	It was not possible to carry out an adequate investigation into this case due to ill health of the farmer.		
Sheep Liver	Closantel 2100 µg/kg 1505468	Closamectin	Great Britain	This sample originated from a finishing unit which buys from both markets and direct from farms. Lambs are separated on arrival into two groups, one for rapid finishing inside and one for grazing over a longer period, outside. The medicines records were incomplete with missing information such as medicines used, dosage and withdrawal periods. There was an invoice for enough Closamectin to treat 1000 smaller lambs and an entry shortly after the purchase for the treatment of 989 lambs. It is most likely that this animal was erroneously given an unrecorded treatment and sent for slaughter within the withdrawal period. The farmer has been given written advice about the requirements for keeping complete and accurate records to avoid such residues occurring in future.
Sheep Liver	Closantel 2150 µg/kg	Supaverm Oral Suspension	Northern Ireland	This animal originated from a 170 ewe breeding flock. Movement and medicine records were available, however, it was noted that the medicine records were incomplete as the last few treatments given were recorded on a separate sheet of paper only. The treatment of this animal was one of those on the separate paper and showed that Supaverm Oral Suspension was administered 40 days prior to slaughter which did not comply with the 65 day withdrawal period for this product. Although the overall standard of husbandry on the farm was considered to be excellent, it was most likely that the absent entry in the record resulted in this animal being sent to slaughter within the withdrawal period. The farmer has been given written advice on the requirements for keeping full and complete medicines records and how to avoid such residues occurring in the future. Five follow up samples were collected at slaughter, all of which were compliant.
Sheep Liver	Closantel 2600 µg/kg 1505320	Flukiver 5% Oral Suspension	Great Britain	On inspection of the medicines records on this farm it was noted that ID numbers had not been recorded and therefore it was not possible to determine from these if this animal had been treated. There were records of Flukiver use close to the time of slaughter so it is most likely that the cause of this residue is from an erroneous unrecorded treatment which led to this animal being sent to slaughter within the withdrawal period. The farmer has been given written advice on the requirements for keeping full and complete medicines records and how to avoid such residues occurring in the future.
Sheep Liver	Closantel 3100 µg/kg 1532207	Unknown	Great Britain	This large sheep breeding farm has got a health plan and the farmer seeks veterinary advice when required. The medicines records show the use of products containing closantel however eartag numbers were not recorded so it was not possible to determine which treatment relates to this animal. It is most likely that the cause of this residue is from an erroneous unrecorded treatment, or animal sent for slaughter my mistake which led to this animal being sent to slaughter within the withdrawal period. The farmer has been given written advice on the requirements for keeping full and complete medicines records and how to avoid such residues occurring in the future.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Liver	Closantel 5400 µg/kg 1516973	Flukiver 5% Oral Suspension	Great Britain	This sheep only farm buys in lambs and holds them until about 12 months of age before selling directly to abattoirs. The medicines records and storage are satisfactory and show that this batch of lambs was treated with Albex. No closantel products have been used on this farm for 4 years, however, the farmer is contracted to carry out de-worming treatments at other farms and uses the same gun for both medications. The cause of this residue is likely to be from this animal receiving a full unrecorded dose of Flukiver from the contaminated gun used for delivering Albex. The farmer has been given written advice on how to avoid such residues in future and the risks of using shared equipment.
Sheep Liver	Closantel 14600 µg/kg	Unknown	Northern Ireland	This animal was from a small flock of 40 animals and was slaughtered within 2 months of being purchased. Movement and medicine records were available. The flock owner stated he didn't treat this animal. The farmer has been given written advice and the flock will be targeted for further sampling.
Sheep Kidney Fat	Diazinon 800 µg/kg	Osmonds Goldfleece Sheep Dip	Northern Ireland	This animal was from a 570 head fattening and breeding flock. Movement and medicine records were available. The animal had been treated with Osmonds Goldfleece Sheep dip and the withdrawal period had been observed. Five follow up samples were taken at the slaughterhouse, all of which confirmed compliant.
Sheep Liver	Nitroxynil 25 µg/kg 1505384	Trodax	Great Britain	This beef and sheep farm routinely gives anti-parasitic medicines to their stock. The medicines records and storage were in good order and reflected this practice. According to the records, a group of ewe lambs was treated with Trodax with the withdrawal period ending one day prior to being sent for slaughter. It is most likely that the cause of this residue was from an unintentional overdose or from poor metabolism of this substance in the lamb. The farmer has been given written advice on how to avoid such residues occurring in the future.
Sheep Kidney	Oxytetracycline 780 µg/kg 1504057	Unknown	Great Britain	The investigation into this non-compliant established that the farmer kept satisfactory records and medicine storage facilities. The farmer is also aware of the withdrawal period for administered medicines. However, it was not possible to determine the dosage of antibiotic given from the records, but they did indicate that the farmer occasionally administers a slight over dosage in relation to age and weight. It is most likely that the cause of this residue is from an overdose and the farmer has been given written advice about the requirements for using veterinary medicines appropriately.
Sheep Kidney	Oxytetracycline 920 µg/kg 1525360	Alamycin LA 200 mg/l	Great Britain	The medicine records were inspected which showed several separate treatments of Alamycin LA 200 which was supported by the invoice and prescription, which was also available. The recommended dosage rate is 1ml per 10kg body weight, records show that 4ml was used for lambs between 35-40kgs. The withdrawal periods in the records were written in days rather than using an end date, which was commented on during a farm assurance visit which took place prior to this investigation. It was noted that corrective action had been implemented since this recommendation. It is most likely a combination of a slight overdose and misinterpretation of the withdrawal period by 1 day which led to this residue. The farmer has been given written advice on how to avoid such residues in future.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep Kidney	Oxytetracycline 930 µg/kg 1504140	Unknown	Great Britain	The investigation into this non-compliant was carried out over two visits and in conjunction with Trading Standards as this farmer was already the subject of an on-going investigation regarding movement records. The medicines records showed the acquisition of several medicines containing oxytetracycline such as Tetroxy LA, Terramycin LA, Terramycin Spray and Alamycin LA. On inspection of the records held by the private vet there were five occasions when the farmer purchased two bottles of Alamycin LA at each, however only two bottles had been recorded on farm. Alamycin LA was not present in the medicines store which also contained empty packaging and out of date medicines. Given the poor record keeping and general disregard for storage and farm management it is most likely that this residue was cause by an unrecorded treatment and subsequently slaughtered within the withdrawal period. The farmer has been given written advice on the requirement for using veterinary medicines appropriately.
Sheep Kidney	Oxytetracycline 2600 µg/kg 1524950	Unknown	Great Britain	This sample originated from a breeding unit where only lame ewes are treated with oxytetracycline products for foot rot, not lambs. The most likely cause of this residue is due to an unrecorded treatment given erroneously, and sent for slaughter within the withdrawal period. The farmer has been given written advice and the flock will be targeted for further sampling.
Horse				
Horse Urine	Alpha-nortestosterone 19 µg/l & beta- nortestosterone 130 µg/l 1520135	N/A	Great Britain	This horse was an entire stallion which had a spine defect causing a dipped back. There was no evidence of the illegal use of hormones and therefore the cause of this residue is likely to be natural levels.
Horse Kidney	Cadmium 7600 µg/kg 1506800	N/A	Great Britain	This horse spent some time grazing in the Dartmoor a year prior to slaughter. Geological survey maps suggest a high naturally occurring level of cadmium in the soil in the West Country. Therefore, the most likely cause of this residue is a natural build up over time from environmental contaminants.
Poultry				
Broiler Muscle	Chlortetracycline 870 µg/kg 1511205	Aurofac Granular Premix for Medicated Feed	Great Britain	This farm has a good level of management and the medicines records and storage were in good order. Aurofac was given to a batch of birds on two occasions; day old chicks and finishers. The Food Chain Information submitted to the slaughterhouse only states that Aurofac was given to the Day old chicks and not the finishers. It was established that there was a lapse in communication between the administration and farm staff resulting in this omission. The farm has now put a system in place to avoid this happening again. The withdrawal period was fully observed and there was no evidence of possible cross contamination of feed. The birds were also given the correct dose therefore the most likely cause of this residue is from an imbalance of medication throughout the feed, although it was not possible to analyse the feed due to a significant delay in the completion of this investigation. The farmer has been given written advice on how to avoid such residues in future.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Broiler Liver	Monensin 18µg/kg 1513634	Unknown	Great Britain	This sample originated from a recently diversified dairy farm to housing broilers. There are two sheds fed by three bins connected by blow lines to the front of the building. The lines are labelled but the bins are not. The all in all out system is managed by the mill supplying the dietary regime and the food business operator supplies and collects the birds. The farmer simply feeds them and had no understanding of the importance of withdrawal feed. He admitted that he may have opened the wrong slide for feeding once, which is the likely cause of this residue. The farmer has been given written advice on the requirement for keeping accurate records and labelling bins to avoid such residues in future.
Broiler Liver	Salinomycin 8.8 µg/kg 1524034	Unknown	Great Britain	The investigation into this case was marred by incorrect information collected at the time of sampling. The farm of origin comprises of 6 broiler houses of varying capacities operating an all in, all out system. The houses are served by six 30 ton bins, houses 1 and 2 have their own bins whereas the other four share two bins per two houses. There was no evidence of errors with deliveries and the investigation at the mill established that it was unlikely that contamination occurred during manufacture. There was some doubt as to the house of origin for this sample and therefore the investigation could not adequately determine the cause of this residue, however, it was most likely that it was due to on farm feeding error. The farmer has been given written advice on how to avoid such residues in future.
Broiler Liver	Toltrazuril sulphone 680 µg/kg 1511743	Unknown	Great Britain	There was no evidence of the use of toltrazuril on this farm. However, it was noted that this flock had been treated with tylosin through drinking water to treat leg and heart problems, which was not recorded on the food chain information documents. The farmer was also unaware of the requirement to keep medicines records for medicated feed. The farmer has been given written advice on the requirement for keeping complete and accurate records and on the responsible use of veterinary medicines.
Broiler Liver	Toltrazuril sulphone 750 µg/kg 1513798	Unknown	Great Britain	This sample originated from a large poultry unit which demonstrates a good level of management. Medicines are not stored on site as only the amount required for the treatment is supplied. Toltrazuril was not included in the medicines records but the original prescription was available. The farmer was advised to keep records of all medicinal use in the medicines record. Although the withdrawal period was observed, there was no declaration of this treatment on the Food Chain Information certificate and the farmer has been made aware of this. Given that this treatment is delivered through drinking water it is possible that an inadvertent over dose occurred which would account for this residue. The farmer has been given written advice on how to avoid such residues in future and reminded of the requirement for keeping complete and accurate records.
Egg				
Free Range	Lasalocid 1700 µg/kg 1509008	Unknown	Great Britain	This small free range egg farm mainly produces eggs for the use in the manufacture of pet food but sells some eggs through a farm shop. All feed deliveries were in bags at the time of sampling although the number of birds on farm has increased that the feed is now delivered in bulk. The feed delivery notes indicate that Turkey feed containing lasalocid was bought before Christmas, although none of the feed was retained so further samples could not be taken. There was no obvious source of the contamination but the cause of this residue was most likely from a feeding error on farm. The farm has already improved its feeding practices and storage labelling and will ensure that all staff are aware of the risks of cross-contamination.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Game				
Farmed Deer Kidney Fat	DDE-p,p' 1500 µg/kg 1508869	This case has been referred to the Food Standards Agency		
Pheasant muscle	Lead 43000 µg/kg 1529889	N/A	Great Britain	This pheasant was killed using a lead shot, which is the most likely cause of this residue.
Partridge Muscle	Lasalocid 660 µg/kg 1529902	Unknown	Great Britain	This sample originated from a partridge which was part of a shoot. They buy in 1 day old chicks and rear at various sites until the shoots. It was not possible to analyse feed samples from the mill due to them being damaged during a flood. The farm took delivery of 9 tonnes of plain feed and 250kg of medicine feed, intended for use at another farm. It is most likely that the cause of this residue is from inadvertently mixing the medicine feed with plain. The farmer has been given written advice and implemented procedures to avoid such residues occurring in future.
Farmed Fish				
Salmon Skin & muscle	Emamectin 120 µg/kg 1521867	Slice 2 mg/g Premix for Medicated Feeding Stuff	Great Britain	No investigation was carried out for this case as this sample was taken during a treatment period of Slice 2 mg/g Premix for Medicated Feeding Stuffs, and therefore should not have been sampled for analyses of avermectins.
Milk				
Cattle	Amoxicillin 8.1 µg/l 1512989	Betamox 150 mg/ml Suspension for Injection	Great Britain	This sample was taken from a large dairy farm with 400 high yielding Holstein cows plus followers. The investigation established that Betamox injection is regularly used for cows with retained placentas with records of its recent purchase. Records showed that one cow received three successive days of treatment, the last day of treatment being the day of sampling, therefore it is most likely that the 24 hour withdrawal period had not been observed resulting in this residue. The medicines records also had gaps of entire months and the medicines store contained partly used medicines but no records of its use. This farmer was given written advice of the requirements for keeping complete and accurate records and how to avoid such residues in future.
Cattle	Ivermectin 1 µg/l 1521529	Ivomec Super	Great Britain	This sample was taken from a mixed dairy and beef farm with an excellent standard of care and husbandry. Only one person on farm is responsible for keeping the medicine records updated and handing out correct dosage to those farm workers administering the medicine. All dry cattle are treated with Ivomec Super and remain dry for a period of 3 to 4 months, adhering to the 60 day withholding period. The most likely that a mistaken ID entry in the medicines record is the cause of this residue. The farmer has been given written advice of the requirements for keeping complete and accurate records and how to avoid such residues in future.
Cattle	Ivermectin 4.1 µg/l	Ivomec Super And Bimectin Plus	Northern Ireland	The investigation showed that treatments of Ivomec Super or Bimectin Plus were given to a group of heifers 111 days prior to sampling. The withdrawal period for these products is 60 day which was fully adhered to. A follow up sample was taken which confirmed as compliant. It was not possible to determine the cause of this residue.

SAMPLING OF ANIMALS SUSPECTED OF CONTAINING A RESIDUE AT THE TIME OF SLAUGHTER: 2015

RESIDUES DETECTED ABOVE THE REFERENCE POINT TO DATE: 31 DECEMBER 2015

Sample	Analysed for	No. of analyses	No. of Non-compliant samples	Reference Point µg/kg/l	Concentrations above the Reference Point µg/kg/l (more than one substance may be found in one sample)
Calf Kidney	Antimicrobials	15	5 substances in 4 samples	1000 600 50	23000 (dihydrostreptomycin) 3200, 4100, 5800 (oxytetracycline) 1900 (penicillin G)
Cattle Kidney	Antimicrobials	1423	11	50 1000 150 Presence 600 50 100	344 (amoxicillin) 5300 (dihydrostreptomycin) 580, 5590 (marbofloxacin) 9.3 (nalidixic acid) 2550 (oxytetracycline) 90, 106, 221, 719 (penicillin G) 1080 (sulphamethazine)
Cattle Liver	Anthelmintics	98	2	100 20	198 (ivermectin) 266 (nitroxinil)
Sheep Kidney	Antimicrobials	3	1	600	966 (oxytetracycline)

RESULTS OF FOLLOW-UP INVESTIGATIONS: 31 DECEMBER 2015

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle				
Calf Kidney	Dihydrostreptomycin 23000 µg/kg & Penicillin G 1900 µg/kg 1597055	Pen & Strep Suspension for Injection	Great Britain	The investigation established that the most likely cause of this residue is from and unrecorded treatment given by the farm had and subsequently sent for slaughter within the withdrawal period. The medicines records and storage otherwise appeared satisfactory. The farmer was given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines.
Calf Kidney	Oxytetracycline 3200 µg/kg 1597059	Hexasol	Great Britain	The medicines records show that calves were treated with Hexasol LA but there was no entry for this calf. It is most likely that this animal was treated on farm but erroneously recorded as another calf, leading to it being sent for slaughter within the withdrawal period. The farmer was given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines.
Calf Kidney	Oxytetracycline 4100 µg/kg 1597053	Hexasol	Great Britain	The farm policy on this farm is not to treat bull calves but instead send directly to slaughter or kill on farm. The farmer suggested that it was possible he had erroneously treated this animal and failed to record it in the medicines records, which were otherwise satisfactory. The medicines store contained Hexasol LA, therefore this is the most likely cause of this residue. The farmer has been given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Calf Kidney	Oxytetracycline 5800 µg/kg 1597001	Hexasol	Great Britain	This is a mixed dairy and ewe farm which keeps calves until approximately 8 weeks of age before being sold at market. The medicines records showed that this calf had been treated daily with Hexasol LA over a period of 4 days but the withdrawal period was not worked out from the date of the last treatment. Hexasol is for single use only and the farmer had not considered the consequence that overdosing can have on withdrawal periods. The farmer has been given advice on the requirement for using medicines correctly and applying the correct withdrawal periods.
Calf Kidney	Oxytetracycline 13000 µg/kg 1597070	Unknown	Great Britain	This medium sized dairy farm held good medicines records and storage facilities, however the investigation determined that it was likely an occasional assistant may have given this animal an unrecorded treatment and without informing the farmer. Procedures have now been put in place to restrict who can administer veterinary medicines to the animals. The farmer has also been given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines.
Cattle Kidney	Amoxicillin 344 µg/kg	Betamox 150 mg/ml Suspension for Injection	Northern Ireland	This animal originated from a dairy herd where the movement records were available but it was noted that there was an error in the medicines records for this animal with the wrong drug being recorded. A farm worker had been instructed to give the cow Alamycin but during the investigation the farmer checked and discovered Betamox had been administered at almost two times the recommended dose. This animal was sent for slaughter 22 post treatment, and having completed the 18 day withdrawal period, however, the over dose would have required significantly longer withdrawal, which is the cause of this residue. The farmer has been given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines.
Cattle Kidney	Dihydrostreptomycin 5300 µg/kg	Pen & Strep	Northern Ireland	This animal originated from a 500 head dairy herd and movement and medicines records were satisfactory. The farmer was unaware of the stipulation for a maximum dose of 6ml per injection and had administered 16ml per injection for 3 days. Therefore the most likely cause of this residue is from a significant overdose.
Cattle Liver	Ivermectin 198 µg/kg	Noromectin 0.5% Pour on Solution	Northern Ireland	This animal originated from a small herd on a farm which buys drop calves and sells on as light stores. This animal was an on farm emergency slaughter because slurry mixing by a farm worker had caused five animals to collapse with gas poisoning. As this animal failed to recover it was shot and bled by the PVP and taken to the meat plant. This animal was one of eight animals which had been treated with Noromectin 0.5% by the herd keeper 12 days prior to slaughter which was well within the 28 day withdrawal period for meat. The farmer's son was unaware that this animal had been treated as he hadn't consulted the medicine records due to the emergency nature of the incident. The farmer has been given written advice and the herd will be targeted for further sampling.
Cattle Kidney	Marbofloxacin 580 µg/kg	Marbocyl 10% injectable	Northern Ireland	The investigation established that Marbocyl 10% injectable was used on this animal 7 days prior to slaughter, observing the 6 day withdrawal period. The medicine records were satisfactory and there was no other obvious explanation for this residue. It is possible that pathology affected the withdrawal period as the animal was suffering from nephritis.
Cattle Kidney	Marbofloxacin 5590 µg/kg	Marbonor	Northern Ireland	This animal originated from 300 head dairy herd. The medicine records were available but not complete as this animal was treated with Marbonor, but the date of administration was not recorded. The cause of this residue is likely due to being slaughtered within the withdrawal period. The farmer has been given written advice about the requirements for accurate record keeping and responsible use of veterinary medicines and the herd will be targeted for further sampling.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Cattle Kidney	Nalidixic Acid 9.3 µg/kg	Unknown	Northern Ireland	The medicines records showed that this animal was treated with Forcyl Injectable which contains marbofloxacin and all withdrawal periods were observed. There were no medicines containing nalidixic acid used according to the records and none were found in the medicines storage. Therefore it was not possible to establish the cause of this residue. All follow up samples were found to be compliant.
Cattle Liver	Nitroxinil 266 µg/kg	Unknown	Northern Ireland	This animal was from a fattening herd and movement and medicine records were satisfactory. The farmer had purchased this cow 18 days prior to sending it to slaughter and records show that this animal had not been treated with this substance during this time. The long withdrawal period required for this substance suggests that it may have been treated by the previous owner and a further investigation will be carried out.
Cattle Kidney	Oxytetracycline 2550 µg/kg	Unknown	Northern Ireland	The movement and medicine records showed that this animal was purchased 21 day prior to slaughter and had not been treated whilst on farm. The investigating officer suspects that the previous owner had given this animal an overdose before selling, although no further trace back investigation was carried out.
Cattle Kidney	Penicillin G 90 µg/kg	Unknown	Northern Ireland	This case has been referred for further action.
Cattle Kidney	Penicillin G 106 µg/kg	Norocillin 30% Injectable	Northern Ireland	The investigation established that this treatment was given sub-cutaneously rather than the deep intramuscular as recommended by the manufacturer. This led to an inappropriate withdrawal period being adhered to resulting in this residue.
Cattle Kidney	Penicillin G 221 µg/kg	Pen & Strep Suspension for Injection and Ultrapen LA Suspension for Injection	Northern Ireland	This animal was from a 650 head herd. Movement and medicine records were available. This animal had been failing to thrive for some time and had been examined by the vet. Chronic lung disease had been diagnosed and prescribed a long course of penicillin to see if she improved sufficiently for salvage slaughter. It had been treated with pen strep and ultrapen and the withdrawal period had been observed and a further 20 days had passed before slaughter. The farmer has been given written advice and the herd will be targeted for further sampling.
Cattle Kidney	Penicillin G 719 µg/kg	Depocillin Suspension for Injection	Northern Ireland	This animal was from a 550 head beef finishing unit. Movement and medicine records were available. The animals had been treated with Depocillin and the withdrawal period had been observed. Twelve follow up samples were taken, all of which confirmed compliant. The farmer has been given written advice and the herd could be targeted for further sampling.
Cattle Kidney	Sulphamethazine 1080 µg/kg	Proprietary scour treatment produced by PVP	Northern Ireland	This animal originated from a 55 head beef fattening dealer herd. Movement records were available however this animal had not been recorded as slaughtered in the herd book. Medicine records were available but not complete and there were no records of usage for some of the medicines in the store. In addition, the identity of individual animals treated was not recorded. This animal had been treated orally on 6 days prior to slaughter with a proprietary scour treatment produced by PVP which has a 7 day withdrawal period. Ingredients for the PVP's scour treatment were labelled Product-Intradine. There is no withdrawal time or active ingredient on the label and Intradine is a Norbrook product which contains Sulphamethazine (Sulphadimidine). The product data sheet states that it is to be administered by intravenous or subcutaneous injection and has 18 day withdrawal period for meat. PVP is removing the product from shelves. The farmer has been given written advice and the herd will be targeted for further sampling.

Species & Matrix	Residue detected & concentration (RIM Ref)	Products used	Region	Cause of residue
Sheep				
Sheep Kidney	Oxytetracycline 966 µg/kg	Alamycin LA	Northern Ireland	This animal was from a small flock of 59 animals. The movement and medicine records were available and appeared satisfactory. This animal had been treated with Alamycin LA and the withdrawal period was observed. However, the animal was given a double dose as the farmer thought it would be more beneficial, which would have impacted on the withdrawal period. The farmer has been given written advice about the responsible use of veterinary medicines. and the flock will be targeted for further sampling.

Section B: Full details of 2015 UK statutory surveillance programme by sector

RED MEAT

Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A2 Thyrostats						
Thyrostats	Cattle		Urine	160	2	
	Fattening cattle		Urine	218	1	Thiouracil 50
	Horses		Urine	1		
	Pigs		Urine	100	1	Thiouracil 33
	Sheep		Urine	76		
A3 Hormones						
Gestagens	Cattle		Kidney Fat	297		
	Fattening cattle		Serum	290		
	Pigs		Kidney Fat	101		
	Sheep		Kidney Fat	82		
Methyltestosterone	Pigs		Feed	24		
Oestradiol	Cattle	Male	Serum	200		
	Fattening cattle	Male	Serum	325		
Steroid screen 1	Cattle + Fattening Cattle		Urine	829	9	ADD 0.4, 0.5, 0.6 Alpha-bold 2, 2.9, 4.3, 4.48 Beta-bold 0.29, 0.68
			Urine	1113	16	Alpha-nort 5.2, 5.4, 6.1, 7.7, 7.9, 8.2, 8.7, 9.1, 9.8, 10, 12, 13, 14, 16,18, 20, 35 Beta-nort 0.4 Alpha-estradiol 78 Testosterone 22, 31, 32, 42, 62
	Horses		Urine	2	1	Alpha-nort 19, Beta-nort 130
	Pigs		Urine	348		
	Sheep		Urine	494	26	Alpha-bold 2, 2.1, 2.1, 2.1, 2.4, 2.5, 2.5, 2.6, 2.6, 2.6, 2.7, 2.9, 2.9, 3, 3, 3.4, 3.8, 3.8, 4.1, 4.1, 4.2, 5.2, 9.5, 13 Alpha-nort 29 Beta-bold 0.58 Beta-nort 0.72, 0.78, 0.93
	Testosterone	Cattle	Female	Serum	310	1
Fattening cattle		Female	Serum	315	1	Beta-test 0.31
A5 Beta-Agonists						
	Calves	< 6 months	Liver	7		
	Cattle		Liver	528	1	Clenbuterol 0.13
	Fattening cattle		Feed	197		
	Fattening cattle		Urine	217		
	Horses		Liver	2		
	Pigs		Feed	85		
	Pigs		Liver	338		
	Sheep		Liver	283		
A6 Annex IV						
Chloramphenicol	Calves	< 6 months	Kidney	7		
	Cattle		Kidney	285		
	Fattening cattle		Feed	300		

	Horses		Kidney	3		
	Pigs		Kidney	255		
	Sheep		Kidney	152		
Nitrofurans	Calves	< 6 months	Kidney	4		
	Cattle		Kidney	162		
	Fattening cattle		Feed	206		
	Horses		Kidney	2		
	Pigs		Feed	7		
	Pigs		Kidney	322		
	Sheep		Kidney	240		
Nitroimidazoles	Calves	< 6 months	Kidney	4		
	Cattle		Kidney	167		
	Horses		Kidney	2		
	Pigs		Feed	15		
	Pigs		Kidney	238		
	Sheep		Kidney	114		
B1 Antimicrobial						
AMS1	Calves	< 6 months	Kidney	88	3	Gamithromycin 230, Chlortetracycline 1600, Oxytetracycline 6000, Tilmicosin 3200,
	Cattle		Kidney	1207	3	Dihydrostreptomycin 4400, Penicillin G 140, Tulathromycin 11000
	Horses		kidney	8		
	Pigs		Kidney	1336	1	Sulfadiazine 110
	Sheep		Kidney	2604	4	Oxytetracycline 780, 920, 930, 2600
AMS2	Cattle		kidney	351		
	Pigs		kidney	373		
AMS4	Calves	< 6 months	Kidney	90	2	Dihydrostreptomycin 1700, 10000
	Calves	< 6 months	Kidney Fat	1		
	Cattle		kidney	134		
	Sheep		kidney	101		
Ceftiofur	Pigs		kidney	103		
Florfenicol	Calves	< 6 months	Kidney	91	3	Florfenicol 710, 800, 2300
	Sheep		Kidney	96		
B2A Anthelmintics						
Anthelmintics	Cattle		Liver	506	1	Nitroxynil 51
	Pigs		Liver	267		
	Sheep		Liver	960	11	Closantel 1740,1800, 1840, 1900, 2100, 2150, 2600, 3100, 5400, 14600 Nitroxynil 25
Avermectins	Cattle	1234	Liver	303	1	Ivermectin 130
	Horses		Liver	8		
	Pigs		Liver	177		
	Sheep		Liver	546	1	Abamectin170
B2B Coccidiostats						
Coccidiostats	Calves	< 6 months	Liver	17	2	Decoquinatate 23, 34
	Horses		Liver	2		
	Pigs		Liver	108		
	Sheep		Liver	324		
B2C Pesticide Screen						
Pyrethroids	Calves	< 6 months	Kidney Fat	31		
	Horses		Kidney Fat	2		

	Pigs		Kidney Fat	73		
	Sheep		Kidney Fat	554		
B2D Sedatives						
	Breeding Boar		Liver	90		
	Cattle		Liver	38		
	Horses		Liver	8		
	Pigs		Liver	115		
	Sheep		Liver	97		
B2E NSAIDs						
	Cattle		Kidney	622	1	Ibuprofen 840
	Horses		Kidney	40		
	Pigs		Kidney	39		
	Sheep		Kidney	49		
B2F Glucocorticoids						
	Cattle		Liver	333		
	Horses		Liver	7		
	Pigs		Liver	45		
	Sheep		Liver	23		
B3A Pesticide Screen						
	Cattle		Kidney Fat	76	1	PCBs 61
	Horses		Kidney Fat	1		
	Pigs		Kidney Fat	71		
	Sheep		Kidney Fat	129		
B3B Pesticide Screen						
OPs	Cattle		Kidney Fat	230		
	Horses		Kidney Fat	1		
	Pigs		Kidney Fat	143		
	Sheep		Kidney Fat	569	1	Diazinon 800
B3C Heavy Metals						
Metals	Cattle		Kidney	65	3	Cadmium 1200, 1200, 2260
	Horses		Kidney	1	1	Cadmium 7600
	Pigs		Kidney	14		
	Sheep		Kidney	52	3	Cadmium 1700, 2200, 2600
B3D Mycotoxins						
Mycotoxins	Cattle		Liver	28		
	Horses		Liver	1		
	Pigs		Liver	71		
	Sheep		Liver	16		
A4 Hormones						
Zeranol	Cattle + Fattening Cattle		Urine	363 339	8 4	Taleranol 0.79, 1.2, 1.5 Taleranol & Zeranol 2.02, 2.02, 2.66, 2.9, 4.9, 8.2, 10.2, 11, 98
	Horses		Urine	2		
	Pigs		Urine	230		
	Sheep		Urine	104	1	

POULTRY						
Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A3 Hormones						
Steroid screen 2	Broilers		Liver	549		
	Ducks		Liver	11		
	Hens		Liver	21		
	Turkeys		Liver	75		
A5 Beta-Agonists						
	Broilers		Feed	155		
	Broilers		Liver	351		
	Ducks		Feed	6		
	Ducks		Liver	11		
	Hens		Feed	9		
	Hens		Liver	19		
	Turkeys		Feed	21		
	Turkeys		Liver	70		
A6 Annex IV						
Chloramphenicol	Broilers		Muscle	597		
	Ducks		Muscle	14		
	Hens		Muscle	20		
	Turkeys		Muscle	46		
Nitrofurans	Broilers		Feed	254		
	Broilers		Muscle	498		
	Ducks		Feed	5		
	Ducks		Muscle	11		
	Hens		Feed	9		
	Hens		Muscle	20		
	Turkeys		Feed	31		
	Turkeys		Muscle	57		
Nitroimidazoles	Broilers		Feed	261		
	Broilers		Serum	847		
	Ducks		Feed	35		
	Ducks		Serum	15		
	Hens		Feed	9		
	Hens		Serum	26		
	Turkeys		Feed	31		
	Turkeys		Serum	85		
B1 Antimicrobial						
AMS1	Broilers		Muscle	1623	1	Chlortetracycline 870
	Ducks		Muscle	31		
	Geese		Muscle	3		
	Hens		Muscle	53		
	Turkeys		Muscle	189		
AMS2	Broilers		Muscle	671		
	Ducks		Muscle	9		

	Geese		Muscle	1		
	Hens		Muscle	20		
	Turkeys		Muscle	85		
Tiamulin	Broilers		Muscle	10		
B2A Anthelmintics						
Anthelmintics	Broilers		Liver	290		
	Ducks		Liver	11		
	Hens		Liver	20		
	Turkeys		Liver	69		
B2B Coccidiostats						
Coccidiostats	Broilers		Liver	671	4	Monensin 18, Salinomycin 8.8 Toltrazuril Sulphone 680, 750
	Hens		Liver	13		
	Turkeys		Liver	41		
B2C Pesticide Screen						
Pyrethroids + Carbamates	Broilers		Liver	73		
	Ducks		Liver	7		
	Hens		Liver	7		
	Turkeys		Liver	13		
B2E NSAIDs						
	Broilers		Liver	5		
	Ducks		Liver	5		
	Hens		Liver	5		
	Turkeys		Liver	5		
B3A Pesticide Screen						
	Broilers		Liver	235		
	Ducks		Liver	6		
	Hens		Liver	9		
	Turkeys		Liver	12		
B3C Heavy Metals						
Metals	Broilers		Muscle	85		
	Ducks		Muscle	2		
	Hens		Muscle	3		
	Turkeys		Muscle	8		
B3D Mycotoxins						
Mycotoxins	Broilers		Liver	17		
	Hens		Liver	1		
	Turkeys		Liver	1		

EGGS

Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A6 Annex IV						
Chloramphenicol	Eggs		Eggs	164		
Nitrofurans	Eggs		Eggs	146		
Nitroimidazoles	Eggs		Eggs	146		

B1 Antimicrobial

AMS1	Eggs		Eggs	155		
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AMS2	Eggs		Eggs	98		
AMS3	Eggs		Eggs	198		
Tiamulin	Eggs		Eggs	32		
B2B Coccidiostats						
Coccidiostats	Eggs		Eggs	577	1	Lasalocid 1700
B3A Pesticide Screen						
	Eggs		Eggs	57		

FISH						
Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A3 Hormones						
Methyltestosterone	Trout		Muscle & Skin	9		
A6 Annex IV						
Chloramphenicol	Salmon		Muscle & Skin	182		
	Trout		Muscle & Skin	15		
Nitrofurans	Bass		Muscle & Skin	1		
	Salmon		Muscle & Skin	91		
	Trout		Muscle & Skin	10		
Nitroimidazoles	Bass		Muscle & Skin	2		
	Salmon		Muscle & Skin	160		
	Trout		Muscle & Skin	12		
B1 Antimicrobial						
AMS1	Salmon	Market (fish)	Muscle & Skin	99		
	Trout	Market (fish)	Muscle & Skin	4		
AMS2	Salmon	Market (fish)	Muscle & Skin	34		
AMS3	Salmon	Market (fish)	Muscle & Skin	192		
	Trout	Market (fish)	Muscle & Skin	4		
Florfenicol	Salmon		Muscle & Skin	87		
B2A Anthelmintics						
Anthelmintics	Salmon		Muscle & Skin	95		
	Trout		Muscle & Skin	3		
Avermectins	Salmon		Muscle & Skin	84	1	Emamectin 120
	Trout		Muscle & Skin	3		
B2C Pesticide Screen						
Pyrethroids	Salmon		Muscle & Skin	113		
B3A Pesticide Screen						
	Salmon		Muscle & Skin	10		
	Trout		Muscle & Skin	4		

B3B Pesticide Screen						
OPs	Salmon		Muscle & Skin	34		
B3C Heavy Metals						
Metals	Salmon		Muscle & Skin	20		
	Trout		Muscle & Skin	4		
B3D Mycotoxins						
Mycotoxins	Salmon		Muscle & Skin	8		
	Trout		Muscle & Skin	4		
B3E Dyes						
Dyes	Bass		Muscle & Skin	1		
	Salmon	Young (fish)	Muscle & Skin	131		
	Tilapia		Muscle & Skin	1		
	Trout	Market (fish)	Muscle & Skin	69		

MILK						
Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A6 Annex IV						
Chloramphenicol	Cattle		Milk	830		
	Goats		Milk	3		
	Sheep		Milk	4		
B1 Antimicrobial						
AMS1	Cattle		Milk	468	1	Amoxycillin 8.1
	Goats		Milk	1		
	Sheep		Milk	3		
AMS2	Cattle		Milk	241		
	Goats		Milk	1		
	Sheep		Milk	2		
AMS3	Cattle		Milk	381		
	Goats		Milk	1		
AMS4	Cattle		Milk	220		
	Goats		Milk	1		
Cefquinome	Cattle		Milk	151		
	Goats		Milk	2		
	Sheep		Milk	1		
Ceftiofur	Cattle		Milk	103		
	Goats		Milk	1		
	Sheep		Milk	1		
B2A Anthelmintics						
Anthelmintics	Cattle		Milk	204		
	Goats		Milk	1		
Avermectins	Cattle		Milk	552	2	Ivermectin1, 4.1
	Goats		Milk	1		
	Sheep		Milk	5		

B2E NSAIDs						
	Cattle		Milk	164		
	Goats		Milk	1		
B3A Pesticide Screen						
	Cattle		Milk	32		
	Goats		Milk	1		
B3B Pesticide Screen						
OPs	Cattle		Milk	37		
B3C Heavy Metals						
Metals	Cattle		Milk	41		
B3D Mycotoxins						
Mycotoxins	Cattle		Milk	36		

GAME						
Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A2 Thyrostats						
Thyrostats	Deer		Liver	4		
A3 Hormones						
Steroid screen 2	Deer		Liver	8		
A5 Beta-Agonists						
	Deer		Liver	12		
A6 Annex IV						
Nitroimidazoles	Deer		Muscle	4		
B1 Antimicrobial						
AMS1	Deer		Kidney	27		
B2A Anthelmintics						
Anthelmintics	Deer		Liver	7		
	Partridge		Liver	2		
	Pheasant		Liver	5		
B2B Coccidiostats						
Coccidiostats	Partridge		Muscle	5	1	Lasalocid 660
	Pheasant		Muscle	5		
	Quail		Muscle	5		
B2C Pesticide Screen						
Pyrethroids	Deer		Kidney Fat	4		
B2D Sedatives						
	Deer		Liver	4		
B2E NSAIDs						
	Deer		Kidney	5		
B3A Pesticide Screen						
	Deer		Kidney Fat	7	1	DDE-pp 1500
B3C Heavy Metals						
Metals	Deer		Muscle	6		
	Partridge		Muscle	6		
	Pheasant		Muscle	6	1	Lead 43000
	Wild Deer		Muscle	36		

Honey						
Substance Group/Analyte	Species	Age & Sex	Matrix	No of Analyses	No. above Action Level	Concentration where samples above MRL (Ug/Kg)
A6 Annex IV						
Chloramphenicol	Bees		Honey	10		
Nitrofurans	Bees		Honey	10		
B1 Antimicrobial						
AMS1	Bees		Honey	21		
AMS3	Bees		Honey	22		
AMS4	Bees		Honey	20		
AMS5	Bees		Honey	20		
B2C Pesticide Screen						
Pyrethroids	Bees		Honey	10		
B3A Pesticide Screen						
	Bees		Honey	10		
	Bees		Honey	12		
B3B Pesticide Screen						
OPs	Bees		Honey	15		
B3C Heavy Metals						
Metals	Bees		Honey	14		