

**United States Department of Agriculture
Food Safety and Inspection Service, Office of Public Health Science**

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Revision: .02	Replaces: CLG-MRM3.01	Effective: 11/02/20

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A. INTRODUCTION

1. Background / Summary of Procedure

Animal drug residues are extracted from tissue using a solution of acetonitrile and water. The extracted residues are examined using UHPLC-MS-MS with a tandem mass spectrometer under electrospray ionization (ESI) conditions.

2. Applicability

This method is suitable for the screening and confirmation of animal drug residues in bovine, poultry, porcine, caprine, and ovine kidney and muscle tissue, liquid egg products, and fish of the order Siluriformes (catfish) muscle tissue at the minimum levels of applicability listed in Tables 12-17 in Appendix J.3.

Note: Refer to 21CFR for tolerance values set by FDA and 40CFR for tolerance values set by EPA.

Note: This method may be performed using standards/solutions that contain fewer analytes than the method is applicable for, if the excluded analytes will not be included in the reported results.

B. EQUIPMENT

Note: Equivalent equipment may be substituted.

1. Apparatus

- a. Pulsating vortex platform shaker - Cat. No. 099A LC1012, Glas-Col
- b. Centrifuge - Hettich Rotanta 460 R, capable of ~ 4600 RPM
- c. Balance - Mettler Top Loading Model PB300 Balance capable of weighing 2 ± 0.01 g
- d. Balance Analytical - Mettler Model XS-205DU Dualrange
- e. Centrifuge tubes - Polypropylene (PP), 50 mL, Falcon Part number 352070
- f. LC vials with screw cap lids - Amber glass, 4 mL, Cat. No. 1232 P 49, Thomas Scientific
- g. Plastic screw cap vials - Polypropylene, 4 mL, Cat. No. 1708 H 01, Thomas Scientific
- h. Screw top, amber glass, autosampler vials, PTFE septa, 2 mL, Cat. No. 5182-0556, Agilent Technologies

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2. Instrumentation

- a. Agilent 1290 Infinity UHPLC with Sciex QTrap 6500 mass spectrometer
- b. Phenomenex Kinetex core-shell C18 column (50 x 3 mm, 1.7 µm) coupled with 3 mm i.d. core-shell C18 guard column.

C. REAGENTS AND SOLUTIONS

1. *Note: Equivalent reagents / solutions may be substituted.* Reagents

- a. Acetonitrile (ACN) - LC-MS Grade, Honeywell Burdick & Jackson - Product No. LC015
- b. Formic acid – Sigma Chemical Co., Cat. No. F0507-500ML
- c. Water - LC Grade, House deionized water passed through an ELGA Pure Lab Ultra Filtration System
- d. Sodium hydroxide (NaOH) - pellets, Fisher Scientific, Item No. S318-3
- e. Methanol (MeOH) - Fisher Scientific – Cat. No. A456-4
- f. Dimethyl Sulfoxide (DMSO) - Spectrum Chemical – Cat. No. HP412
- g. Acetone – Fisher Scientific, Cat. No. UN 1090

2. Solutions

- a. 80:20 Acetonitrile/Water:
Measure 800 mL of acetonitrile using a graduated cylinder and transfer to a 1 L volumetric flask. Measure 200 mL of deionized water using a graduated cylinder and add to the volumetric flask containing the acetonitrile. Mix this solution and transfer to a dispenser bottle.
- b. 50:50 Acetonitrile/Methanol:
Add equal volumes of acetonitrile and methanol to a graduated cylinder and mix. Transfer solution to a storage vessel.
- c. 0.03 M Sodium Hydroxide:
Add 0.12 g of NaOH to a 100 ml volumetric flask containing 80 mL of deionized water. Mix and allow solution to cool. Adjust to final volume using deionized water. Store in a plastic container.
- d. UHPLC Aqueous Mobile Phase (0.1% Formic Acid in water):
Add 1.0 mL of formic acid to a 1 L volumetric flask. Dilute to volume with deionized water. Mix and transfer to the aqueous reservoir of the LC.
- e. UHPLC Organic Mobile Phase (Acetonitrile, 0.1% Formic Acid):

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Add 1.0 mL of formic acid into a 1 L volumetric flask. Bring to volume using acetonitrile. Mix and transfer to the organic reservoir of the LC.

D. STANDARD(S)

- Note: Equivalent standards / solutions may be substituted. Purity and counterions are to be taken into account when calculating standard concentrations. In-house prepared standards shall be assigned an expiration date that is no later than the stability stated in the method.* Standard Information

Table 1 – Standard Information

Standard Analyte	Manufacturer	Catalog Number	Standard Analyte	Manufacturer	Catalog Number
2-amino-Flubendazole	Sigma Aldrich	32841	Metronidazole	Sigma Aldrich	M3761
2-Aminosulfone Albendazole	Toronto Research Co.	A580950	Metronidazole - OH	Sigma Aldrich	34007
2-Quinoxaline Carboxylic Acid (QCA)	Absolute Standards	91819	Monensin	Sigma Aldrich	46468
Abamectin	Sigma Aldrich	31732	Morantel tartrate	Sigma Aldrich	M5529
Acepromazine	Sigma Aldrich	A7111	Moxidectin	Sigma Aldrich	33746
Albendazole	Sigma Aldrich	A4673	Nafcillin	US Pharmacopeia	1450007
Amoxicillin	US Pharmacopeia	1031503	Narasin	US Pharmacopeia	1457458
Ampicillin	Sigma Aldrich	A1593	Norfloxacin	Sigma Aldrich	N9890
Azaperone	Sigma Aldrich	34223	Orbifloxacin	Sigma Aldrich	34041
Butorphanol	Sigma Aldrich	B9156	Oxacillin	US Pharmacopeia	1481000
Carazolol	Sigma Aldrich	53787	Oxyphenylbutazone	Toronto Research	876950
Carbadox	MP Biomedicals, LLC	194154	Oxytetracycline	Sigma Aldrich	O5875
Cefazolin	Sigma Aldrich	C5020	Penicillin G	US Pharmacopeia	1502508
Chloramphenicol	Sigma Aldrich	31667	Penicillin G - d ₇	Toronto Research	B288600
Chlorpromazine	Sigma Aldrich	C8138	Phenylbutazone	MP Biochemicals	153567
Chlortetracycline	US Pharmacopeia	1129007	Pirlimycin	Toronto Research	P509300
Cimaterol	Sigma Aldrich	32568	Prednisone	Sigma Aldrich	P6254
Ciprofloxacin	US Pharmacopeia	1134313	Promethazine	Sigma Aldrich	P4651
Clenbuterol	Sigma Aldrich	C5423	Propionylpromazine	Sigma Aldrich	P7780
Clindamycin	Sigma Aldrich	C5269	Ractopamine	Sigma Aldrich	34198
Cloxacillin	US Pharmacopeia	1142005	Ronidazole	Sigma Aldrich	R7635
Danofloxacin	Sigma Aldrich	33700	Salbutamol	Sigma Aldrich	S8260
DCCD	Toronto Research	D289905	Salinomycin	Sigma Aldrich	46729
Desacetyl Cephapirin	Toronto Research	D288970	Sarafloxacin	Sigma Aldrich	33497

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Standard Analyte	Manufacturer	Catalog Number	Standard Analyte	Manufacturer	Catalog Number
Desethylen Ciprofloxacin	Toronto Research	D289150	Selamectin	Sigma Aldrich	32476
Diclofenac	Sigma Aldrich	D6899	Sulfachloropyridazine	Sigma Aldrich	46778
Dicloxacinil	US Pharmacopeia	1189009	Sulfadiazine	Sigma Aldrich	S8626
Difloxacin	Sigma Aldrich	33984	Sulfadimethoxine	Sigma Aldrich	46794
Dimetridazole	Sigma Aldrich	D4025	Sulfadoxine	US Pharmacopeia	1626500
Dimetridazole - OH	Sigma Aldrich	34003	Sulfaethoxypyridazine	Fluka	2743
Dipyron	Sigma Aldrich	46232	Sulfamerazine	Sigma Aldrich	S8876
Doramectin	Sigma Aldrich	33993	Sulfamethazine	Sigma Aldrich	S6256
Doxycycline	Sigma Aldrich	D9891	Sulfamethazine Phenyl - ¹³ C ₆	Sigma Aldrich	32519
Emamectin Benzoate	Sigma Aldrich	31733	Sulfamethizole	Sigma Aldrich	S5632
Enrofloxacin	Sigma Aldrich	33699	Sulfamethoxazole	Sigma Aldrich	S7507
Eprinomectin	Sigma Aldrich	32526	Sulfamethoxypyridazine	Sigma Aldrich	S7257
Erythromycin A	Sigma Aldrich	E0774	Sulfanilamide	Sigma Aldrich	46874
Fenbendazole	Sigma Aldrich	F5396	Sulfantran	Sigma Aldrich	46882
Fenbendazole sulphone	Sigma Aldrich	32544	Sulfapyridine	Sigma Aldrich	S6252
Florfenicol	Sigma Aldrich	F1427	Sulfaquinoxaline	Sigma Aldrich	45662
Florfenicol Amine	Sigma Aldrich	32492	Sulfathiazole	Sigma Aldrich	S9876
Flubendazole	Sigma Aldrich	34091	Sulfisoxazole	Sigma Aldrich	31739
Flunixin	US Pharmacopeia	1274607	Taleranol (B-Zearalanol)	Sigma Aldrich	Z0417
Flunixin - d ₃	Sigma Aldrich	34083	Tetracycline	US Pharmacopeia	1651009
Gamithromycin	Sigma Aldrich	32161	Thiabendazole	Sigma Aldrich	T8904
Haloperidol	Sigma Aldrich	H1512	Tildipirosin	Toronto Research	T440150
Ipronidazole	Sigma Aldrich	32173	Tilmicosin	Sigma Aldrich	33864
Ipronidazole - OH	Sigma Aldrich	34004	Tolfenamic Acid	Sigma Aldrich	T0535
Ivermectin	US Pharmacopeia	1354309	Triflupromazine	Sigma Aldrich	46976
Ketamine	Sigma Aldrich	K2753	Tulathromycin A	Pfizer	CP-472,295
Ketoprofen	Sigma Aldrich	K1751	Tylosin	Sigma Aldrich	T6134
Lasalocid A	Sigma Aldrich	33339	Tylvalosin	Toronto Research	T898210
Levamisole	Sigma Aldrich	31742	Virginiamycin	Sigma Aldrich	V2753
Lincomycin	Sigma Aldrich	L6004	Xylazine	Sigma Aldrich	X1126
Melengestrol Acetate	US Pharmacopeia	1379254	Zilpaterol	Sigma Aldrich	32379
Meloxicam	Sigma Aldrich	M3935			

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2. Preparation of Standard Solutions

a. Animal drug stock solutions and internal standard stock solutions

Prepare animal drug stock solutions and internal standard stock solutions at approximately 1.0 mg/mL when adequate material is available. Other concentrations are used based on two criteria:

- i. Solubility of the drug in the solvent
- ii. Cost and availability of the drug

For each stock solution, calculate the amount of base material needed (ex. accounting for purity and/or water and counterion content) to prepare at the concentration listed below using the appropriate solvent listed.

Note: When DMSO is referenced in solvent used, dissolve weighed standard with appropriate volume of DMSO and dilute to volume with appropriate solvent.

Table 2 – Stock Standard Concentrations

Standard Analyte	Category	Solvent used	Stock Standard Solution Concentration (ng/μL)
2-amino-Flubendazole	Acetonitrile Mix	12.5% DMSO in Acetonitrile	1000
2-Aminosulfone Albendazole	Acetonitrile Mix	12.5% DMSO in Methanol	1000
2-Quinoxaline Carboxylic Acid (QCA)	Acetonitrile Mix	Purchased	15
Abamectin	Acetonitrile Mix	Acetonitrile	1000
Acepromazine	Acetonitrile Mix	Acetonitrile	1000
Δ Albendazole	Acetonitrile Mix	12.5% DMSO in Acetonitrile	1000
Amoxicillin	Beta Lactam Mix	Water	350
Ampicillin	Beta Lactam Mix	Water	250
Azaperone	Acetonitrile Mix	Methanol	1000
Butorphanol	Acetonitrile Mix	Methanol	1000
Carazolol	Acetonitrile Mix	Acetonitrile	1000
Carbadox	Acetonitrile Mix	100% DMSO	1000
Cefazolin	Beta Lactam Mix	Water	400
Chloramphenicol	Acetonitrile Mix	Acetonitrile	1000
Chlorpromazine	Acetonitrile Mix	Acetonitrile	1000
Chlortetracycline	Acetonitrile Mix	Methanol	500
Cimaterol	Acetonitrile Mix	Acetonitrile	1000
Ciprofloxacin	Acetonitrile Mix	0.03 M NaOH	1000
Δ Clenbuterol	Acetonitrile Mix	Acetonitrile	1000
Δ Clindamycin	Acetonitrile Mix	Acetonitrile	1000
Cloxacillin	Beta Lactam Mix	Water	200
Danofloxacin	Acetonitrile Mix	0.03 M NaOH	1000

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Standard Analyte	Category	Solvent used	Stock Standard Solution Concentration (ng/μL)
Δ DCCD	Beta Lactam Mix	Water	300
Desacetyl Cephaprin	Beta Lactam Mix	Water	250
Desethylene Ciprofloxacin	Acetonitrile Mix	0.03 M NaOH	300
Diclofenac	Acetonitrile Mix	6% DMSO in Acetonitrile	1000
Dicloxacinil	Beta Lactam Mix	Water	200
Difloxacin	Acetonitrile Mix	50%ACN/MeOH	500
Dimetridazole	Acetonitrile Mix	Acetonitrile	1000
Dimetridazole - OH	Acetonitrile Mix	Acetone	1000
Dipyrrone	Acetonitrile Mix	Methanol	1000
Doramectin	Acetonitrile Mix	Acetonitrile	1000
Doxycycline	Acetonitrile Mix	Methanol	1000
Enamectin Benzoate	Acetonitrile Mix	Acetonitrile	1000
Enrofloxacin	Acetonitrile Mix	Acetonitrile	500
Eprinomectin	Acetonitrile Mix	Acetonitrile	1000
Erythromycin A	Acetonitrile Mix	Acetonitrile	1000
Δ Fenbendazole	Acetonitrile Mix	12.5% DMSO in Methanol	1000
Δ Fenbendazole sulphone	Acetonitrile Mix	12.5% DMSO in Acetonitrile	1000
Florfenicol	Acetonitrile Mix	Acetonitrile	1000
Florfenicol Amine	Acetonitrile Mix	Acetonitrile	1000
Δ Flubendazole	Acetonitrile Mix	12.5% DMSO in Acetonitrile	1000
Flunixin	Acetonitrile Mix	Methanol	1000
Flunixin - d ₃	Internal Standard Mix	Methanol	1000
Gamithromycin	Acetonitrile Mix	Acetonitrile	500
Haloperidol	Acetonitrile Mix	Methanol	1000
Iprnidazole	Acetonitrile Mix	Acetonitrile	250
Iprnidazole - OH	Acetonitrile Mix	Acetonitrile	250
Ivermectin	Acetonitrile Mix	Acetonitrile	1000
Ketamine	Acetonitrile Mix	Purchased	1000
Ketoprofen	Acetonitrile Mix	Acetonitrile	1000
Lasalocid A	Acetonitrile Mix	Purchased	100
Levamisole	Acetonitrile Mix	12.5% DMSO in Methanol	1000
Lincomycin	Acetonitrile Mix	50%ACN/MeOH	500
Melengestrol Acetate	Acetonitrile Mix	Acetonitrile	1000
Meloxicam	Acetonitrile Mix	Acetonitrile	1000
Metronidazole	Acetonitrile Mix	Acetonitrile	1000
Metronidazole - OH	Acetonitrile Mix	Acetonitrile	500
Monensin	Acetonitrile Mix	Methanol	1000
Morantel tartrate	Acetonitrile Mix	Water	1000
Moxidectin	Acetonitrile Mix	Acetonitrile	1000
Nafcillin	Beta Lactam Mix	Water	300

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Standard Analyte	Category	Solvent used	Stock Standard Solution Concentration (ng/μL)
Narasin	Acetonitrile Mix	Methanol	1000
Δ Norfloxacin	Acetonitrile Mix	Acetonitrile	1000
Δ Orbifloxacin	Acetonitrile Mix	Methanol	500
Oxacillin	Beta Lactam Mix	Water	200
Oxyphenylbutazone	Acetonitrile Mix	Acetonitrile	1000
Oxytetracycline	Acetonitrile Mix	Methanol	1000
Penicillin G	Beta Lactam Mix	Water	250
Penicillin G - d ₇	Internal Standard Mix	Water	500
Phenylbutazone	Acetonitrile Mix	Acetonitrile	1000
Pirlimycin	Acetonitrile Mix	50%ACN/MeOH	1000
Prednisone	Acetonitrile Mix	Methanol	1000
Promethazine	Acetonitrile Mix	Acetonitrile	1000
Propionylpromazine	Acetonitrile Mix	Acetonitrile	1000
Ractopamine	Acetonitrile Mix	Water	1000
Ronidazole	Acetonitrile Mix	Acetonitrile	1000
Δ Salbutamol	Acetonitrile Mix	Acetonitrile	1000
Salinomycin	Acetonitrile Mix	Acetonitrile	1000
Sarafloxacin	Acetonitrile Mix	Methanol	1000
Selamectin	Acetonitrile Mix	Acetonitrile	1000
Sulfachloropyridazine	Acetonitrile Mix	Acetonitrile	1000
Δ Sulfadiazine	Acetonitrile Mix	Acetonitrile	1000
Sulfadimethoxine	Acetonitrile Mix	Acetonitrile	1000
Sulfadoxine	Acetonitrile Mix	Acetonitrile	1000
Sulfaethoxypyridazine	Acetonitrile Mix	Acetonitrile	1000
Sulfamerazine	Acetonitrile Mix	Acetonitrile	1000
Sulfamethazine	Acetonitrile Mix	Acetonitrile	1000
Sulfamethazine Phenyl - ¹³ C ₆	Internal Standard Mix	Acetonitrile	1000
Sulfamethizole	Acetonitrile Mix	Acetonitrile	1000
Sulfamethoxazole	Acetonitrile Mix	Acetonitrile	1000
Sulfamethoxypyridazine	Acetonitrile Mix	Acetonitrile	1000
Sulfanilamide	Acetonitrile Mix	Acetonitrile	500
Sulfantran	Acetonitrile Mix	Acetonitrile	500
Sulfapyridine	Acetonitrile Mix	Acetonitrile	1000
Δ Sulfaquinoxaline	Acetonitrile Mix	Acetonitrile	500
Sulfathiazole	Acetonitrile Mix	Acetonitrile	1000
Sulfisoxazole	Acetonitrile Mix	Acetonitrile	1000
Taleranol (B-Zearalanol)	Acetonitrile Mix	Methanol	1000
Tetracycline	Acetonitrile Mix	Methanol	500
Thiabendazole	Acetonitrile Mix	Methanol	1000
Tildipirosin	Acetonitrile Mix	Methanol	1000

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Standard Analyte	Category	Solvent used	Stock Standard Solution Concentration (ng/μL)
Tilmicosin	Acetonitrile Mix	Acetonitrile	1000
Tolfenamic Acid	Acetonitrile Mix	Acetonitrile	1000
Triflupromazine	Acetonitrile Mix	3% DMSO in Acetonitrile	1000
Tulathromycin A	Acetonitrile Mix	Acetonitrile	1000
Tylosin	Acetonitrile Mix	Acetonitrile	1000
Tyvalosin	Acetonitrile Mix	Methanol	1000
Virginiamycin	Acetonitrile Mix	Methanol	250
Xylazine	Acetonitrile Mix	Acetonitrile	1000
Zilpaterol	Acetonitrile Mix	Water	1000

Note: Stock standard solutions identified with a delta (Δ) symbol in Table 2 may require gentle heating at time of preparation and before preparation of mixed working standards to aid in dissolution of material.

“Acetonitrile Mix” stock standards will expire in 6 months. “Beta Lactam Mix” stock standards will expire in 2 months. “Internal Standard Mix” stock standards will expire in 2 months for Penicillin G - d₇, or 6 months for Flunixin - d₃ and Sulfamethazine Phenyl - ¹³C₆.

Note: All standards shall be stored at ≤ -10°C.

Note: Internal standards are used to monitor injection sequence performance within a set. For issues observed, such as inconsistent internal standard area counts, samples may be reinjected or reanalyzed as needed.

b. Intermediate standard solutions

Prepare individual intermediate standard solutions as described for the analytes below in 10 mL volumetric flasks. Intermediate stock standards will expire in 6 months when stored at ≤ -10°C.

Table 3 – Intermediate Standard Solutions Preparation

Standard Analyte	Stock Standard Solution Concentration (ng/μL)	Stock Standard Solution Volume (μL)	Solvent Used	Intermediate Standard Solution concentration (ng/μL)
Azaperone	1000	1000	Methanol	100
Butorphanol	1000	1000	Methanol	100
Carazolol	1000	1000	Acetonitrile	100
Chloramphenicol	1000	500	Acetonitrile	50
Chlorpromazine	1000	1000	Acetonitrile	100
Cimaterol	1000	500	Acetonitrile	50
Dimetridazole	1000	1000	Acetonitrile	100
Haloperidol	1000	1000	Methanol	100

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Standard Analyte	Stock Standard Solution Concentration (ng/μL)	Stock Standard Solution Volume (μL)	Solvent Used	Intermediate Standard Solution concentration (ng/μL)
Metronidazole	1000	1000	Acetonitrile	100
Promethazine	1000	1000	Acetonitrile	100
Propionylpromazine	1000	1000	Acetonitrile	100
Ractopamine	1000	500	Water	50
Ronidazole	1000	1000	Acetonitrile	100
Salbutamol	1000	500	Acetonitrile	50
Triflupromazine	1000	1000	Acetonitrile	100
Xylazine	1000	1000	Acetonitrile	100
Zilpaterol	1000	1000	Water	100

c. Antibiotic drug composite working (spiking) and internal standard working (spiking) solutions

- i. Prepare the composite “Acetonitrile Mix” working solution for the veterinary drugs contained in the acetonitrile spiking solution using the stock and intermediate standard solutions above and the volumes listed in the table below.
 - (a) Calculate the volume of stock or intermediate stock solution required to give the working standard concentration listed for each analyte in the table below.
 - (b) Pipet the calculated volume of stock into a 100 mL volumetric flask.
 - (c) Dilute to 100 mL volume with acetonitrile.
 - (d) Cap flask and mix.
 - (e) Transfer into 4 mL amber glass LC vials with screw cap lids.
 - (f) Composite “Acetonitrile Mix” working solutions will expire in 6 months when stored at $\leq -10^{\circ}\text{C}$.

Table 4 – “Acetonitrile Mix” Working Standard Solution Preparation

Standard Analyte	Stock or Intermediate Standard Solution Concentration (ng/μL)	Stock or Intermediate Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/μL)
2-amino-Flubendazole	1000	50	0.5
2-Aminosulfone Albendazole	1000	125	1.25
2-Quinoxaline Carboxylic Acid (QCA)	15	5000	0.75

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Standard Analyte	Stock or Intermediate Standard Solution Concentration (ng/μL)	Stock or Intermediate Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/μL)
Abamectin	1000	125	1.25
Acepromazine	1000	20	0.2
Albendazole	1000	125	1.25
Azaperone	100	50	0.05
Butorphanol	100	50	0.05
Carazolol	100	50	0.05
Carbadox	1000	75	0.75
Chloramphenicol	50	300	0.15
Chlorpromazine	100	50	0.05
Chlortetracycline	500	10000	50
Cimaterol	50	300	0.15
Ciprofloxacin	1000	125	1.25
Clenbuterol	1000	15	0.15
Clindamycin	1000	250	2.5
Danofloxacin	1000	125	1.25
Desethylene Ciprofloxacin	300	417	1.25
Diclofenac	1000	25	0.25
Difloxacin	500	250	1.25
Dimetridazole	100	50	0.05
Dimetridazole - OH	1000	250	2.5
Dipyrene	1000	125	1.25
Doramectin	1000	37.5	0.375
Doxycycline	1000	125	1.25
Emamectin Benzoate	1000	37.5	0.375
Enrofloxacin	500	250	1.25
Eprinomectin	1000	37.5	0.375

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Standard Analyte	Stock or Intermediate Standard Solution Concentration (ng/μL)	Stock or Intermediate Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/μL)
Erythromycin A	1000	250	2.5
Fenbendazole	1000	1000	10
Fenbendazole sulphone	1000	1000	10
Florfenicol	1000	500	5
Florfenicol Amine	1000	750	7.5
Flubendazole	1000	50	0.5
Flunixin	1000	62.5	0.625
Gamithromycin	500	500	2.5
Haloperidol	100	50	0.05
Ipronidazole	250	20	0.05
Ipronidazole - OH	250	20	0.05
Ivermectin	1000	37.5	0.375
Ketamine	1000	100	1
Ketoprofen	1000	25	0.25
Lasalocid A	100	100	0.1
Levamisole	1000	250	2.5
Lincomycin	500	500	2.5
Melengestrol Acetate	1000	100	1
Meloxicam	1000	50	0.5
Metronidazole	100	50	0.05
Metronidazole - OH	500	40	0.2
Monensin	1000	100	1
Morantel tartrate	1000	1750	17.5
Moxidectin	1000	37.5	0.375
Narasin	1000	100	1
Norfloxacin	1000	125	1.25

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Orbifloxacin	500	250	1.25
Oxyphenylbutazone	1000	250	2.5
Oxytetracycline	1000	2500	25
Phenylbutazone	1000	250	2.5
Pirlimycin	1000	1250	12.5
Prednisone	1000	250	2.5
Promethazine	100	50	0.05
Propionylpromazine	100	50	0.05
Ractopamine	50	300	0.15
Ronidazole	100	50	0.05
Salbutamol	50	300	0.15
Salinomycin	1000	100	1
Sarafloxacin	1000	125	1.25
Selamectin	1000	37.5	0.375
Sulfachloropyridazine	1000	250	2.5
Sulfadiazine	1000	250	2.5
Sulfadimethoxine	1000	250	2.5
Sulfadoxine	1000	250	2.5
Sulfaethoxypyridazine	1000	250	2.5
Sulfamerazine	1000	250	2.5
Sulfamethazine	1000	250	2.5
Sulfamethizole	1000	250	2.5
Sulfamethoxazole	1000	250	2.5
Sulfamethoxypyridazine	1000	250	2.5
Sulfanilamide	500	500	2.5
Sulfanitran	500	500	2.5

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Standard Analyte	Stock or Intermediate Standard Solution Concentration (ng/μL)	Stock or Intermediate Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/μL)
Sulfapyridine	1000	250	2.5
Sulfaquinoxaline	500	500	2.5
Sulfathiazole	1000	250	2.5
Sulfisoxazole	1000	100	1
Taleranol (B-Zearalanol)	1000	60	0.6
Tetracycline	500	5000	25
Thiabendazole	1000	250	2.5
Tildipirosin	1000	2500	25
Tilmicosin	1000	300	3
Tolfenamic Acid	1000	125	1.25
Triflupromazine	100	50	0.05
Tulathromycin A	1000	5000	50
Tylosin	1000	500	5
Tylvalosin	1000	125	1.25
Virginiamycin	250	1000	2.5
Xylazine	100	50	0.05
Zilpaterol	100	150	0.15

- ii. Prepare the composite working solution for the veterinary drugs contained in the “Beta-Lactam Mix” spiking solution using the stock standard solutions above and the volumes listed in the table below.
- Calculate the volume of stock solution required to give the working standard concentration listed for each analyte in the table below.
 - Pipet the calculated volume of stock into a 25 mL volumetric flask.
 - Dilute to 25 mL volume with water.
 - Cap flask and mix.
 - Transfer into 4 mL polypropylene vials with screw cap lids .

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- (f) Composite “Beta-Lactam Mix” working solutions will expire in 2 months when stored at $\leq -10^{\circ}\text{C}$.

Table 5 – “Beta-Lactam Mix” Working Standard Solution Preparation

Standard Analyte	Stock Standard Solution Concentration (ng/ μL)	Stock Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/ μL)
Amoxicillin	350	71.4	1
Ampicillin	250	25	0.25
Cefazolin	400	156.3	2.5
Cloxacillin	200	31.3	0.25
DCCD	300	208	2.5
Desacetyl Cephaprin	250	250	2.5
Dicloxacillin	200	312.5	2.5
Nafcillin	300	208.3	2.5
Oxacillin	200	312.5	2.5
Penicillin G	250	125	1.25

- iii. Prepare the composite working solution for the isotopically-labeled veterinary drugs contained in the “Internal Standard Mix” spiking solution using the stock standard solutions above and the volumes listed in the below table.
- Calculate the volume of stock solution required to give the working standard concentration listed for each analyte in the table below.
 - Pipet the calculated volume of stock into a 25 mL volumetric flask.
 - Dilute to 25 mL with acetonitrile.
 - Cap flask and mix.
 - Transfer into 4 mL amber glass LC vials with screw cap lids.
 - Composite “Internal Standard Mix” working solutions will expire in 2 months when stored at $\leq -10^{\circ}\text{C}$.

Table 6 – “Internal Standard Mix” Working Standard Solution Preparation

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Standard Analyte	Stock Standard Solution Concentration (ng/μL)	Stock Standard Solution Volume (μL)	Working Standard Solution Concentration (ng/μL)
Flunixin - d ₃	1000	500	20
Penicillin G - d ₇	500	1000	20
Sulfamethazine Phenyl - ¹³ C ₆	1000	500	20

3. Preparation of External Calibration Curve (Optional)
- Use the following table to prepare external standards.

Table 7 – Preparation of External Standards

Level	Acetonitrile Standard Mix Volume (μL)	Beta Lactam Standard Mix Volume (μL)	Internal Standard Mix Volume (μL)	80:20 Acetonitrile/Water Volume (μL)
0 X	0	0	3	997
1/4 X	2	2	3	993
1/2 X	4	4	3	989
1 X	8	8	3	981
2 X	16	16	3	965
3 X	24	24	3	949

E. SAMPLE RECEIPT AND PREPARATION

Samples are freshly collected and must be kept cold before and during shipping to the laboratory. Once received at the laboratory, samples must be frozen ($\leq -10^{\circ}\text{C}$) prior to grinding if they cannot be prepared on the day of receipt. Once frozen, the sample should be allowed to thaw, while keeping it as cold as possible. Dissect away fat and connective tissue. Grind tissue in blender or vertical cutter-mixer until homogeneous. Store samples frozen ($\leq -10^{\circ}\text{C}$) prior to analysis.

Sample preparation may also be done by dry ice grinding as follows:

- Chop 0.5 - 1 lb of muscle tissue into small pieces and homogenize with an equal amount of dry ice in a large food processor. The resulting sample homogenate will be a frozen powder.
- Transfer a portion of the homogenized sample into a loosely capped sample cup until the dry ice has sublimed. Excess sample from step E.a. may be discarded.
- For any retained sample, tighten the caps and store in a freezer at $\leq -10^{\circ}\text{C}$.

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F. ANALYTICAL PROCEDURE

1. Preparation of Controls and Samples

- a. Weigh 2 ± 0.1 g of homogenized samples into labeled 50 mL polypropylene centrifuge tubes.

Note: Use corresponding blank tissue for controls for each specific species and tissue sample being analyzed.

- i. Weigh eight 2 g portions of blank tissue into 50 mL polypropylene centrifuge tubes. One for the blank (negative control), one each for the 1/2 X, 1 X, and 2 X recoveries (positive control), and one each for the 1/2 X, 1 X, 2 X, and 3 X matrix matched standards. Weigh one additional portion for a check sample, if necessary.
- ii. Prepare blank, recoveries, matrix matched standards, check samples, and samples using the solutions and volumes in the table below:

Table 8 – Preparation of Controls and Samples

Sample Type	Acetonitrile Standard Mix Volume (μL)	Beta Lactam Standard Mix Volume (μL)	Internal Standard Mix Volume (μL)
Samples and Negative Controls			25
1/2 X Recovery	40	40	25
1 X Recovery	80	80	25
2 X Recovery	160	160	25

2. Extraction Procedure

- a. Vortex all uncapped tubes 10 seconds each to mix chemicals with matrix and allow to stand 5 minutes.
- Note: Press down to start swirling action slowly and then increase speed to mix without splashing.*
- b. Add 10 mL of 4/1 (v/v) acetonitrile/water to all tubes using a calibrated solvent dispenser. Cap tubes well.
- c. Vortex the tubes using the pulsating vortex platform shaker at 100% speed and 80% pulsation for 5 minutes.
- d. Centrifuge the tubes at ~4600 RPM (4708 RCF) for 10 minutes.
- e. Refer to Table 9 for appropriate spiking of matrix matched standards.
- Spike directly into the matrix match 50 mL centrifuge tubes and swirl gently. Repeat step d as necessary if the tissue pellet is dispersed.

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Table 9 – Preparation of Matrix Matched Standards

Sample Type	Acetonitrile Standard Mix Volume (µL)	Beta Lactam Standard Mix Volume (µL)	Internal Standard Mix Volume (µL)
1/2 X Matrix Matched Standard	40	40	25
1 X Matrix Matched Standard	80	80	25
2 X Matrix Matched Standard	160	160	25
3 X Matrix Matched Standard	240	240	25

- f. Pipette a minimum of 500 µL of sample extract to labeled amber glass autosampler vials.

3. Instrumental Settings

Note: The instrument parameters may be optimized to ensure system suitability.

- a. Instrument Operating Parameters - UHPLC system
- i. Mobile phase for Residue analysis:
 Mobile Phase A - 0.1% Aqueous Formic Acid
 Mobile Phase B - 0.1% Formic Acid in ACN
 - ii. UHPLC gradient program:
 Flow rate: 0.3 mL/min
 Run time: 12.9 minutes

Table 10 – UHPLC Gradient Program

<i>Time (min)</i>	<i>% Mobile Phase A</i>	<i>% Mobile Phase B</i>	<i>Gradient</i>
0.00	98	2	none
0.10	98	2	linear
8.00	0	100	linear
10.7	0	100	linear
10.8	98	2	linear
12.90	98	2	linear

- b. Autosampler Program:
- i. Run Time: 12.90 minutes

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- ii. Injection Volume: 1 µL
 - iii. Needle Level: 0.20 mm
 - iv. Wash Time : 30 sec
 - v. Sample Temperature: 10 °C
- c. Column Manager:
 - i. Column Valve Position: To match column location.
 - ii. Column Temperature: 40 °C.
- d. Instrument Operating Parameters - Mass Spectrometer:

Mass Spectrometer calibration is to be performed according to the manufacturer's specification using the manufacturer's supplied calibration solution.

 - i. MS Method Parameters
 - (a) Scan Type: Scheduled MRM
 - (b) Polarity: Positive/Negative Switching
 - (c) MRM Detection Window: 30 sec
 - (d) Target Scan Time: 0.5000 sec
 - (e) Resolution Q1: Unit
 - (f) Resolution Q3: Unit
 - (g) Settling Time: 20.0000 msec
 - (h) Collision Energy: Variable – see Table 11 below
 - ii. Electrospray Source Parameters:
 - (a) Curtain Gas: 25
 - (b) Collision Gas: Medium
 - (c) Temperature: 425 °C
 - (d) Source Gas 1: 50
 - (e) Source Gas 2: 50
 - (f) Ion Spray Voltage ESI+: 5000 V
 - (g) Ion Spray Voltage ESI-: -4500 V

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Table 11 – Scan Parameters

Note: Product ions are listed with the expected screening ion as *analyte-1* along with corresponding confirmation ions listed as *analyte-2* and *analyte-3*.

Precursor Ion (m/z)	Fragment Ion (m/z)	Retention Time (min)	Name	Declustering Potential (V)	Entrance Potential (V)	Collision Energy (V)	Cell Exit Potential (V)
248	230.1	1.37	Florfenicol Amine-1	34	8	15	12
248	130.1	1.37	Florfenicol Amine-2	34	8	30	6
248	91	1.37	Florfenicol Amine-3	34	8	62	6
173	93	1.56	Sulfanilamide-1	16	10	29	10
173	92	1.56	Sulfanilamide-2	16	10	22	16
173	65	1.56	Sulfanilamide-3	16	10	40	12
382.3	112	1.82	Desacetyl Cephapirin-1	66	7	31	12
382.3	124	1.82	Desacetyl Cephapirin-2	66	7	61	14
382.3	110.9	1.82	Desacetyl Cephapirin-3	66	7	65	12
188	123.1	1.99	Metronidazole- Hydroxy-1	5	3	18	6
188	126	1.99	Metronidazole- Hydroxy-2	5	3	22	6
188	68	1.99	Metronidazole- Hydroxy-3	5	3	27	8
262.1	185.1	2.07	Zilpaterol-1	47	11	33	10
262.1	202.1	2.07	Zilpaterol-2	47	11	27	10
262.1	157	2.07	Zilpaterol-3	47	11	43	8
240.2	148	2.07	Salbutamol-1	23	10	24	8
240.2	222	2.07	Salbutamol-2	23	10	15	10
240.2	166.1	2.07	Salbutamol-3	23	10	19	6
366.2	349	2.11	Amoxicillin-1	60	3	12	16
366.2	114	2.11	Amoxicillin-2	60	3	25	18
366.2	208	2.11	Amoxicillin-3	60	3	17	12
220.1	143.1	2.12	Cimaterol-1	34	6	30	6
220.1	116	2.12	Cimaterol-2	34	6	44	18
220.1	89	2.12	Cimaterol-3	34	6	58	10
158.1	139.9	2.22	Dimetridazole- 2-hydroxy-1	36	6	16	16
158.1	111.9	2.22	Dimetridazole- 2-hydroxy-2	36	6	26	12
158.1	94	2.22	Dimetridazole- 2-hydroxy-3	36	6	30	6
172.1	128	2.24	Metronidazole-1	37	11	19	14
172.1	82.1	2.24	Metronidazole-2	37	11	31	10
172.1	111	2.24	Metronidazole-3	30	11	29	15
218.1	97	2.28	Dipyrrone-1	32	7	17	16

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218.1	187.1	2.28	Dipyrrone-2	32	7	14	10
218.1	125	2.28	Dipyrrone-3	32	7	15	6
549	183	2.33	DCCD-1	95	7	38	10
549	241	2.33	DCCD-2	95	7	29	12
549	181.9	2.33	DCCD-3	95	7	49	10
368	98.1	2.44	Tildiprosin-1	65	5	24	11
368	464.3	2.44	Tildiprosin-2	65	5	26	28
368	174.1	2.44	Tildiprosin-3	65	5	26	10
201	140.1	2.49	Ronidazole-1	6	2	16	6
201	55.1	2.49	Ronidazole-2	6	2	28	8
201	54.1	2.49	Ronidazole-3	6	2	58	8
142	96	2.51	Dimetridazole-1	38	10	22	16
142	95	2.51	Dimetridazole-2	38	10	30	14
142	81	2.51	Dimetridazole-3	38	10	33	12
407.1	126.1	2.52	Lincomycin-1	66	2	34	14
407.1	359	2.52	Lincomycin-2	66	2	23	10
407.1	389.1	2.52	Lincomycin-3	66	2	16	22
205	178.1	2.56	Levamisole-1	82	10	29	8
205	91	2.56	Levamisole-2	82	10	45	10
205	123	2.56	Levamisole-3	82	10	38	13
240	133.1	2.57	Albendazole- 2-amino- sulfone-1	85	10	39	6
240	198	2.57	Albendazole- 2-amino- sulfone-2	85	10	27	10
240	105	2.57	Albendazole- 2-amino- sulfone-3	85	10	69	12
251	156	2.6	Sulfadiazine-1	25	9	21	8
251	92	2.6	Sulfadiazine-2	25	9	32	14
251	108	2.6	Sulfadiazine-3	25	9	30	18
202.1	175	2.66	Thiabendazole-1	105	7	35	18
202.1	131.1	2.66	Thiabendazole-2	105	7	44	14
202.1	65	2.66	Thiabendazole-3	105	7	63	10
350.1	106	2.68	Ampicillin-1	59	5	22	12
350.1	160	2.68	Ampicillin-2	59	5	17	8
350.1	174	2.68	Ampicillin-3	59	5	19	10
306.1	288	2.72	Desethylene Ciprofloxacin- 1	51	4	25	16
306.1	217	2.72	Desethylene Ciprofloxacin- 2	51	4	47	24

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306.1	268	2.72	Desethylen Ciprofloxacin-3	51	4	35	14
250.1	156	2.78	Sulfapyridine-1	65	8	22	8
250.1	184	2.78	Sulfapyridine-2	65	8	24	10
250.1	92	2.78	Sulfapyridine-3	65	8	33	14
320.1	302	2.83	Norfloxacin-1	91	6	27	16
320.1	276.1	2.83	Norfloxacin-2	91	6	23	14
320.1	233.1	2.83	Norfloxacin-3	91	6	33	12
404	577.2	2.84	Tulathromycin A-1	45	10	20	27
404	158	2.84	Tulathromycin A-2	45	10	30	8
404	72	2.84	Tulathromycin A-3	45	10	64	8
461.1	426.1	2.85	Oxytetracycline-1	56	4	24	20
461.1	443.1	2.85	Oxytetracycline-2	56	4	18	20
461.1	444	2.85	Oxytetracycline-3	56	4	21	22
332.1	314.1	2.89	Ciprofloxacin-1	99	6	27	14
332.1	288.1	2.89	Ciprofloxacin-2	99	6	25	14
332.1	231.1	2.89	Ciprofloxacin-3	99	6	49	12
263.3	229	2.89	Carbadox-1	46	8	23	12
263.3	130	2.89	Carbadox-2	46	8	27	14
263.3	129	2.89	Carbadox-3	46	8	28	14
302.1	164.1	2.93	Ractopamine-1	48	7	23	8
302.1	121.1	2.93	Ractopamine-2	48	7	29	6
302.1	107	2.93	Ractopamine-3	48	7	47	14
265	156	2.93	Sulfamerazine-1	4	8	23	8
265	172	2.93	Sulfamerazine-2	4	8	23	10
265	108	2.93	Sulfamerazine-3	4	8	33	16
358.1	340	2.95	Danofloxacin-1	84	10	31	16
358.1	314	2.95	Danofloxacin-2	84	10	25	16
358.1	283	2.95	Danofloxacin-3	84	10	33	14
238.1	124.9	2.96	Ketamine-1	52	4	35	14
238.1	220	2.96	Ketamine-2	52	4	20	26
238.1	206.9	2.96	Ketamine-3	52	4	19	12
445.1	410	3	Tetracycline-1	52	4	27	20
445.1	427.1	3	Tetracycline-2	52	4	19	23
445.1	154	3	Tetracycline-3	52	4	35	18

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360.1	342.1	3.04	Enrofloxacin-1	84	8	29	16
360.1	316.1	3.04	Enrofloxacin-2	84	8	27	16
360.1	245.1	3.04	Enrofloxacin-3	84	8	37	12
175	131.1	3.05	2QCA-1	63	4	20	6
175	129	3.05	2QCA-2	63	4	21	6
175	102	3.05	2QCA-3	63	4	40	14
328.2	165.1	3.09	Azaperone-1	83	6	28	8
328.2	121.1	3.09	Azaperone-2	83	6	28	6
328.2	123	3.09	Azaperone-3	83	6	44	14
396.2	352.1	3.12	Orbifloxacin-1	102	7	25	18
396.2	295	3.12	Orbifloxacin-2	102	7	33	16
396.2	226	3.12	Orbifloxacin-3	102	7	55	12
455	323	3.13	Cefazolin-1	35	4	15	16
455	156	3.13	Cefazolin-2	35	4	23	8
455	295	3.13	Cefazolin-3	35	4	23	14
270.9	156	3.16	Sulfamethizole-1	29	8	19	8
270.9	92	3.16	Sulfamethizole-2	29	8	37	14
270.9	108	3.16	Sulfamethizole-3	29	8	31	18
285	186.1	3.18	SMZ-d6-1	56	7	23	10
285	124.1	3.18	SMZ-d6-2	56	7	31	8
285	98	3.18	SMZ-d6-3	56	7	23	10
279	186	3.18	Sulfamethazine-1	41	7	23	10
279	124.1	3.18	Sulfamethazine-2	41	7	29	6
279	156	3.18	Sulfamethazine-3	41	7	25	8
221.1	90	3.2	Xylazine-1	90	6	29	8
221.1	164	3.2	Xylazine-2	90	6	35	14
221.1	147.1	3.2	Xylazine-3	90	6	31	12
281	156	3.2	Sulfamethoxypyridazine-1	52	6	22	8
281	108	3.2	Sulfamethoxypyridazine-2	52	6	31	14
281	92	3.2	Sulfamethoxypyridazine-3	52	6	39	14
186.1	106	3.23	Hydroxy-lpronidazole-1	40	3	49	12
186.1	168.1	3.23	Hydroxy-lpronidazole-2	40	3	17	14
186.1	122.1	3.23	Hydroxy-lpronidazole-3	40	3	26	10
277	202.8	3.24	Clenbuterol-1	37	10	23	22
277	132	3.24	Clenbuterol-2	37	10	39	12

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277	258.9	3.24	Clenbuterol-3	37	10	15	18
386.1	368	3.27	Sarafloxacin-1	106	6	31	18
386.1	342	3.27	Sarafloxacin-2	106	6	27	16
386.1	299	3.27	Sarafloxacin-3	106	6	37	16
400.1	382.1	3.3	Difloxacin-1	91	10	31	18
400.1	356	3.3	Difloxacin-2	91	10	27	18
400.1	299	3.3	Difloxacin-3	91	10	39	14
221	123	3.33	Morantel-1	74	6	47	6
221	111	3.33	Morantel-2	74	6	33	18
221	150	3.33	Morantel-3	74	6	39	10
411.1	112	3.38	Pirlimycin-1	96	2	32	6
411.1	363.1	3.38	Pirlimycin-2	96	2	23	18
411.1	56	3.38	Pirlimycin-3	96	2	85	8
479	444	3.48	Chlortetracycline-1	60	5	29	20
479	154	3.48	Chlortetracycline-2	60	5	37	8
479	461.2	3.48	Chlortetracycline-3	60	5	19	20
256	123	3.5	Flubendazole- 2-amino-1	145	9	37	6
256	95	3.5	Flubendazole- 2-amino-2	145	9	45	14
256	75	3.5	Flubendazole- 2-amino-3	145	9	85	10
425.1	126	3.51	Clindamycin-1	90	5	34	12
425.1	377	3.51	Clindamycin-2	90	5	26	20
425.1	389.2	3.51	Clindamycin-3	90	5	22	10
285	156	3.56	Sulfachloropyridazine-1	24	8	21	8
285	92	3.56	Sulfachloropyridazine-2	24	8	37	14
285	108	3.56	Sulfachloropyridazine-3	24	8	31	18
777.4	619.4	3.57	Gamithromycin-1	66	5	45	26
777.4	601.4	3.57	Gamithromycin-2	66	5	49	26
777.4	158.1	3.57	Gamithromycin-3	66	5	51	8
328.2	310.1	3.61	Butorphanol-1	66	5	32	26
328.2	157.1	3.61	Butorphanol-2	66	5	57	26
328.2	171.1	3.61	Butorphanol-3	66	5	55	26
445.1	428.1	3.62	Doxycycline-1	61	3	26	24
445.1	267	3.62	Doxycycline-2	61	3	50	30
445.1	321	3.62	Doxycycline-3	61	3	43	34
299.2	116.1	3.66	Carazolol-1	77	7	26	6

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299.2	222.1	3.66	Carazolol-2	77	7	26	12
299.2	194.1	3.66	Carazolol-3	77	7	39	10
311	156	3.71	Sulfadoxine-1	69	6	25	8
311	108	3.71	Sulfadoxine-2	69	6	33	16
311	92	3.71	Sulfadoxine-3	69	6	39	14
435.4	99	3.72	Tilmicosin-1	66	3	26	34
435.4	696	3.72	Tilmicosin-2	66	3	24	8
435.4	174.1	3.72	Tilmicosin-3	66	3	33	10
254	156	3.72	Sulfamethoxazole-1	19	8	21	8
254	92	3.72	Sulfamethoxazole-2	19	8	35	14
254	108	3.72	Sulfamethoxazole-3	19	8	31	8
256	92	3.72	Sulfathiazole-1	22	8	37	14
256	108	3.72	Sulfathiazole-2	22	8	31	14
256	156	3.72	Sulfathiazole-3	22	8	21	8
295	156	3.74	Sulfaethoxypyridazine-1	47	6	25	8
295	140.1	3.74	Sulfaethoxypyridazine-2	47	6	25	8
295	108	3.74	Sulfaethoxypyridazine-3	47	6	35	16
358	241	3.75	Florfenicol-1	21	6	23	12
358	206.1	3.75	Florfenicol-2	21	6	34	12
358	170.1	3.75	Florfenicol-3	21	6	41	8
268.2	156.1	3.86	Sulfisoxazole-1	58	10	18	10
268.2	113	3.86	Sulfisoxazole-2	58	10	20	8
268.2	92	3.86	Sulfisoxazole-3	58	10	34	16
170	124.1	3.9	Ipronidazole-1	65	5	24	8
170	109.1	3.9	Ipronidazole-2	65	5	32	18
170	96	3.9	Ipronidazole-3	65	5	30	8
320.7	151.9	3.94	*Chloramphenicol-1	-75	-5	-22	-9
320.7	193.9	3.94	*Chloramphenicol-2	-75	-5	-16	-9
320.7	257	3.94	*Chloramphenicol-3	-75	-5	-15	-13
734.3	576.2	4.12	Erythromycin A-1	94	8	28	26
734.3	158.1	4.12	Erythromycin A-2	94	8	38	8
734.3	83	4.12	Erythromycin A-3	94	8	96	12
359.1	147.1	4.18	Prednisone-1	77	3	31	8
359.1	171	4.18	Prednisone-2	77	3	39	8
359.1	115.1	4.18	Prednisone-3	77	3	111	14

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311.1	156	4.18	Sulfadimethoxine-1	69	6	27	8
311.1	108	4.18	Sulfadimethoxine-2	69	6	35	18
311.1	92	4.18	Sulfadimethoxine-3	69	6	43	14
301	156	4.19	Sulfaquinoxaline-1	66	6	23	8
301	108	4.19	Sulfaquinoxaline-2	66	6	33	16
301	92	4.19	Sulfaquinoxaline-3	66	6	41	10
327.1	86	4.22	Acepromazine-1	72	6	25	14
327.1	254	4.22	Acepromazine-2	72	6	33	14
327.1	222.1	4.22	Acepromazine-3	72	6	51	12
916.6	174	4.27	Tylosin-1	98	6	47	10
916.6	772.4	4.27	Tylosin-2	98	6	41	32
916.6	83	4.27	Tylosin-3	98	6	135	14
285	86	4.27	Promethazine-1	50	5	21	10
285	198	4.27	Promethazine-2	50	5	33	10
285	71.1	4.27	Promethazine-3	50	5	61	12
376.1	165.1	4.27	Haloperidol-1	101	10	32	8
376.1	123	4.27	Haloperidol-2	101	10	43	6
376.1	95	4.27	Haloperidol-3	101	10	93	14
332	300	4.31	Fenbendazole sulphone-1	123	7	31	16
332	159	4.31	Fenbendazole sulphone-2	123	7	49	8
332	131	4.31	Fenbendazole sulphone-3	123	7	61	6
266	234	4.33	Albendazole-1	89	9	27	12
266	191	4.33	Albendazole-2	89	9	45	10
266	192	4.33	Albendazole-3	89	9	39	10
342.2	160	4.38	Penicillin G-d7-1	40	6	14	10
342.2	183	4.38	Penicillin G-d7 -2	40	6	17	10
342.2	114	4.38	Penicillin G-d7-3	40	6	46	20
335	160	4.4	Penicillin G -1	40	6	13	10
335	176.1	4.4	Penicillin G-2	40	6	16	10
335	114	4.4	Penicillin G-3	40	6	43	20
314	282	4.55	Flubendazole-1	123	6	31	14
314	123	4.55	Flubendazole-2	123	6	47	6
314	95	4.55	Flubendazole-3	123	6	55	14
341.1	86	4.56	Propionylpromazine-1	55	2	25	12
341.1	268.1	4.56	Propionylpromazine-2	55	2	31	14

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341.1	236.2	4.56	Propionylpromazine-3	55	2	49	12
319	86	4.71	Chlorpromazine-1	72	6	25	14
319	246	4.71	Chlorpromazine-2	72	6	33	14
319	214	4.71	Chlorpromazine-3	72	6	53	12
334	135.9	4.74	*Sulfantran-1	-172	-3	-38	-7
334	270	4.74	*Sulfantran-2	-172	-3	-34	-13
334	133	4.74	*Sulfantran-3	-172	-3	-36	-9
402	243	4.9	Oxacillin-1	34	8	19	12
402	160	4.9	Oxacillin-2	34	8	19	8
402	114	4.9	Oxacillin-3	34	8	49	18
321	277	4.92	*Zearalanol-1	-130	-2	-28	-15
321	303.1	4.92	*Zearalanol-2	-130	-2	-28	-21
321	259	4.92	*Zearalanol-3	-130	-2	-32	-15
353.1	86	4.95	Triflupromazine-1	93	2	25	14
353.1	280	4.95	Triflupromazine-2	93	2	35	14
353.1	248.1	4.95	Triflupromazine-3	93	2	57	12
300	268	4.97	Fenbendazole-1	104	5	29	14
300	159	4.97	Fenbendazole-2	104	5	47	8
300	131.1	4.97	Fenbendazole-3	104	5	59	15
526.2	355.1	4.98	Virginiamycin M1-1	75	4	25	16
526.2	337	4.98	Virginiamycin M1-2	75	4	29	16
526.2	133	4.98	Virginiamycin M1-3	75	4	33	6
436	277	5.13	Cloxacillin-1	27	5	23	14
436	160	5.13	Cloxacillin-2	27	5	16	8
436	114.1	5.13	Cloxacillin-3	27	5	37	6
415.1	199	5.26	Nafcillin-1	41	5	17	11
415.1	171	5.26	Nafcillin-2	41	5	48	19
415.1	115	5.26	Nafcillin-3	41	5	88	12
255	105	5.28	Ketoprofen-1	70	9	28	12
255	77	5.28	Ketoprofen-2	70	9	59	10
255	194	5.28	Ketoprofen-3	70	9	31	16
1042.5	174.1	5.31	Tyvalosin -1	90	7	48	12
1042.5	814.3	5.31	Tyvalosin -2	90	7	45	20
1042.5	109	5.31	Tyvalosin -3	90	7	106	2
325.1	204.1	5.35	Oxyphenylbutazone-1	57	6	21	8

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325.1	120.1	5.35	Oxyphenylbutazone-2	57	6	23	6
325.1	148.1	5.35	Oxyphenylbutazone-3	57	6	35	8
352	115	5.44	Meloxicam-1	66	2	23	8
352	141	5.44	Meloxicam-2	66	2	25	6
352	73	5.44	Meloxicam-3	66	2	71	12
297.1	259.1	5.46	Flunixin-1	70	3.5	39	14
297.1	236.1	5.46	Flunixin-2	70	3.5	59	14
297.1	279	5.46	Flunixin-3	70	3.5	60	14
300	282	5.46	Flunixin-d3-1	90	7	33	14
300	264.1	5.46	Flunixin-d3-2	90	7	47	14
300	112	5.46	Flunixin-d3-3	90	7	33	14
470	160	5.47	Dicloxacillin-1	40	7	19	10
470	311	5.47	Dicloxacillin-2	40	7	19	16
470	114	5.47	Dicloxacillin-3	40	7	65	18
296	215	6.08	Diclofenac-1	30	7	27	12
296	214	6.08	Diclofenac-2	30	7	45	12
296	250	6.08	Diclofenac-3	30	7	19	12
886.5	158.1	6.13	Enamectin Benzoate-1	56	4	40	10
886.5	82.1	6.13	Enamectin Benzoate-2	56	4	124	2
886.5	126.1	6.13	Enamectin Benzoate-3	56	9	84	14
309.1	188.1	6.38	Phenylbutazone-1	20	4	23	10
309.1	120.1	6.38	Phenylbutazone-2	20	4	25	8
309.1	211.1	6.38	Phenylbutazone-3	20	4	21	12
397.2	337.2	6.68	Melengesterol Acetate-1	88	8	19	16
397.2	279.2	6.68	Melengesterol Acetate-2	88	8	27	14
397.2	236.2	6.68	Melengesterol Acetate-3	88	8	39	12
262	244	6.72	Tolfenamic Acid-1	2	5	17	14
262	209.1	6.72	Tolfenamic Acid-2	2	5	38	12
262	180.1	6.72	Tolfenamic Acid-3	2	5	57	10
914.5	186.1	7.6	Eprinomectin-1	80	2	23	8
914.5	112.1	7.6	Eprinomectin-2	80	2	103	16
914.5	330.1	7.6	Eprinomectin-3	80	2	21	16
895.4	751.3	7.99	Abamectin-Na-1	280	7	58	30
895.4	449.2	7.99	Abamectin-Na-2	280	7	64	20
895.4	327.2	7.99	Abamectin-Na-3	280	7	66	16

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Precursor Ion (m/z)	Fragment Ion (m/z)	Retention Time (min)	Name	Declustering Potential (V)	Entrance Potential (V)	Collision Energy (V)	Cell Exit Potential (V)
921.4	777.1	8.33	Doramectin-1	45	2	61	16
921.4	449.2	8.33	Doramectin-2	45	2	67	6
921.4	353.1	8.33	Doramectin-3	45	2	69	6
640.4	528.3	8.53	Moxidectin-1	65	9	13	12
640.4	498.3	8.53	Moxidectin-2	65	9	17	24
640.4	496.2	8.53	Moxidectin-3	65	9	17	12
589.2	235	8.6	*Lasalocid A-1	-160	-9	-44	-13
589.2	173	8.6	*Lasalocid A-2	-160	-9	-56	-9
589.2	191	8.6	*Lasalocid A-3	-160	-9	-49	-11
770.3	626.3	8.72	Selamectin-1	140	5	25	26
770.3	608.4	8.72	Selamectin-2	140	5	29	6
770.3	333.1	8.72	Selamectin-3	140	5	31	16
897.2	753.2	8.75	Ivermectin-1	290	2	59	30
897.2	329.0	8.75	Ivermectin-2	290	2	69	16
897.2	609.1	8.75	Ivermectin-3	290	2	64	20
773.3	430.9	9.02	Salinomycin-1	50	4	71	10
773.3	531.2	9.02	Salinomycin-2	50	4	63	8
773.3	264.9	9.02	Salinomycin-3	50	4	70	6
693.4	461.3	9.07	Monensin-1	40	8	68	10
693.4	479.3	9.07	Monensin-2	40	8	74	13
693.4	501.3	9.07	Monensin-3	40	8	70	17
787.5	431.2	9.33	Narasin-1	30	13	69	7
787.5	531.2	9.33	Narasin-2	30	13	65	13
787.5	512.9	9.33	Narasin-3	30	13	67	12

Note: Analytes denoted with (*) are monitored in negative ESI mode.

4. Sample Set
 - a. External standards (optional)
 - b. Blank (negative control)
 - c. Recoveries (positive controls)
 - d. Matrix matched standards
 - e. Intra-laboratory check sample (if needed)
 - f. Up to 35 samples

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- g. Trailing External standard, matrix matched standard, or recovery

G. DECISION CRITERIA / CALCULATIONS

1. Screening

- a. The screening ion for a given analyte must be present at the minimum level of applicability (Tables 12, 14, and 16 in Appendix J.3). The required ion for each compound is listed in Table 11.
- b. The retention times for the screening ion in the fortified recoveries must match the retention time of the screening ion in the matrix-matched standard within 5%. Retention time for the screening ions in the samples must match the retention time of the screening ions in a fortified recovery or the matrix matched standard within 5%.
- c. The screening ion must have a signal-to-noise ratio ≥ 3 . This may be verified by visual inspection. Visual inspection for detection may also include assessment of peak shape or drift in relation to standard peaks or evaluating the presence or absence of monitored secondary or tertiary ions.
- d. A sample is screened positive for an analyte if the following criteria are met:
 - i. The recovery fortified at the minimum level of applicability of the analyte must exceed 10% of the matrix matched standard at the corresponding level.
 - ii. The sample response equals or exceeds the recovery fortified at the minimum level of applicability.
- e. The level of the screening ion in the blank (negative control) must be less than 10% of the matrix-matched standard at the minimum level of applicability.

Note: If a sample shows a positive response for a compound that did not meet screening criteria in the associated QC samples, then further testing of that sample is warranted.

2. Confirmation

- a. Monitored ions for each analyte will be assessed as follows:
 - i. Recovery retention times must match the retention time of the matrix matched standard within 5%. Retention time for the samples must match the retention time of the positive control or the matrix matched standard within 5%.
 - ii. All product ions specified for ratio matching are present with a signal-to-noise ratio ≥ 3 . This may be verified by visual inspection. Visual inspection for detection may also include assessment of peak shape or drift in relation to standard peaks or evaluating the presence or absence

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of monitored secondary or tertiary ions.

- iii. One of the following ion ratio matching conditions is met:

Note: Ratios are calculated by dividing the area count of each diagnostic ion by the area count of the base ion. Ion ratios should be less than 1. If the ratio is not less than 1 for a sample set, the inverse of this ratio may be used.

- (a) If two product ions are assessed, one sample ion ratio should match the calculated average ratio of the matrix-matched standards within a $\pm 10\%$ absolute difference.
 - (b) If three product ions are monitored, the presence of two sample ion ratios should match the calculated average ratio of the matrix-matched standards within a $\pm 20\%$ absolute difference.
- b. A sample is confirmed positive for an analyte if the following criteria are met:
- i. The recovery fortified at the minimum level of applicability (Tables 13, 15, and 17 in Appendix J.3) of the analyte must exceed 10% of the matrix matched standard at the corresponding level.
 - ii. The sample response equals or exceeds the recovery fortified at the minimum level of applicability.
- c. The level of the screening ion in the blank (negative control) must be less than 10% of the matrix-matched standard at the minimum level of applicability.

H. SAFETY INFORMATION AND PRECAUTIONS

1. Personal Protective Equipment -Safety eyewear, protective gloves, and lab coat.
2. Hazards

Consult all Safety Data Sheets (SDS) associated with the method.

3. Disposal Procedures
Follow federal, state and local regulations.

I. QUALITY ASSURANCE PLAN

1. Performance Standard
 - a. Screening Criteria
 - i. For set acceptance, 90% of the monitored analytes must meet screening criteria in the recovery (positive control) fortified at the minimum level of applicability (Tables 12, 14, and 16 in Appendix J.3). For sample

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reporting purposes, the analytes of interest in the fortified recovery (positive control) must meet screening criteria.

- ii. For set acceptance, 90% of the monitored analytes in the blank (negative control) must not meet screening criteria. The blank (negative control) must be negative using the criteria in Section G for samples containing corresponding presumptive positive analytes.

b. Confirmation Criteria

- i. For set acceptance, nine of the following ten analytes must meet confirmation criteria (Dicloxacillin, Erythromycin A, Fenbendazole sulphone, Florfenicol, Flunixin, Meloxicam, Orbifloxacin, Penicillin G, Ractopamine, and Sulfadimethoxine). For sample reporting purposes, the analytes of interest in the fortified recovery (positive control) must meet confirmation criteria.
- ii. The blank (negative control) must be negative using the criteria in Section G for the analytes of interest.

2. Intralaboratory Check Samples

a. Acceptability criteria.

Refer to I.1.

If unacceptable values are obtained, then:

- i. Investigate following established procedures.
- ii. Take corrective action as warranted.

J. APPENDIX

1. References

[Reserved]

2. Chromatograms/spectra

[Reserved]

3. Minimum Level of Applicability

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Table 12 - Minimum Level of Applicability for Kidney Screening

Analyte	Bovine		Porcine		Poultry		Caprine		Ovine	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
2-amino-Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
2-Aminosulfone Albendazole	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
2-Quinoxaline Carboxylic Acid (QCA)	1/2 X	15	1/2 X	15	1/2 X	15	1/2 X	15	1/2 X	15
Abamectin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Acepromazine	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4
Albendazole	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Amoxicillin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ampicillin	1/2 X	5	1/2 X	5	1 X	10	1 X	10	1/2 X	5
Azaperone	1/2 X	1	1/2 X	1	1 X	2	2 X	4	2 X	4
Butorphanol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Carazolol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Carbadox	1/2 X	15	1/2 X	15	1/2 X	15	1/2 X	15	1/2 X	15
Cefazolin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Chloramphenicol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Chlorpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Chlortetracycline	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Cimaterol	1/2 X	3	1/2 X	3	1 X	6	1/2 X	3	1/2 X	3
Ciprofloxacin	1/2 X	25	1/2 X	25	1 X	50	1/2 X	25	1/2 X	25
Clenbuterol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Clindamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Cloxacillin	1/2 X	5	1/2 X	5	1/2 X	5	1/2 X	5	1/2 X	5
Danofloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
DCCD	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Desacetyl Cephalixin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Desethylene Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Diclofenac	1/2 X	5	1/2 X	5	1/2 X	5	1/2 X	5	1/2 X	5
Dicloxacin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Difloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Dimetridazole	1/2 X	1	1/2 X	1	N/A	N/A	N/A	N/A	N/A	N/A
Dimetridazole - OH	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Dipyrene	1/2 X	25	1/2 X	25	1/2 X	25	2 X	100	1 X	50
Doramectin	1/2 X	7.5	1/2 X	7.5	2 X	30	N/A	N/A	2 X	30

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Doxycycline	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Enamectin Benzoate	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Enrofloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Eprinomectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Erythromycin A	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Fenbendazole	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200
Fenbendazole sulphone	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200
Florfenicol	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Florfenicol Amine	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150
Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Flunixin	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5
Gamithromycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Haloperidol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole - OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ivermectin	1/2 X	7.5	1/2 X	7.5	2 X	30	N/A	N/A	N/A	N/A
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1 X	10	2 X	20	2 X	20
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Metronidazole	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Metronidazole - OH	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4
Monensin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	2 X	100
Orbifloxacin	1 X	50	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxytetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500

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	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1 X	100
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Salbutamol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Selamectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1 X	15
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfanilamide	1/2 X	50	1/2 X	50	1 X	100	1 X	100	2 X	200
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	2 X	200
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearanol)	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Thiabendazole	1/2 X	50	1/2 X	50	1 X	100	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60
Tolfenamic Acid	1/2 X	25	1 X	50	1/2 X	25	1/2 X	25	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1

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	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1 X	2
Zilpaterol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3

Table 13 - Minimum Level of Applicability for Kidney Confirmation

Analyte	Bovine		Porcine		Poultry		Caprine		Ovine	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
2-amino-Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
2-Aminosulfone Albendazole	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
2-Quinoxaline Carboxylic Acid (QCA)	1/2 X	15	1/2 X	15	1 X	30	N/A	N/A	1/2 X	15
Abamectin	1/2 X	25	1/2 X	25	1/2 X	25	1 X	50	1/2 X	25
Acepromazine	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4
Albendazole	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Amoxicillin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ampicillin	1/2 X	5	1/2 X	5	1 X	10	1 X	10	1/2 X	5
Azaperone	N/A	N/A	N/A	N/A	1 X	2	2 X	4	N/A	N/A
Butorphanol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Carazolol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Carbadox	2 X	60	1 X	30	N/A	N/A	1 X	30	1 X	30
Cefazolin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Chloramphenicol	1/2 X	3	1 X	6	1 X	6	1/2 X	3	1 X	6
Chlorpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Chlortetracycline	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Cimaterol	1/2 X	3	1/2 X	3	1 X	6	1 X	6	1 X	6
Ciprofloxacin	1 X	50	1/2 X	25	1 X	50	1/2 X	25	1/2 X	25
Clenbuterol	1/2 X	3	1 X	6	N/A	N/A	1 X	6	1 X	6
Clindamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Cloxacillin	1/2 X	5	1/2 X	5	2 X	20	1/2 X	5	1 X	10
Danofloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25

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	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
DCCD	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Desacetyl Cephalirin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Desethylene Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Diclofenac	1/2 X	5	1/2 X	5	1 X	10	1/2 X	5	1/2 X	5
Dicloxacillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Difloxacin	N/A	N/A	1/2 X	25	N/A	N/A	N/A	N/A	2 X	100
Dimetridazole	2 X	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimetridazole - OH	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Dipyron	1/2 X	25	1/2 X	25	1/2 X	25	2 X	100	1 X	50
Doramectin	1 X	15	2 X	30	N/A	N/A	N/A	N/A	N/A	N/A
Doxycycline	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Emamectin Benzoate	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Enrofloxacin	N/A	N/A	1/2 X	25	1/2 X	25	1 X	50	2 X	100
Eprinomectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Erythromycin A	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Fenbendazole	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200
Fenbendazole sulphone	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200
Florfenicol	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Florfenicol Amine	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150
Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Flunixin	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5
Gamithromycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Haloperidol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole	1 X	2	1 X	2	2 X	4	2 X	4	1/2 X	1
Iprnidazole - OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ivermectin	1/2 X	7.5	1 X	15	N/A	N/A	N/A	N/A	N/A	N/A
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1 X	10	2 X	20	2 X	20
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Metronidazole	1/2 X	1	1/2 X	1	N/A	N/A	1/2 X	1	2 X	4
Metronidazole - OH	1/2 X	4	1/2 X	4	1 X	8	1 X	8	1 X	8

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	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Monensin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	2 X	30	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	2 X	80	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	N/A	N/A
Orbifloxacin	1 X	50	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxytetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1 X	100
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	2 X	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Salbutamol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	N/A	N/A	1/2 X	25	N/A	N/A	N/A	N/A	1/2 X	25
Selamectin	N/A	N/A	N/A	N/A	1 X	15	N/A	N/A	1 X	15
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfanilamide	1/2 X	50	1/2 X	50	2 X	200	N/A	N/A	2 X	200
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1/2 X	50	1/2 X	50	2 X	200	1 X	100	2 X	200
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearalanol)	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Thiabendazole	1/2 X	50	1/2 X	50	1 X	100	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60
Tolfenamic Acid	1/2 X	25	1 X	50	1/2 X	25	1/2 X	25	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zilpaterol	1 X	6	1/2 X	3	1 X	6	1/2 X	3	1 X	6

Table 14 - Minimum Level of Applicability for Muscle Screening

[illegible]

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[illegible]

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine		Siluriformes	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Ivermectin	1/2 X	7.5	1/2 X	7.5	1 X	15	2 X	30	1/2 X	7.5	1 X	15
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1 X	10	2 X	20	1/2 X	5	1/2 X	5
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Metronidazole	1/2 X	1	1/2 X	1	1/2 X	1	1 X	2	1/2 X	1	1/2 X	1
Metronidazole – OH	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4
Monensin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1 X	50	1/2 X	25
Orbifloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxytetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Salbutamol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Selamectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine		Siluriformes	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfanilamide	1/2 X	50	1/2 X	50	1 X	100	1/2 X	50	1 X	100	1 X	100
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1 X	100
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearalanol)	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Thiabendazole	1/2 X	50	1/2 X	50	1 X	100	1/2 X	50	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60
Tolfenamic Acid	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Zilpaterol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3

Table 15 - Minimum Level of Applicability for Muscle Confirmation

Analyte	Bovine		Porcine		Poultry		Caprine		Ovine		Siluriformes	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
2-amino-Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
2-Aminosulfone Albendazole	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
2-Quinoxaline Carboxylic Acid (QCA)	1/2 X	15	1/2 X	15	1/2 X	15	N/A	N/A	1/2 X	15	1/2 X	15

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine		Siluriformes	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Fenbendazole sulphone	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200	1/2 X	200
Florfenicol	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Florfenicol Amine	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150	1/2 X	150
Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Flunixin	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5
Gamithromycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Haloperidol	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole	1 X	2	1 X	2	N/A	N/A	N/A	N/A	2 X	4	1/2 X	1
Iprnidazole – OH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2 X	4
Ivermectin	1 X	15	1 X	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1 X	10	2 X	20	1/2 X	5	1 X	10
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10	1/2 X	10
Metronidazole	1 X	2	1/2 X	1	1 X	2	1 X	2	1/2 X	1	1 X	2
Metronidazole – OH	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4	1/2 X	4
Monensin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	N/A	N/A	1/2 X	25	N/A	N/A	N/A	N/A
Orbifloxacin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Oxytetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1

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Analyte	Bovine		Porcine		Poultry		Caprine		Ovine		Siluriformes	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	1/2 X	1	1 X	2	2 X	4	1 X	2	2 X	4	1 X	2
Salbutamol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	N/A	N/A	1/2 X	25	N/A	N/A	1/2 X	25	1/2 X	25	N/A	N/A
Selamectin	N/A	N/A	N/A	N/A	2 X	30	2 X	30	1 X	15	1/2 X	7.5
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfanilamide	1/2 X	50	1/2 X	50	1 X	100	N/A	N/A	1 X	100	1 X	100
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1/2 X	50	1 X	100	2 X	200	1 X	100	2 X	200	1 X	100
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearalanol)	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Thiabendazole	1/2 X	50	1/2 X	50	1 X	100	1/2 X	50	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60	1/2 X	60
Tolfenamic Acid	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1	1/2 X	1
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zilpaterol	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1/2 X	3	1 X	6

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Table 16 - Minimum Level of Applicability for Liquid Egg Product Screening

Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
2-amino-Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10
2-Aminosulfone Albendazole	1/2 X	25	1/2 X	25	1/2 X	25
2-Quinoxaline Carboxylic Acid (QCA)	1/2 X	15	1 X	30	1/2 X	15
Abamectin	1/2 X	25	N/A	N/A	1/2 X	25
Acepromazine	1/2 X	4	1/2 X	4	1/2 X	4
Albendazole	1/2 X	25	1/2 X	25	1/2 X	25
Amoxicillin	1/2 X	20	1 X	40	1/2 X	20
Ampicillin	1/2 X	5	1/2 X	5	1/2 X	5
Azaperone	1/2 X	1	1/2 X	1	2 X	4
Butorphanol	1/2 X	1	1/2 X	1	1/2 X	1
Carazolol	1/2 X	1	1/2 X	1	1/2 X	1
Carbadox	1/2 X	15	1/2 X	15	1/2 X	15
Cefazolin	1/2 X	50	1/2 X	50	1/2 X	50
Chloramphenicol	1/2 X	3	1/2 X	3	1/2 X	3
Chlorpromazine	1/2 X	1	1/2 X	1	1/2 X	1
Chlortetracycline	N/A	N/A	1/2 X	1000	N/A	N/A
Cimaterol	1/2 X	3	1/2 X	3	1/2 X	3
Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Clenbuterol	1/2 X	3	1/2 X	3	1/2 X	3
Clindamycin	1/2 X	50	1/2 X	50	1/2 X	50
Cloxacillin	1/2 X	5	1/2 X	5	1/2 X	5
Danofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
DCCD	1/2 X	50	N/A	N/A	2 X	200
Desacetyl Cephapirin	1/2 X	50	1/2 X	50	1/2 X	50
Desethylene Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Diclofenac	1/2 X	5	1/2 X	5	1/2 X	5
Dicloxacillin	1/2 X	50	1/2 X	50	1/2 X	50
Difloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Dimetridazole	N/A	N/A	N/A	N/A	N/A	N/A
Dimetridazole - OH	1/2 X	50	1/2 X	50	1/2 X	50
Dipyrone	1/2 X	25	1/2 X	25	1/2 X	25
Doramectin	1/2 X	7.5	N/A	N/A	N/A	N/A

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Doxycycline	1/2 X	25	1/2 X	25	1/2 X	25
Enamectin Benzoate	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Enrofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Eprinomectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Erythromycin A	1/2 X	50	1/2 X	50	1/2 X	50
Fenbendazole	1/2 X	200	1/2 X	200	1/2 X	200
Fenbendazole sulphone	1/2 X	200	1/2 X	200	1/2 X	200
Florfenicol	1/2 X	100	1/2 X	100	1/2 X	100
Florfenicol Amine	1/2 X	150	N/A	N/A	2 X	600
Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10
Flunixin	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5
Gamithromycin	1/2 X	50	1/2 X	50	1/2 X	50
Haloperidol	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole	1/2 X	1	1/2 X	1	1/2 X	1
Iprnidazole - OH	2 X	4	N/A	N/A	N/A	N/A
Ivermectin	1/2 X	7.5	N/A	N/A	N/A	N/A
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1/2 X	5
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	2 X	80	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10
Metronidazole	1/2 X	1	1/2 X	1	1/2 X	1
Metronidazole - OH	1/2 X	4	1/2 X	4	1 X	8
Monensin	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Orbifloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Oxytetracycline	1/2 X	500	1/2 X	500	N/A	N/A
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	1/2 X	1	1/2 X	1	1 X	2
Salbutamol	1/2 X	3	1/2 X	3	1/2 X	3
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Selamectin	1/2 X	7.5	N/A	N/A	2 X	30
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfanilamide	1/2 X	50	1 X	100	1/2 X	50
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1/2 X	50	1/2 X	50	1 X	100
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearalanol)	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	N/A	N/A	1/2 X	500	N/A	N/A
Thiabendazole	1/2 X	50	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Tolfenamic Acid	1/2 X	25	N/A	N/A	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	1/2 X	1	1/2 X	1	1/2 X	1
Zilpaterol	1/2 X	3	1/2 X	3	1/2 X	3

Table 17 - Minimum Level of Applicability for Liquid Egg Product Confirmation

Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
2-amino-Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10
2-Aminosulfone Albendazole	1/2 X	25	1/2 X	25	1/2 X	25
2-Quinoxaline Carboxylic Acid (QCA)	N/A	N/A	1 X	30	1/2 X	15
Abamectin	1/2 X	25	N/A	N/A	1/2 X	25
Acepromazine	1/2 X	4	1/2 X	4	1/2 X	4
Albendazole	1/2 X	25	1/2 X	25	1/2 X	25
Amoxicillin	1/2 X	20	1 X	40	1/2 X	20
Ampicillin	1/2 X	5	N/A	N/A	1/2 X	5
Azaperone	1/2 X	1	1/2 X	1	2 X	4
Butorphanol	1/2 X	1	1/2 X	1	1/2 X	1
Carazolol	1/2 X	1	1/2 X	1	1/2 X	1
Carbadox	1 X	30	1 X	30	1/2 X	15
Cefazolin	1/2 X	50	1/2 X	50	1/2 X	50
Chloramphenicol	1 X	6	1 X	6	1 X	6
Chlorpromazine	1/2 X	1	1/2 X	1	1/2 X	1
Chlortetracycline	N/A	N/A	1/2 X	1000	N/A	N/A
Cimaterol	1/2 X	3	1/2 X	3	1/2 X	3
Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Clenbuterol	N/A	N/A	1/2 X	3	1/2 X	3
Clindamycin	1/2 X	50	1/2 X	50	1/2 X	50
Cloxacillin	1/2 X	5	1/2 X	5	1/2 X	5

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Danofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
DCCD	1 X	100	N/A	N/A	2 X	200
Desacetyl Cephapirin	1/2 X	50	1/2 X	50	1/2 X	50
Desethylen Ciprofloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Diclofenac	1/2 X	5	1/2 X	5	1/2 X	5
Dicloxacillin	1/2 X	50	1/2 X	50	1/2 X	50
Difloxacin	1 X	50	2 X	100	N/A	N/A
Dimetridazole	N/A	N/A	N/A	N/A	N/A	N/A
Dimetridazole - OH	1/2 X	50	1/2 X	50	1/2 X	50
Dipyrene	1/2 X	25	1/2 X	25	1/2 X	25
Doramectin	2 X	30	N/A	N/A	N/A	N/A
Doxycycline	1/2 X	25	1/2 X	25	1 X	50
Enamectin Benzoate	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Enrofloxacin	1/2 X	25	1/2 X	25	N/A	N/A
Eprinomectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Erythromycin A	1/2 X	50	1/2 X	50	1/2 X	50
Fenbendazole	1/2 X	200	1/2 X	200	1/2 X	200
Fenbendazole sulphone	1/2 X	200	1/2 X	200	1/2 X	200
Florfenicol	1/2 X	100	1/2 X	100	1/2 X	100
Florfenicol Amine	1/2 X	150	N/A	N/A	2 X	600
Flubendazole	1/2 X	10	1/2 X	10	1/2 X	10
Flunixin	1/2 X	12.5	1/2 X	12.5	1/2 X	12.5
Gamithromycin	1/2 X	50	1/2 X	50	1/2 X	50
Haloperidol	1/2 X	1	1/2 X	1	1/2 X	1
Ipronidazole	1 X	2	1 X	2	1 X	2
Ipronidazole - OH	2 X	4	N/A	N/A	N/A	N/A
Ivermectin	2 X	30	N/A	N/A	N/A	N/A
Ketamine	1/2 X	20	1/2 X	20	1/2 X	20
Ketoprofen	1/2 X	5	1/2 X	5	1/2 X	5
Lasalocid A	1/2 X	2	1/2 X	2	1/2 X	2
Levamisole	1/2 X	50	1/2 X	50	1/2 X	50
Lincomycin	1/2 X	50	1/2 X	50	1/2 X	50
Melengestrol Acetate	1/2 X	20	2 X	80	1/2 X	20
Meloxicam	1/2 X	10	1/2 X	10	1/2 X	10

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Metronidazole	2 X	4	1/2 X	1	1/2 X	1
Metronidazole - OH	1/2 X	4	1/2 X	4	N/A	N/A
Monensin	1/2 X	20	1/2 X	20	1/2 X	20
Morantel tartrate	1/2 X	350	1/2 X	350	1/2 X	350
Moxidectin	1/2 X	7.5	1/2 X	7.5	1/2 X	7.5
Nafcillin	1/2 X	50	1/2 X	50	1/2 X	50
Narasin	1/2 X	20	1/2 X	20	1/2 X	20
Norfloxacin	1/2 X	25	1/2 X	25	1 X	50
Orbifloxacin	1/2 X	25	1/2 X	25	1/2 X	25
Oxacillin	1/2 X	50	1/2 X	50	1/2 X	50
Oxyphenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50
Oxytetracycline	1/2 X	500	1/2 X	500	N/A	N/A
Penicillin G	1/2 X	25	1/2 X	25	1/2 X	25
Phenylbutazone	1/2 X	50	1/2 X	50	1/2 X	50
Pirlimycin	1/2 X	250	1/2 X	250	1/2 X	250
Prednisone	1/2 X	50	1/2 X	50	1/2 X	50
Promethazine	1/2 X	1	1/2 X	1	1/2 X	1
Propionylpromazine	1/2 X	1	1/2 X	1	1/2 X	1
Ractopamine	1/2 X	3	1/2 X	3	1/2 X	3
Ronidazole	2 X	4	1 X	2	N/A	N/A
Salbutamol	1/2 X	3	1/2 X	3	2 X	12
Salinomycin	1/2 X	20	1/2 X	20	1/2 X	20
Sarafloxacin	N/A	N/A	2 X	100	N/A	N/A
Selamectin	N/A	N/A	N/A	N/A	2 X	30
Sulfachloropyridazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadiazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadimethoxine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfadoxine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamerazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethazine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethizole	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxazole	1/2 X	50	1/2 X	50	1/2 X	50
Sulfamethoxypyridazine	1/2 X	50	1/2 X	50	1/2 X	50

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Analyte	Egg White		Egg Yolk		Whole Egg	
	Level	Conc. (ng/g)	Level	Conc. (ng/g)	Level	Conc. (ng/g)
Sulfanilamide	N/A	N/A	2 X	200	1 X	100
Sulfanitran	1/2 X	50	1/2 X	50	1/2 X	50
Sulfapyridine	1/2 X	50	1/2 X	50	1/2 X	50
Sulfaquinoxaline	1/2 X	50	1/2 X	50	1/2 X	50
Sulfathiazole	1 X	100	1 X	100	1 X	100
Sulfisoxazole	1/2 X	20	1/2 X	20	1/2 X	20
Taleranol (B-Zearalanol)	1/2 X	12	1/2 X	12	1/2 X	12
Tetracycline	N/A	N/A	1/2 X	500	N/A	N/A
Thiabendazole	1/2 X	50	1/2 X	50	1/2 X	50
Tildipirosin	1/2 X	500	1/2 X	500	1/2 X	500
Tilmicosin	1/2 X	60	1/2 X	60	1/2 X	60
Tolfenamic Acid	1/2 X	25	N/A	N/A	1/2 X	25
Triflupromazine	1/2 X	1	1/2 X	1	1/2 X	1
Tulathromycin A	1/2 X	1000	1/2 X	1000	1/2 X	1000
Tylosin	1/2 X	100	1/2 X	100	1/2 X	100
Tylvalosin	1/2 X	25	1/2 X	25	1/2 X	25
Virginiamycin	1/2 X	50	1/2 X	50	1/2 X	50
Xylazine	1/2 X	1	N/A	N/A	1 X	2
Zilpaterol	1/2 X	3	1/2 X	3	1/2 X	3

K. APPROVALS AND AUTHORITIES

1. Approvals on file.
2. Issuing Authority: Director, Laboratory Quality Assurance Staff.