



**FLUKICIDES / ANTHELMINTICS BY QuEChERS**  
**ENVIRO-CLEAN<sup>®</sup>** Part Number: ECMSSC50CT-MP  
ECMSC1850CT

November 5, 2009

**Analysis of Anthelmintics in Animal Tissue  
Using QuEChERS and LC/MS/MS**

**1) Extraction**

- a) To 10 g of homogenized/hydrated sample in a 50 mL centrifuge tube add 10 mL acetonitrile
- b) Add internal standard (Cyprodinil + 2,4D)
- c) Shake for 1 minute
- d) Add contents of ECMSSC50CT-MP pouch (4 g of anhydrous magnesium sulfate and 1 g sodium chloride) to the centrifuge tube
- e) Immediately shake for 1 minute
- f) Centrifuge for 5 minutes at 3450 rcf

**2) Sample Clean-Up**

- a) Add an aliquot of supernatant from (step 1 f) to product ECMSC1850CT (50 mL centrifuge tube containing 1500 mg anhydrous magnesium sulfate and 500 mg C18)
- b) Shake for 1 minute
- c) Centrifuge for 1 minute at 3450 rcf

**3) Analysis**

- a) Place 0.5 mL into auto sampler vial
- b) Add QC spike (TPP)
- c) Inject onto LC-MS/MS
- d) Use mode ESI + or ESI- depending upon specific analyte of interest

### 39 Flukicides/Anthelmintics

ESI+		ESI-
IS Triphenylphosphate	QC Spike Cyprodinil	IS 2,4D
Abamectin	Albendazole	Bithionol
Doramectin	Albendazole sulfoxide	Clorsulon
Emamectin	Albendazole sulfone	Closantel
Eprinomectin	Albendazole amino sulfone	Niclosamide
Moxidectin	Cambendazole	Nitroxynil
Lyermeectin	Flubendazole	Oxyclozanide
Selemectin	Flubendazole, amino	Rafoxanide
Diclorvos	Flubendazole, hydroxy	Triclabendazole
Coumaphos	Fenbendazole	
Coumaphos-Oxon	Fenbendazole sulfone	
Haloxon	Oxfendazole	
Morantel	Mebendazole	
Levemisole	Mebendazole, amino	
	Mebendazole, hydroxy	
	Oxibendazole	
	Thiabendazole	
	Thiabendazole, 5-hydroxy	
	Triclabendazole	
	Triacleabendazole suldxide	

Adapted from Kinsella, Lehotay et al, "New method for the Analysis of Anthelmintics in Animal Tissue"

DCN-905011-178