

# QuEChERS Extraction Kit Test Report

## 1. Purpose

This test is based on the QuEChERS pretreatment method as described in the Multi-residue Analysis Method (V) of the Residue Pesticide Test Method for Foods and Drugs. Announced by the Food and Drug Administration of the Ministry of Health and Welfare of the Republic of China (Taiwan), LC/MS/MS and GC/MS/MS analysis was used to compare the recovery rates of extraction and cleanup powders of Finetech's QuEChERS versus leading brands.

## 2. Test Range

Multi-residue analysis was conducted on 373 pesticides (including abamectin) for fruits, vegetables, cereal grains, and teas.

## 3. Experiment Overview

The experiment was divided into two groups: experimental group (FT) and a control group (CG). Reagents from brands "S" and "J" were used to prepare the extraction and cleanup powders for the control. Three types of matrices, fruits and vegetables, cereal grains, and teas were prepared according to the QuEChERS method. The experiment was performed in triplicates. The concentration was diluted to 0.02µg/mL, and the recovery rate and sample deviation was calculated. The reagents in each group are shown in the Table 3.1 below:

Experimental Group: FT	Control Group: CG
Anhydrous magnesium sulfate	
Anhydrous sodium acetate	
PSA	
GCB	
C18	

Table 3.1: Test components in each group.

## 4. Lab Instruments and Equipments

### a) Instruments

1. Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS):  
LC Brand - Agilent, Model - 1290 Series.

Tandem MS Brand - Agilent, Model - 6470 TripleQuad LC/MS.

2. Gas Chromatography Tandem Mass Spectrometry (GC-MS/MS):

GC Brand - Agilent, Model - 7890A.

Tandem MS Brand- Agilent, Model - 7000C Triple Quad.

b) Equipments

1. Centrifuge Tubes: 15ml & 50ml, PP material.

2. Syringe Filter: 0.22 $\mu$ m PTFE (polytetrafluoroethylene) membrane.

3. Syringe: 5mL plastic syringe.

4. Micropipettes: 100 $\mu$ L, 200 $\mu$ L, & 1000 $\mu$ L (Class A).

5. Volumetric Flask: 1mL, 10mL (Class A).

6. Ceramic Homogenizers: Bond Elut QuEChERS P/N 5982-9313 or equivalent.

(Note: ceramic homogenizers can be used for assessing the viscosity of sample)

## 5. Preparation of Extraction and Cleanup Powder

a) Powders

1. Extraction Powder:

Contains 4g of anhydrous magnesium sulfate and 1g of anhydrous sodium acetate.

2. Cleanup Centrifuge Tube I:

Contains 300mg of PSA and 900mg of anhydrous magnesium sulfate. Load aliquot of 6mL. Suitable for fruits and vegetable samples with high moisture content.

3. Cleanup Centrifuge Tube II:

Contains 300mg of PSA, 300mg of C18EC, and 900mg of anhydrous magnesium sulfate. Load aliquot of 6mL. Suitable for cereal samples with high moisture content.

4. Cleanup Centrifuge Tube III:

Contains 450mg of PSA, 300mg of C18EC, 900mg of anhydrous magnesium sulfate, and 50mg of GCB. Load aliquot of 6mL. Suitable for samples with high pigment content and teas.

## 6. Procedure

1. After samples was homogenized, 10g of fruits and vegetables; 5g of cereal; 2g of tea, were placed in 50mL centrifuge tubes. Then 10mL of cold deionized water was added to the sample and allowed to stand for 20 minutes.

2. To each sample, 200 $\mu$ l of 373 pesticides standard was added. The sample was mixed and allowed to stand for 10 minutes.

3. Then, 100 $\mu$ l of a 5 $\mu$ g/mL internal standard was added.

4. A 10mL acetonitrile solution with 1% acetic acid was added.
5. Extraction powder and ceramic homogenizers were added. The samples were vigorously shaken for one minute.
6. At 15°C, the samples were centrifuge at 8000 rpm for one minute.
7. After, 6mL of the extracted supernatant was transferred to Cleanup Centrifuge Tube I and was shaken vigorously for one minute.
8. At 15°C, the samples were centrifuge at 8000 rpm for one minute. The upper layer was used for analysis of the sample (I).
9. GC-MS/MS: 1mL of the sample (I) was taken and dried completely with nitrogen. The sample was reconstituted with 1mL of acetone/hexane (1:1; V/V) solution. After thorough mixing, the sample was filtered into a 2mL amber vial with a 0.22µm syringe filter and then analyzed by GC-MS/MS.
10. LC-MS/MS: 1mL of the sample (I) was taken and dried completely with nitrogen. The sample was reconstituted with 1mL of methanol. After thorough mixing, the sample was filtered into a 2mL amber vial with a 0.22µm syringe filter and then analyzed by LC-MS/MS.

## 7. Calibration Standard Solution

### a) Matrix Matched Calibration Curve

#### 1. GC/MS/MS

A standard solution of 1µg/mL was used to prepare standard solution concentrations of 0.004, 0.01, 0.02, 0.05, 0.1, and 0.2µg/mL by diluting with a acetone/hexane (1:1; V/V) solution. Then, for each prepared concentration, 100µL of the blank matrix extract was concentrated to a slightly dry state with nitrogen gas. Afterwards, 100µL of each prepared standard solution was added to each of the dried blank matrix extract and mixed thoroughly.

#### 2. LC/MS/MS

A standard solution of 1µg/mL was used to prepare standard solution concentrations of 0.0004, 0.002, 0.005, 0.01, 0.02, 0.03, 0.05, and 0.1µg/mL with methanol. Then, for each prepared concentration, 100µL of the blank matrix extract was concentrated to a slightly dry state with nitrogen gas. Afterwards, 100µL of each prepared standard solution was added to each blank matrix extract and mixed thoroughly. (Note: Fipronil is 0.0004~0.05µg/mL)

## 8. Conclusion

In this analysis, the concentration of added solution was 0.02µg/mL and the triplicate analysis was performed separately. The recovery rates and repeatability of 20 monitoring compounds were evaluated. The recovery rates and RSD of the experimental group and the control group are shown in Table 8.1. The comparison of recovery rates between the two groups fro fruits & vegetables, cereals, and teas are shown in Figure 8.1, Figure 8.2, and Figure 8.3.



No.	Compound	Fruits and Vegetables				Cereal				Tea			
		FT Average(%)	FT SD(%)	CG Average(%)	CG SD(%)	FT Average(%)	FT SD(%)	CG Average(%)	CG SD(%)	FT Average(%)	FT SD(%)	CG Average(%)	CG SD(%)
GC-1	Bromopropylate	88.3	5.8	88.3	5.8	94.7	1.6	96.1	5.7	78.0	1.0	73.3	1.5
GC-2	Chlorfenapyr	83.3	2.9	90.0	8.7	90.8	3.8	107.5	5.0	107.0	7.5	81.0	5.0
GC-3	Dimethipin	92.1	2.6	75.0	0.0	97.5	11.5	107.5	9.0	95.4	3.5	73.0	1.2
GC-4	Ethion	73.3	2.9	85.0	0.0	95.8	1.4	105.0	4.3	79.7	4.7	88.3	0.6
GC-5	Fluensulfone	83.3	2.9	86.7	2.9	79.2	1.4	99.2	3.8	111.3	3.5	79.2	4.9
GC-6	Fenpropathrin	81.7	2.9	86.7	7.6	72.5	2.5	105.0	4.3	87.3	4.5	78.7	3.2
GC-7	Procymidone	75.0	0.0	81.7	2.9	81.7	3.8	100.0	6.6	99.4	7.0	72.2	1.8
GC-8	Kresoxim-methyl	78.3	2.9	81.7	2.9	95.8	1.4	96.7	5.2	75.4	2.3	71.8	1.0
GC-9	Pyrimidifen	86.3	9.9	85.0	5.0	91.0	1.5	90.6	4.0	75.6	0.2	79.3	1.5
GC-10	Pyriproxyfen	86.7	2.9	85.0	5.0	82.5	2.5	80.3	2.7	84.4	1.9	77.7	0.6
LC-1	Acetamiprid	83.9	6.1	89.3	3.6	79.8	2.3	84.7	3.8	76.6	2.9	83.4	11.5
LC-2	Ametoctradin	84.7	3.9	87.0	4.3	80.5	2.9	81.7	3.0	95.4	0.9	87.5	8.5
LC-3	Buprofezin	89.1	6.9	95.8	2.2	77.6	2.0	92.1	4.3	101.3	3.7	89.1	7.6
LC-4	Carbaryl	83.8	7.0	83.6	3.5	86.1	4.6	85.0	2.6	103.3	6.4	83.9	5.2
LC-5	Fluopyram	78.8	3.3	85.2	7.1	80.5	1.5	86.4	6.1	107.4	2.5	87.5	6.1
LC-6	Chlorantraniliprole	81.2	8.8	89.0	2.4	78.5	5.0	87.5	5.8	93.0	8.7	86.0	6.6
LC-7	Pyraclostrobin	83.2	4.2	88.0	3.5	79.7	4.1	78.1	2.3	97.1	8.5	90.1	9.1
LC-8	Metalaxyl	84.0	6.5	87.6	4.9	85.5	2.0	85.7	1.6	106.2	5.4	90.3	9.3
LC-9	Trifloxystrobin	84.4	3.2	91.9	3.5	80.3	4.3	81.9	6.3	110.7	4.0	86.9	7.3
LC-10	Tricyclazole	81.7	4.1	83.3	4.8	92.8	1.1	81.0	4.9	76.4	1.0	82.2	11.6

Table 8.1: 20 pesticide standards recovery rate and RSD of experimental (FT) and control group (CG)

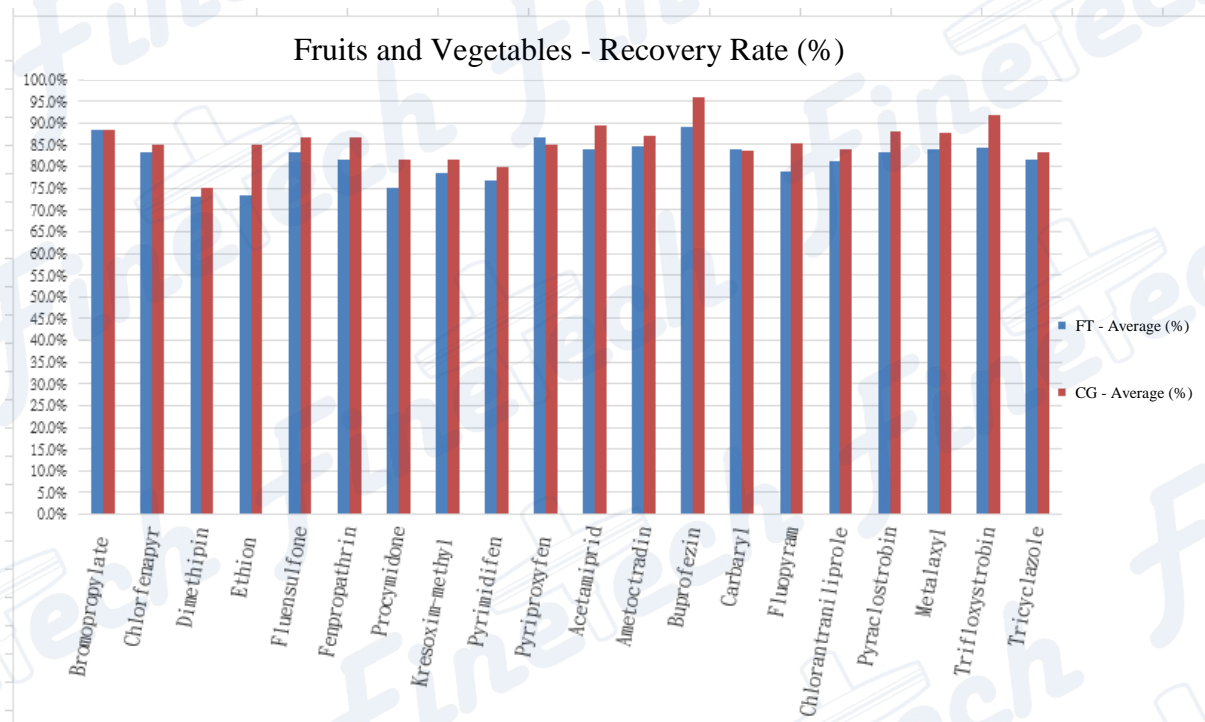


Figure 8.1: Recovery rate of compounds in fruits and vegetables; experimental versus control group

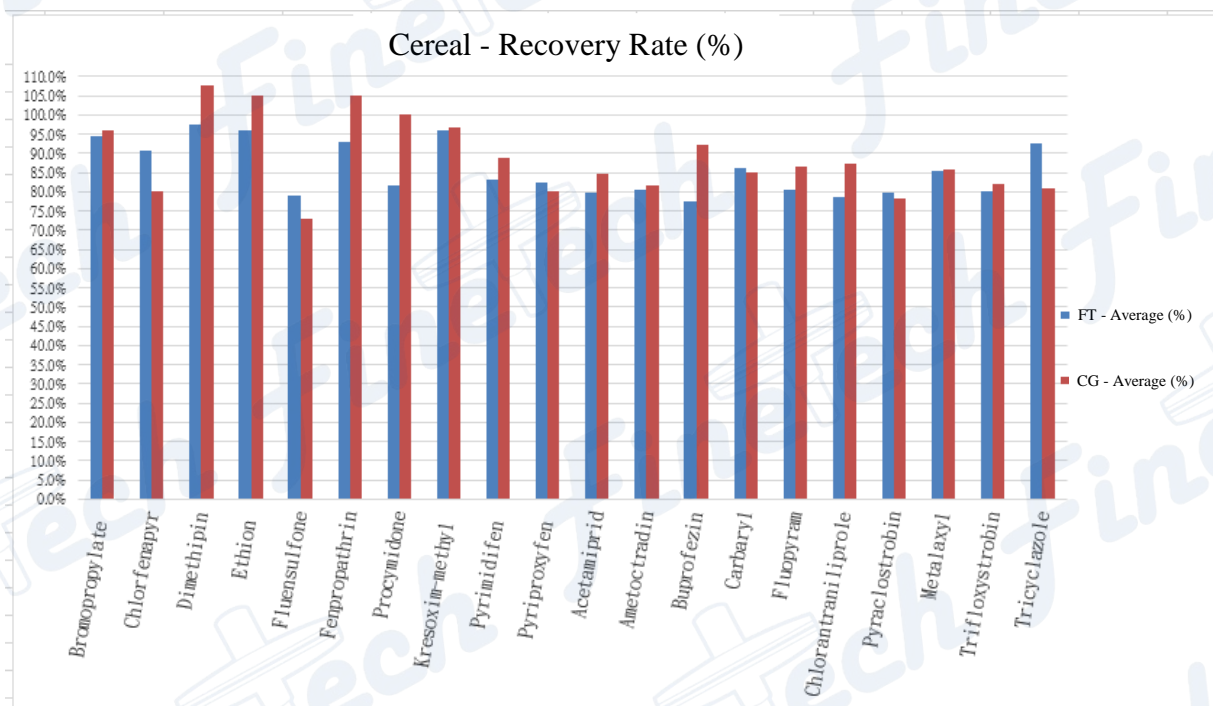


Figure 8.2: Recovery rate of compounds in cereal; experimental versus control group

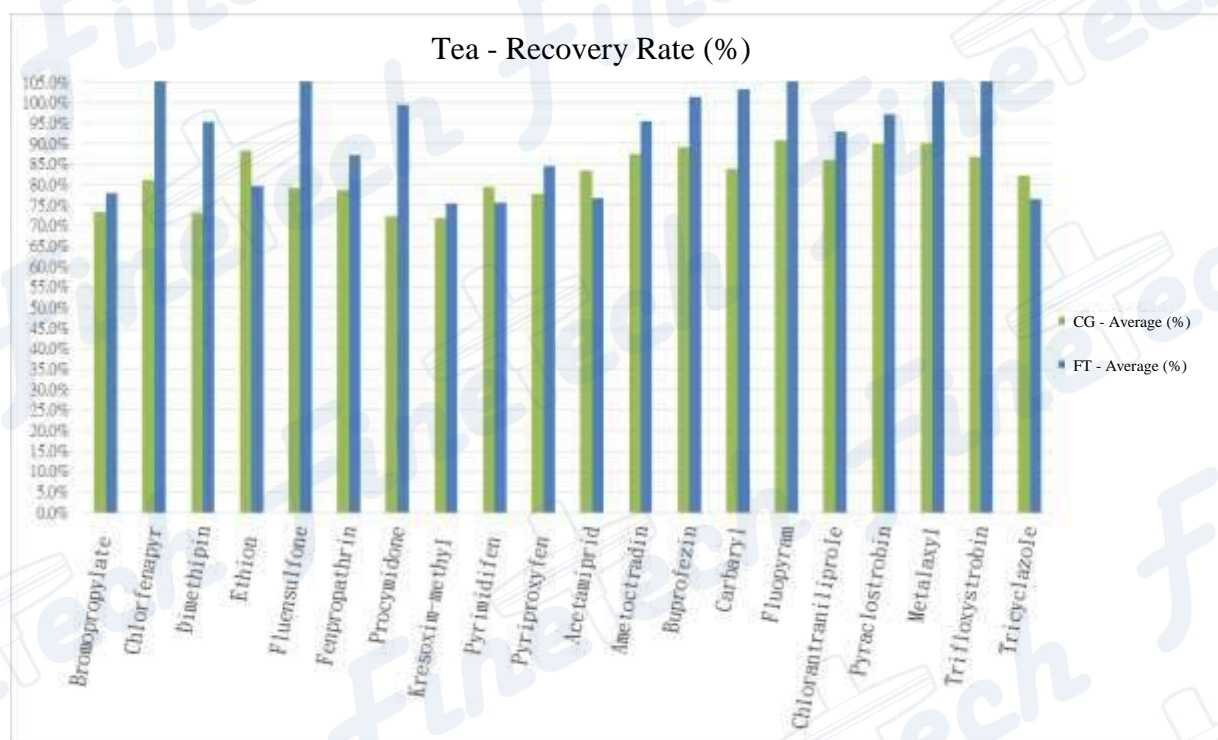


Figure 8.3: Recovery rate of compounds in tea; experimental versus control group

1) Experimental Group FT

The recovery rate of fruits and vegetables was between 73.3%-92.1% (83.2% average), the recovery rate of cereal was between 72.5%-97.5% (85.1% average), and the recovery rate of tea was between 75.4%-111.3% (93.1% average). The average RSD of the three was less than 20%.

2) Control Group CG

The recovery rate of fruits and vegetables was between 75.0%-95.8% (86.3% average), the recovery rate of cereal was between 78.1%-107.5% (91.6% average), and the recovery rate of tea was between 71.8%-90.3% (82.1% average). The average RSD of the three was less than 20%.

The results show that the difference in recovery rate between the experimental group and the control group was not significant. The average recovery rate of the two groups falls between 70.4% and 111.3%, which is an acceptable range in the analysis of multiple pesticide residues.



Appendix I - Fruits and Vegetables

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G001	2,6-Diisopropyl-naphthalene (2,6-DIPN)	GC	85.0	0.0	0.0	96.7	5.8	6.0
G002	2-Phenylphenol	GC	83.3	5.8	6.9	83.3	5.8	6.9
G003	Dicofol (DCBP)	GC	80.0	5.0	6.3	86.7	2.9	3.3
G004	Acetochlor	GC	81.7	2.9	3.5	88.3	10.4	11.8
G005	Acrinathrin	GC	98.3	7.6	7.8	93.3	5.8	6.2
G006	Alachlor	GC	78.3	2.9	3.7	85.0	5.0	5.9
G007	Aldrin	GC	88.3	2.9	3.3	91.7	7.6	8.3
G008	Allethrin	GC	81.7	7.6	9.4	93.3	14.4	15.5
G009	$\alpha$ -cypermethrin	GC	81.7	10.4	12.7	88.3	5.8	6.5
G010	Azinphos-methyl	GC	74.2	5.2	7.0	75.3	4.6	6.2
G011	Benfluralin	GC	73.3	2.9	3.9	85.0	8.7	10.2
G012	Bifenox	GC	73.7	2.3	3.1	83.3	5.8	6.9
G013	Bifenthrin	GC	90.0	5.0	5.6	88.3	5.8	6.5
G014	Bitertanol	GC	77.0	7.2	9.4	86.7	12.6	14.5
G015	Bromacil	GC	77.3	7.5	9.7	80.0	0.0	0.0
G016	Bromophos-ethyl	GC	78.3	2.9	3.7	86.7	7.6	8.8
G017	Bromophos-methyl	GC	81.7	2.9	3.5	85.0	8.7	10.2
G018	Bromopropylate	GC	88.3	5.8	6.5	88.3	5.8	6.5
G019	Bromuconazole	GC	76.7	11.5	15.1	76.7	2.9	3.8
G020	Bupirimate	GC	75.0	5.0	6.7	81.7	2.9	3.5
G021	Butachlor	GC	76.7	5.8	7.5	86.7	7.6	8.8
G022	Butralin	GC	73.3	2.9	3.9	73.3	2.9	3.9
G023	Cadusafos	GC	81.7	2.9	3.5	90.0	5.0	5.6
G024	Carbophenothion	GC	76.7	2.9	3.8	88.3	2.9	3.3
G025	Chinomethionat	GC	98.3	17.6	17.9	90.7	5.1	5.7
G026	Chlorfenapyr	GC	83.3	2.9	3.5	90.0	8.7	9.6
G027	Chloropropylate	GC	78.3	2.9	3.7	88.3	5.8	6.5
G028	Chlorothalonil	GC	82.0	2.5	3.0	89.5	5.1	5.7
G029	Chlorpropham	GC	81.7	2.9	3.5	86.7	5.8	6.7
G030	Chlorpyrifos	GC	83.3	2.9	3.5	90.0	10.0	11.1
G031	Chlorpyrifos-methyl	GC	80.0	5.0	6.3	85.0	5.0	5.9
G032	Chlorthal-dimethyl	GC	86.7	2.9	3.3	88.3	10.4	11.8
G033	Chlozolinate	GC	88.3	2.9	3.3	83.3	10.4	12.5
G034	cis-Chlordane	GC	78.3	2.9	3.7	86.7	7.6	8.8

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G035	CPMC (Etrofol)	GC	111.7	2.9	2.6	112.5	6.6	5.9
G036	Cyanofenphos	GC	76.7	5.8	7.5	83.3	2.9	3.5
G037	Cyanophos	GC	78.3	2.9	3.7	78.3	2.9	3.7
G038	Cyfluthrin	GC	85.0	10.0	11.8	93.3	2.9	3.1
G039	Cyhalofop-butyl	GC	83.3	2.9	3.5	85.0	5.0	5.9
G040	$\lambda$ -Cyhalothrin	GC	96.7	7.6	7.9	86.7	14.4	16.7
G041	Cypermethrin	GC	85.0	10.0	11.8	88.3	5.8	6.5
G042	Cyproconazole	GC	76.2	6.8	9.0	83.3	5.8	6.9
G043	Deltamethrin	GC	100.0	10.0	10.0	110.0	17.3	15.7
G044	Diazinon	GC	80.0	5.0	6.3	86.7	7.6	8.8
G045	Dichlorvos	GC	85.0	5.0	5.9	80.0	8.7	10.8
G046	Dicloran	GC	75.0	5.0	6.7	75.0	0.0	0.0
G047	Dicofol	GC	88.8	8.7	9.8	84.2	6.0	7.1
G048	Dieldrin	GC	90.0	5.0	5.6	90.0	5.0	5.6
G049	Difenoconazole	GC	75.2	5.0	6.7	86.7	16.1	18.5
G050	Dimethipin	GC	92.1	2.6	2.8	75.0	0.0	0.0
G051	Diniconazole	GC	72.5	2.2	3.0	81.7	2.9	3.5
G052	Dinitramine	GC	77.8	1.9	2.4	88.3	7.6	8.6
G053	Diphenamid	GC	78.3	7.6	9.8	80.0	5.0	6.3
G054	Diphenylamine	GC	85.0	0.0	0.0	90.0	5.0	5.6
G055	Disulfoton	GC	72.2	3.8	5.2	88.3	11.5	13.1
G056	Ditalimfos	GC	73.0	2.6	3.6	81.7	2.9	3.5
G057	Dithiopyr	GC	83.3	2.9	3.5	86.7	7.6	8.8
G058	Edifenphos	GC	73.3	2.9	3.9	83.3	2.9	3.5
G059	Endosulfan-sulfate	GC	110.0	10.0	9.1	98.3	2.9	2.9
G060	Endrin	GC	78.3	2.9	3.7	88.3	10.4	11.8
G061	EPN	GC	80.3	10.0	12.5	91.7	2.9	3.1
G062	Epoxiconazole	GC	72.3	2.4	3.3	73.3	2.9	3.9
G063	Esfenvalerate	GC	73.3	5.8	7.9	88.3	2.9	3.3
G064	Ethion	GC	73.3	2.9	3.9	85.0	0.0	0.0
G065	Ethoprophos	GC	81.7	2.9	3.5	81.7	7.6	9.4
G066	Etofenprox	GC	88.3	7.6	8.6	95.0	17.3	18.2
G067	Etridiazole	GC	91.8	2.8	3.0	77.7	6.8	8.8
G068	Etrimfos	GC	81.7	2.9	3.5	90.0	8.7	9.6
G069	Fenarimol	GC	77.9	6.2	8.0	75.0	0.0	0.0
G070	Fenbuconazole	GC	80.2	5.0	6.2	76.7	7.6	10.0



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G071	Fenitrothion	GC	73.3	2.9	3.9	81.7	7.6	9.4
G072	Fenoxaprop-ethyl	GC	81.7	5.8	7.1	83.3	10.4	12.5
G073	Fenpropathrin	GC	81.7	2.9	3.5	86.7	7.6	8.8
G074	Fenpropimorph	GC	78.3	7.6	9.8	81.7	2.9	3.5
G075	Fensulfothion	GC	75.0	5.0	6.7	80.0	10.0	12.5
G076	Fenvalerate	GC	78.3	7.6	9.8	88.3	2.9	3.3
G077	Flucythrinate	GC	80.5	4.3	5.3	88.3	14.4	16.3
G078	Fluensulfone	GC	83.3	2.9	3.5	86.7	2.9	3.3
G079	Fluroxypyr-meptyl	GC	83.3	5.8	6.9	86.7	7.6	8.8
G080	Flutolanil	GC	74.3	4.0	5.4	81.7	2.9	3.5
G081	Fluvalinate	GC	95.0	8.7	9.1	90.0	5.0	5.6
G082	Fluxapyroxad	GC	76.7	5.8	7.5	78.3	2.9	3.7
G083	Fonofos	GC	81.7	2.9	3.5	83.3	5.8	6.9
G084	Formothion	GC	110.0	17.3	15.7	83.5	3.0	3.6
G085	Fthalide(Phthalide)	GC	83.3	2.9	3.5	75.0	5.0	6.7
G086	Halfenprox	GC	73.3	5.8	7.9	83.3	10.4	12.5
G087	Heptachlor epoxide	GC	80.0	5.0	6.3	90.0	8.7	9.6
G088	Heptachlor	GC	75.0	0.0	0.0	83.3	5.8	6.9
G089	Heptenophos	GC	83.3	2.9	3.5	80.0	0.0	0.0
G090	Hexazinone	GC	74.0	2.2	2.9	70.0	0.0	0.0
G091	Imibenconazole	GC	80.7	7.9	9.8	86.7	12.6	14.5
G092	Iprobenfos	GC	75.0	5.0	6.7	78.3	2.9	3.7
G093	Iprodione	GC	95.2	13.9	14.6	96.7	14.4	14.9
G094	Isofenphos	GC	76.7	5.8	7.5	86.7	7.6	8.8
G095	Isoprothiolane	GC	78.3	2.9	3.7	81.7	7.6	9.4
G096	Isotianil	GC	78.3	2.9	3.7	80.0	5.0	6.3
G097	Isoxathion	GC	74.7	0.8	1.0	85.0	10.0	11.8
G098	Kresoxim-methyl	GC	78.3	2.9	3.7	81.7	2.9	3.5
G099	Malathion	GC	76.7	7.6	10.0	83.3	5.8	6.9
G100	Mefenacet	GC	76.7	7.6	10.0	75.0	5.0	6.7
G101	Mephosfolan	GC	75.8	4.3	5.6	71.7	2.9	4.0
G102	Mepronil	GC	73.8	2.0	2.7	78.3	2.9	3.7
G103	Metazachlor	GC	72.8	2.6	3.5	76.7	2.9	3.8
G104	Methacrifos	GC	78.3	5.8	7.4	81.7	7.6	9.4
G105	Methidathion	GC	73.2	2.8	3.8	76.7	2.9	3.8
G106	Methyl pentachlorophenyl	GC	85.0	5.0	5.9	85.0	5.0	5.9

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
	sulfide							
G107	Metolachlor	GC	76.7	5.8	7.5	83.3	2.9	3.5
G108	Mirex	GC	83.3	5.8	6.9	85.0	5.0	5.9
G109	Molinate	GC	80.0	5.0	6.3	75.0	0.0	0.0
G110	Myclobutanil	GC	76.7	2.9	3.8	80.0	0.0	0.0
G111	Napropamide	GC	73.3	2.9	3.9	85.0	5.0	5.9
G112	Nuarimol	GC	71.7	2.9	4.0	75.0	0.0	0.0
G113	o,p'-DDD	GC	71.8	2.8	3.8	91.7	2.9	3.1
G114	o,p'-DDE	GC	86.7	2.9	3.3	86.7	7.6	8.8
G115	o,p'-DDT	GC	83.3	2.9	3.5	88.3	5.8	6.5
G116	Oxadiazon	GC	86.7	2.9	3.3	86.7	7.6	8.8
G117	Oxadixyl	GC	74.2	2.8	3.8	75.3	0.8	1.0
G118	Oxyfluorfen	GC	83.3	5.8	6.9	95.0	8.7	9.1
G119	Paclbutrazol	GC	77.0	2.8	3.6	80.0	5.0	6.3
G120	Parathion	GC	73.3	5.8	7.9	78.3	2.9	3.7
G121	Parathion-methyl	GC	76.7	2.9	3.8	78.3	2.9	3.7
G122	Penconazole	GC	76.7	5.8	7.5	83.3	5.8	6.9
G123	Pendimethalin	GC	75.0	0.0	0.0	86.7	5.8	6.7
G124	Penflufen	GC	76.4	3.1	4.0	83.3	5.8	6.9
G125	Pentachloroaniline	GC	85.0	5.0	5.9	95.0	10.0	10.5
G126	Permethrin	GC	86.7	5.8	6.7	93.3	15.3	16.4
G127	Phenothiol	GC	85.0	0.0	0.0	93.3	10.4	11.2
G128	Phenothrin	GC	86.7	7.6	8.8	95.0	8.7	9.1
G129	Phenthoate	GC	73.3	2.9	3.9	83.3	2.9	3.5
G130	Phorate	GC	71.7	2.9	4.0	76.7	7.6	10.0
G131	Phosalone	GC	78.3	7.6	9.8	86.7	2.9	3.3
G132	Phosmet	GC	76.7	7.6	10.0	75.0	0.0	0.0
G133	Pirimiphos-ethyl	GC	80.0	5.0	6.3	83.3	2.9	3.5
G134	Pirimiphos-methyl	GC	80.0	0.0	0.0	85.0	8.7	10.2
G135	p,p'-DDD	GC	76.7	2.9	3.8	83.3	10.4	12.5
G136	p,p'-DDE	GC	88.3	7.6	8.6	90.0	5.0	5.6
G137	p,p'-DDT	GC	77.0	2.2	2.8	88.3	7.6	8.6
G138	Procymidone	GC	75.0	0.0	0.0	81.7	2.9	3.5
G139	Prometryn	GC	80.0	5.0	6.3	85.0	8.7	10.2
G140	Propaphos	GC	76.8	9.0	11.7	81.7	2.9	3.5
G141	Propiconazole	GC	80.8	1.4	1.8	91.7	7.6	8.3

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G142	Prothiofos	GC	78.3	2.9	3.7	90.0	5.0	5.6
G143	Pyraclufos	GC	72.0	2.6	3.7	78.3	2.9	3.7
G144	Pyraflufen-ethyl	GC	81.7	5.8	7.1	86.7	2.9	3.3
G145	Pyrazophos	GC	75.3	4.5	6.0	75.0	0.0	0.0
G146	Pyridaphenthion	GC	77.3	8.7	11.3	74.8	0.3	0.4
G147	Pyrimethanil	GC	80.0	5.0	6.3	88.3	5.8	6.5
G148	Pyrimidifen	GC	86.3	9.9	11.5	85.0	5.0	5.9
G149	Pyriproxyfen	GC	86.7	2.9	3.3	85.0	5.0	5.9
G150	Pyroquilon	GC	76.7	5.8	7.5	79.6	12.5	15.7
G151	Quinalphos	GC	83.7	12.2	14.5	88.3	2.9	3.3
G152	Quintozene (PCNB)	GC	76.7	7.6	10.0	83.3	5.8	6.9
G153	Salithion	GC	81.7	2.9	3.5	80.0	5.0	6.3
G154	Sedaxane	GC	83.0	9.8	11.9	81.7	2.9	3.5
G155	Silafluofen	GC	88.3	2.9	3.3	93.3	14.4	15.5
G156	Tebuconazole	GC	79.4	12.2	15.4	81.7	2.9	3.5
G157	Terbufos	GC	76.7	2.9	3.8	83.3	5.8	6.9
G158	Tetraconazole	GC	80.8	5.2	6.4	83.3	5.8	6.9
G159	Tetradifon	GC	85.0	5.0	5.9	86.7	7.6	8.8
G160	Tetramethrin	GC	86.7	7.6	8.8	88.3	5.8	6.5
G161	Thenylchlor	GC	76.7	2.9	3.8	78.3	7.6	9.8
G162	Thifluzamide	GC	80.9	6.4	7.9	83.3	2.9	3.5
G163	Thiometon	GC	72.2	2.9	4.1	76.7	5.8	7.5
G164	Tolclofos-methyl	GC	83.3	2.9	3.5	85.0	5.0	5.9
G165	trans-Chlordane	GC	81.7	2.9	3.5	88.3	10.4	11.8
G166	Triadimefon	GC	76.7	5.8	7.5	83.3	2.9	3.5
G167	Triadimenol	GC	75.9	6.4	8.5	78.3	2.9	3.7
G168	Triazophos	GC	76.3	7.0	9.1	80.0	0.0	0.0
G169	Tridiphane	GC	75.7	9.8	13.0	85.0	5.0	5.9
G170	Triflumizole	GC	73.9	3.4	4.7	86.7	2.9	3.3
G171	Trifluralin	GC	78.3	2.9	3.7	81.7	7.6	9.4
G172	Vinclozolin	GC	81.7	7.6	9.4	91.7	7.6	8.3
G173	$\alpha$ -BHC	GC	83.3	2.9	3.5	86.7	7.6	8.8
G174	$\alpha$ -Endosulfan	GC	83.3	5.8	6.9	86.7	7.6	8.8
G175	$\beta$ -BHC	GC	80.0	0.0	0.0	85.0	5.0	5.9
G176	$\beta$ -Endosulfan	GC	85.0	10.0	11.8	85.0	0.0	0.0
G177	$\gamma$ -BHC(Lindane)	GC	80.0	5.0	6.3	86.7	7.6	8.8



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G178	δ-BHC	GC	111.7	10.4	9.3	86.7	2.9	3.3
L001	3-keto carbofuran	LC	108.6	6.8	6.3	89.9	7.5	8.3
L002	3-OH Carbofuran	LC	81.2	9.0	11.1	87.3	4.8	5.5
L003	Abamectin+Na	LC	77.8	0.5	0.7	87.4	11.7	13.4
L004	Acephate	LC	80.6	3.9	4.9	79.1	2.3	2.9
L005	Acequinocyl-hydroxyl	LC	90.6	5.7	6.3	89.3	3.2	3.6
L006	Acetamiprid	LC	83.9	6.1	7.3	89.3	3.6	4.0
L007	Acibenzolar-S-methyl	LC	98.4	15.6	15.8	82.2	7.8	9.5
L008	Aldicarb	LC	77.2	5.4	7.0	79.1	3.1	3.9
L009	Aldicarb sulfone	LC	78.5	5.3	6.7	79.6	0.6	0.8
L010	Aldicarb sulfoxide	LC	91.2	3.5	3.9	85.2	5.8	6.9
L011	Alloxydim(sodium)	LC	75.7	2.3	3.0	80.7	8.3	10.3
L012	Ametoctradin	LC	84.7	3.9	4.5	87.0	4.3	5.0
L013	Ametryn	LC	86.6	5.7	6.6	85.1	2.5	2.9
L014	Amisulbrom	LC	79.3	9.5	12.0	101.1	10.5	10.4
L015	Atrazine	LC	81.5	6.4	7.9	82.5	5.7	6.9
L016	Azoxystrobin	LC	80.8	5.8	7.2	92.5	1.1	1.2
L017	Benalaxyl	LC	82.5	5.8	7.0	89.1	1.7	1.9
L018	Bendiocarb	LC	82.4	5.8	7.0	84.8	3.3	3.9
L019	Benfuracarb	LC	73.5	2.5	3.4	82.1	1.2	1.5
L020	Bensulfuron-methyl	LC	80.1	4.9	6.1	87.8	1.2	1.3
L021	Bentazone	LC	79.8	7.1	8.9	83.9	1.3	1.5
L022	Benthiazole	LC	93.4	7.4	7.9	84.4	15.5	18.4
L023	Bifenazate	LC	78.1	1.4	1.7	96.9	9.1	9.3
L024	Boscalid	LC	92.4	8.4	9.1	79.8	10.1	12.7
L025	Bufencard 1+2	LC	84.7	2.3	2.8	77.7	5.0	6.5
L026	Buprofezin	LC	89.1	6.9	7.8	95.8	2.2	2.3
L027	Butocarboxim	LC	75.7	3.1	4.1	78.3	4.2	5.3
L028	Carbaryl	LC	83.8	7.0	8.4	83.6	3.5	4.2
L029	Carbendazim	LC	82.9	5.9	7.1	76.0	0.9	1.2
L030	Carbofuran	LC	97.0	13.4	13.8	90.5	2.8	3.1
L031	Carbosulfan	LC	76.0	4.0	5.3	78.4	0.6	0.7
L032	Carfentrazone-ethyl	LC	81.1	5.2	6.4	82.5	4.4	5.3
L033	Carpropamid	LC	80.1	8.1	10.1	85.2	4.6	5.4
L034	Chlorantraniliprole	LC	81.2	8.8	10.8	89.0	2.4	2.7
L035	Chlorfluzuron	LC	82.4	7.5	9.1	82.8	5.6	6.8

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L036	Chromafenozide	LC	81.9	4.7	5.8	86.6	3.0	3.5
L037	Cinern 1	LC	72.5	0.4	10.1	90.1	0.5	9.9
L038	Cinern 2	LC	102.3	0.4	9.7	125.4	0.4	7.6
L039	Cinosulfuron	LC	78.9	3.7	4.7	96.6	18.3	19.0
L040	Clethodim	LC	83.4	5.2	6.3	76.8	8.7	11.3
L041	Clofentezine	LC	75.4	5.4	7.1	85.8	4.9	5.8
L042	Clomazone	LC	81.4	6.7	8.3	86.4	4.0	4.7
L043	Clomeprop	LC	85.5	5.1	6.0	82.9	3.9	4.7
L044	Clothianidin	LC	82.6	4.3	5.2	88.9	1.5	1.7
L045	Cyanazine	LC	77.9	5.1	6.6	91.2	3.3	3.6
L046	Cyazofamid	LC	77.7	5.7	7.3	81.7	4.1	5.0
L047	Cyclosulfamuron	LC	74.7	3.7	5.0	104.3	6.0	5.7
L048	Cycloxydime	LC	74.8	0.9	1.3	72.7	2.1	2.9
L049	Cyflufenamide	LC	83.4	13.5	16.2	89.9	14.7	16.4
L050	Cyflumetofen	LC	109.4	7.3	6.7	81.3	1.5	1.9
L051	Cymoxanil	LC	89.5	4.0	4.5	85.8	5.7	6.6
L052	Cyprodinil	LC	80.9	7.3	9.0	84.4	3.5	4.2
L053	Demeton-S-methyl	LC	77.1	3.2	4.2	76.7	4.3	5.6
L054	Dicrotophos	LC	88.9	6.5	7.3	81.9	3.6	4.3
L055	Diflubenzuron	LC	81.6	3.6	4.4	83.6	8.6	10.3
L056	Dimethenamid	LC	75.9	4.2	5.5	89.9	4.0	4.5
L057	Dimethoate	LC	98.2	5.8	5.9	107.5	6.8	6.3
L058	Dimethomorph 1+2	LC	79.1	5.2	6.6	83.5	6.9	8.2
L059	Dinotefuran	LC	80.0	5.4	6.7	77.1	3.6	4.6
L060	Diuron	LC	78.9	4.2	5.4	88.1	4.5	5.1
L061	Dymron	LC	75.4	4.7	6.2	87.8	0.2	0.2
L062	Emamectin benzoate B1a	LC	88.4	4.6	5.5	84.3	3.3	3.9
L063	Emamectin benzoate B1b	LC	71.8	0.4	10.5	89.4	0.2	3.0
L064	Ethiprole	LC	84.5	8.8	10.4	92.4	14.5	15.6
L065	Ethirimol	LC	78.2	5.6	7.1	78.5	5.6	7.2
L066	Etoxazole	LC	93.1	3.2	3.4	100.6	0.0	0.0
L067	Famoxadone	LC	76.0	2.2	2.8	83.8	3.1	3.6
L068	Fenamiphos	LC	75.0	4.2	5.7	81.0	4.0	4.9
L069	Fenazaquin	LC	84.0	4.4	5.3	94.2	12.2	13.0
L070	Fenbutatin-oxide	LC	74.5	3.1	4.2	76.5	3.2	4.2

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L071	Fenhexamid	LC	83.1	10.7	12.8	82.6	10.2	12.3
L072	Fenobucarb	LC	84.0	7.6	9.1	89.0	4.7	5.3
L073	Fenothiocarb	LC	80.4	4.1	5.2	86.0	1.5	1.7
L074	Fenoxanil 1+2	LC	76.7	2.7	3.5	88.7	2.9	3.3
L075	Fenoxycarb	LC	80.9	5.7	7.0	84.6	3.2	3.8
L076	Fenpyroximate	LC	79.0	4.4	5.6	83.1	2.7	3.3
L077	Fenthion	LC	92.5	2.3	2.5	86.5	6.2	7.1
L078	Ferimzone	LC	85.4	3.5	4.1	89.9	1.9	2.1
L079	Fipronil	LC	85.6	2.2	2.5	86.7	3.8	4.4
L080	Fipronil-sulfone	LC	84.0	5.0	6.0	89.1	0.9	1.0
L081	Flazasulfuron	LC	84.6	1.0	1.1	80.8	15.5	19.2
L082	Flonicamid	LC	79.9	7.2	9.0	92.3	10.4	11.3
L083	Fluazifop-P-butyl	LC	82.8	2.4	2.8	84.3	1.8	2.1
L084	Fluazinam	LC	84.5	3.2	3.8	83.5	3.2	3.8
L085	Flubendiamide	LC	89.7	4.9	5.5	89.1	2.3	2.6
L086	Fludioxonil_N	LC	87.4	4.3	5.0	87.2	9.2	10.5
L087	Flufenoxuron	LC	91.3	3.8	4.2	87.1	2.4	2.7
L088	Fluopicolide	LC	77.7	3.7	4.8	81.2	7.8	9.6
L089	Fluopyram	LC	78.8	3.3	4.1	85.2	7.1	8.4
L090	Flupyradifurone	LC	77.1	8.7	11.3	82.6	5.8	7.0
L091	Flusilazole	LC	76.8	4.8	6.2	84.6	10.7	12.7
L092	Flutriafol	LC	82.5	5.0	6.0	87.9	12.8	14.6
L093	Formetanate	LC	86.7	0.7	0.8	90.9	2.6	2.9
L094	Fosthiazate	LC	87.4	6.0	6.9	87.7	2.4	2.8
L095	Furametpyr	LC	81.5	5.1	6.3	86.5	4.5	5.2
L096	Haloxifop-methyl	LC	86.2	2.8	3.3	91.1	4.4	4.8
L097	Hexaconazole	LC	82.0	7.4	9.0	90.1	4.9	5.4
L098	Hexaflumuron	LC	82.2	8.5	10.3	97.7	10.4	10.6
L099	Hexythiazox	LC	90.0	1.9	2.1	87.0	3.9	4.4
L100	Imazalil	LC	76.8	7.6	9.9	85.2	0.8	0.9
L101	Imidacloprid	LC	77.3	0.1	0.2	93.1	13.8	14.8
L102	Indoxacarb	LC	83.4	8.6	10.3	85.2	10.1	11.8
L103	Iprovalicarb 1+2	LC	79.6	6.5	8.1	91.7	2.8	3.0
L104	Isazofos	LC	80.3	6.5	8.1	91.2	1.9	2.1
L105	Isoprocarb	LC	84.2	7.6	9.0	86.1	2.1	2.4
L106	Isopyrazam	LC	79.4	0.8	1.0	80.5	4.8	6.0



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L107	Isouron	LC	89.1	8.1	9.1	86.4	2.8	3.3
L108	Isoxaflutole	LC	82.8	6.8	8.2	82.6	0.6	0.8
L109	Jasmolin 1	LC	80.4	0.5	17.9	71.3	0.2	8.3
L110	Jasmolin 2	LC	85.6	0.1	6.3	113.3	0.4	15.2
L111	Linuron	LC	76.2	4.3	5.7	84.7	1.1	1.3
L112	Lufenuron	LC	94.6	0.2	0.2	85.0	10.8	12.7
L113	Mandipropamid	LC	78.4	6.8	8.7	87.3	12.4	14.2
L114	Mecarbam	LC	104.6	4.6	4.4	85.4	4.4	5.1
L115	Mepanipyrim	LC	79.9	6.3	7.9	80.2	4.2	5.2
L116	Metaflumizone	LC	79.2	7.6	9.6	91.3	14.4	15.8
L117	Metalaxyl	LC	84.0	6.5	7.8	87.6	4.9	5.6
L118	Metconazole-cis	LC	80.8	5.4	6.7	78.5	4.1	5.2
L119	Methamidophos	LC	75.5	5.3	7.0	73.3	1.2	1.7
L120	Methiocarb	LC	78.4	8.2	10.4	89.3	3.0	3.4
L121	Methomyl	LC	86.1	5.4	6.3	85.2	2.2	2.5
L122	Methoprene	LC	80.4	2.6	3.2	83.3	2.0	2.4
L123	Methoxyfenozide	LC	79.5	5.4	6.7	87.9	4.0	4.5
L124	Metobromuron	LC	84.2	9.4	11.1	87.6	9.7	11.1
L125	Metolcarb	LC	85.7	1.6	1.8	84.4	3.2	3.8
L126	Metrafenone	LC	82.5	1.6	1.9	91.5	5.4	5.9
L127	Metribuzin	LC	84.5	11.7	13.8	92.6	10.1	11.0
L128	Mevinphos(1+2)	LC	84.9	6.2	7.3	84.8	1.8	2.1
L129	Monocrotophos	LC	82.7	4.8	5.8	84.6	1.9	2.2
L130	MPMC(Xykykcarb)_back	LC	84.6	2.8	3.3	88.0	3.0	3.4
L131	Norflurazon	LC	83.7	6.3	7.5	86.1	0.4	0.5
L132	Novaluron	LC	91.6	13.0	14.2	83.3	5.0	6.0
L133	Omethoate	LC	81.6	4.1	5.0	82.3	2.3	2.8
L134	Oxamyl	LC	85.9	5.1	6.0	87.9	2.2	2.5
L135	Oxycarboxine	LC	82.5	5.7	7.0	90.6	6.6	7.3
L136	Oxydemeton-methyl	LC	102.6	2.4	2.4	92.1	4.0	4.4
L137	Pencycuron	LC	81.4	6.9	8.4	86.0	3.6	4.1
L138	Penoxsulam	LC	78.0	5.1	6.5	86.0	5.3	6.1
L139	Penthiopyrad	LC	89.9	6.4	7.1	83.8	3.0	3.6
L140	Phosphamidon 1+2	LC	84.5	5.4	6.4	85.0	2.4	2.8
L141	Phoxim	LC	80.2	9.9	12.4	85.8	4.8	5.6

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L142	Piperonyl butoxide	LC	87.4	5.4	6.2	101.0	2.4	2.4
L143	Pirimicarb	LC	87.6	5.6	6.4	87.9	0.8	0.9
L144	Pretilachlor	LC	81.4	3.5	4.3	89.5	6.2	6.9
L145	Probenazole	LC	79.9	6.3	7.9	80.2	4.2	5.2
L146	Prochloraz	LC	76.1	1.2	1.6	82.3	2.2	2.7
L147	Profenophos	LC	87.2	7.5	8.6	87.4	3.4	3.9
L148	Promecarb	LC	78.9	7.7	9.7	82.7	0.5	0.6
L149	Propamocarb hydrochloride	LC	81.7	5.4	6.6	76.2	5.7	7.5
L150	Propanil	LC	86.1	12.3	14.3	92.6	12.7	13.7
L151	Propargite	LC	93.0	6.0	6.4	87.6	1.1	1.3
L152	Propoxur	LC	83.7	6.7	8.0	88.1	1.0	1.1
L153	Proquinazid	LC	77.0	6.8	8.9	87.7	5.2	5.9
L154	Pymetrozine	LC	80.4	6.2	7.8	83.8	1.7	2.1
L155	Pyraclostrobin	LC	83.2	4.2	5.0	88.0	3.5	4.0
L156	Pyrazosulfuron-ethyl	LC	74.9	3.9	5.2	79.2	6.4	8.1
L157	Pyrethrin I	LC	85.4	3.2	7.2	85.1	3.7	8.3
L158	Pyrethrin II	LC	77.8	0.7	2.7	85.7	4.5	16.6
L159	Pyribencarb	LC	85.1	6.8	8.0	87.7	0.6	0.6
L160	Pyridaben	LC	81.9	6.3	7.6	86.4	4.5	5.2
L161	Pyridate	LC	102.8	2.0	1.9	87.5	2.3	2.6
L162	Pyrifenox 1+2	LC	78.1	3.0	3.9	88.4	4.6	5.2
L163	Pyrifluquinazon	LC	83.5	7.5	9.0	73.3	1.0	1.4
L164	Quinoxifen	LC	90.6	8.8	9.7	88.1	12.5	14.2
L165	Quizalofop-ethyl	LC	80.3	4.6	5.8	88.8	10.2	11.5
L166	Rotenone	LC	83.0	10.8	13.1	85.7	6.2	7.2
L167	Saflufenacil	LC	75.6	5.4	7.1	89.1	6.1	6.8
L168	Sethoxydim	LC	87.1	1.7	2.0	84.3	2.5	2.9
L169	Simazine	LC	79.3	6.7	8.5	92.4	3.7	4.0
L170	Spinetoram J	LC	90.5	3.1	4.6	98.7	1.1	1.5
L171	Spinetoram L	LC	64.9	0.8	4.9	74.1	1.7	8.9
L172	Spinosad A(spinosyn A)	LC	81.5	1.9	4.0	88.4	2.0	3.9
L173	Spinosad D(spinosynD)	LC	83.4	2.0	5.9	86.1	0.9	2.5
L174	Spirodiclofen	LC	85.7	5.7	6.7	92.6	1.7	1.8
L175	Spiromesifen	LC	80.8	3.7	4.6	101.9	14.0	13.7
L176	Spirotetramat	LC	79.1	2.8	3.6	78.4	4.7	6.0
L177	Sulfoxaflor 1+2	LC	84.0	4.1	4.8	87.6	0.4	0.5

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L178	Tebufenozide	LC	83.5	4.7	5.6	82.5	2.9	3.5
L179	Tebufenpyrad	LC	77.1	2.1	2.8	85.0	9.1	10.7
L180	Teflubenzuron	LC	79.3	7.1	9.0	97.0	9.6	9.9
L181	Tepraloxymid	LC	93.7	0.5	0.5	84.3	6.1	7.2
L182	Thiabendazole	LC	85.2	4.5	5.3	89.2	9.6	10.8
L183	Thiacloprid	LC	84.9	7.3	8.6	87.5	4.1	4.7
L184	Thiamethoxam	LC	75.6	7.4	9.8	92.2	10.2	11.0
L185	Thiobencarb	LC	82.4	3.1	3.8	85.6	0.4	0.5
L186	Thiodicarb	LC	79.9	4.5	5.7	85.6	3.0	3.5
L187	Thiofanox	LC	94.8	4.1	4.3	77.1	5.9	7.7
L188	Tolfenpyrad	LC	87.0	7.5	8.6	80.3	5.3	6.6
L189	Tolyfluanid	LC	89.0	13.3	14.9	89.0	16.0	17.9
L190	Trichlorfon	LC	94.8	6.6	7.0	84.1	5.4	6.5
L191	Tricyclazole	LC	81.7	4.1	5.0	83.3	4.8	5.8
L192	Trifloxystrobin	LC	84.4	3.2	3.8	91.9	3.5	3.8
L193	Triforine_392	LC	83.6	15.0	18.0	88.9	3.9	4.4
L194	Vamidotion	LC	84.5	6.2	7.4	86.8	3.5	4.1
L195	XMC(Macbal)_front	LC	84.6	1.8	2.1	85.7	3.2	3.7
L196	Zoxamide	LC	83.3	8.6	10.3	87.2	2.8	3.2



Appendix II – Cereal Grains

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G001	2,6-Diisopropyl-naphthalene (2,6-DIPN)	GC	90.0	0.0	0.0	101.7	1.4	1.4
G002	2-Phenylphenol	GC	80.0	0.0	0.0	101.7	2.9	2.8
G003	Dicofol (DCBP)	GC	79.2	3.8	4.8	105.0	6.6	6.3
G004	Acetochlor	GC	80.8	1.4	1.8	96.7	1.4	1.5
G005	Acrinathrin	GC	119.2	1.4	1.2	107.5	11.5	10.7
G006	Alachlor	GC	77.5	2.5	3.2	97.5	2.5	2.6
G007	Aldrin	GC	72.5	2.5	3.4	101.7	7.2	7.1
G008	Allethrin	GC	99.2	1.4	1.5	111.7	5.2	4.7
G009	$\alpha$ -cypermethrin	GC	87.5	2.5	2.9	106.7	8.8	8.2
G010	Azinphos-methyl	GC	71.7	1.4	2.0	113.3	5.2	4.6
G011	Benfluralin	GC	76.7	11.5	15.1	90.0	2.5	2.8
G012	Bifenox	GC	86.8	3.6	4.2	112.5	2.5	2.2
G013	Bifenthrin	GC	77.5	2.5	3.2	102.5	2.5	2.4
G014	Bitertanol	GC	75.8	1.4	1.9	106.7	10.1	9.5
G015	Bromacil	GC	95.8	1.4	1.5	110.8	6.3	5.7
G016	Bromophos-ethyl	GC	79.2	1.4	1.8	102.5	5.0	4.9
G017	Bromophos-methyl	GC	86.7	1.4	1.7	100.8	3.8	3.8
G018	Bromopropylate	GC	94.7	1.6	1.7	96.1	5.7	5.9
G019	Bromuconazole	GC	77.5	13.0	16.8	110.0	4.3	3.9
G020	Bupirimate	GC	85.8	1.4	1.7	100.0	2.5	2.5
G021	Butachlor	GC	84.2	7.2	8.6	107.5	5.0	4.7
G022	Butralin	GC	82.5	2.5	3.0	104.2	6.3	6.0
G023	Cadusafos	GC	77.5	2.5	3.2	100.8	3.8	3.8
G024	Carbophenothion	GC	94.2	5.2	5.5	106.7	7.2	6.8
G025	Chinomethionat	GC	105.8	10.4	9.8	97.5	5.0	5.1
G026	Chlorfenapyr	GC	90.8	3.8	4.2	107.5	5.0	4.7
G027	Chloropropylate	GC	89.2	1.4	1.6	109.2	5.2	4.8
G028	Chlorothalonil	GC	74.2	2.9	3.9	71.7	0.9	1.3
G029	Chlorpropham	GC	80.0	2.5	3.1	109.2	7.6	7.0
G030	Chlorpyrifos	GC	90.8	1.4	1.6	100.8	5.2	5.2
G031	Chlorpyrifos-methyl	GC	81.7	1.4	1.8	97.5	2.5	2.6
G032	Chlorthal-dimethyl	GC	80.8	1.4	1.8	99.2	3.8	3.9
G033	Chlozolinate	GC	91.7	7.2	7.9	95.0	7.5	7.9
G034	cis-Chlordane	GC	96.7	2.9	3.0	98.3	3.8	3.9

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G035	CPMC (Etofol)	GC	93.8	9.4	10.1	101.7	17.7	17.4
G036	Cyanofenphos	GC	90.8	1.4	1.6	103.3	5.8	5.6
G037	Cyanophos	GC	80.8	2.9	3.6	99.2	3.8	3.9
G038	Cyfluthrin	GC	92.5	2.5	2.7	113.3	5.2	4.6
G039	Cyhalofop-butyl	GC	80.8	2.9	3.6	105.8	3.8	3.6
G040	$\lambda$ -Cyhalothrin	GC	113.3	1.4	1.3	104.2	6.3	6.0
G041	Cypermethrin	GC	90.0	2.5	2.8	110.0	7.5	6.8
G042	Cyproconazole	GC	88.3	1.4	1.6	109.2	3.8	3.5
G043	Deltamethrin	GC	85.8	1.4	1.7	104.2	13.8	13.2
G044	Diazinon	GC	80.0	2.5	3.1	95.0	2.5	2.6
G045	Dichlorvos	GC	79.2	8.8	11.1	105.8	5.8	5.5
G046	Dicloran	GC	83.3	3.8	4.6	102.5	6.6	6.5
G047	Dicofol	GC	89.3	4.7	5.2	83.5	5.7	6.9
G048	Dieldrin	GC	78.3	1.4	1.8	100.0	6.6	6.6
G049	Difenoconazole	GC	82.5	0.0	0.0	91.2	3.1	3.4
G050	Dimethipin	GC	97.5	11.5	11.8	107.5	9.0	8.4
G051	Diniconazole	GC	89.2	1.4	1.6	113.3	5.8	5.1
G052	Dinitramine	GC	73.3	3.8	5.2	93.3	7.2	7.7
G053	Diphenamid	GC	88.3	1.4	1.6	103.3	6.3	6.1
G054	Diphenylamine	GC	77.5	0.0	0.0	94.2	2.9	3.1
G055	Disulfoton	GC	79.2	3.8	4.8	106.0	1.8	1.7
G056	Ditalimfos	GC	72.5	4.3	6.0	100.8	10.4	10.3
G057	Dithiopyr	GC	81.7	1.4	1.8	97.5	0.0	0.0
G058	Edifenphos	GC	85.0	2.5	2.9	113.3	6.3	5.6
G059	Endosulfan-sulfate	GC	112.6	7.6	6.8	109.2	3.8	3.5
G060	Endrin	GC	77.5	2.5	3.2	102.5	6.6	6.5
G061	EPN	GC	71.7	1.4	2.0	108.3	6.3	5.8
G062	Epoxiconazole	GC	81.7	1.4	1.8	101.7	2.9	2.8
G063	Esfenvalerate	GC	77.5	2.5	3.2	110.0	6.6	6.0
G064	Ethion	GC	95.8	1.4	1.5	105.0	4.3	4.1
G065	Ethoprophos	GC	80.0	2.5	3.1	104.2	2.9	2.8
G066	Etofenprox	GC	85.8	1.4	1.7	111.7	6.3	5.6
G067	Etridiazole	GC	104.5	0.7	0.7	72.5	2.5	3.4
G068	Etrimfos	GC	78.3	1.4	1.8	99.2	3.8	3.9
G069	Fenarimol	GC	79.2	1.4	1.8	107.5	4.3	4.0

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G070	Fenbuconazole	GC	79.2	1.4	1.8	112.5	5.0	4.4
G071	Fenitrothion	GC	85.0	2.5	2.9	101.7	1.4	1.4
G072	Fenoxaprop-ethyl	GC	87.5	2.5	2.9	112.5	2.5	2.2
G073	Fenpropathrin	GC	72.5	2.5	3.4	105.0	4.3	4.1
G074	Fenpropimorph	GC	78.3	1.4	1.8	105.0	7.5	7.1
G075	Fensulfothion	GC	78.3	5.8	7.4	110.8	1.4	1.3
G076	Fenvalerate	GC	83.3	1.4	1.7	110.8	5.2	4.7
G077	Flucythrinate	GC	83.3	1.4	1.7	109.2	8.8	8.0
G078	Fluensulfone	GC	79.2	1.4	1.8	99.2	3.8	3.9
G079	Fluroxypyr-meptyl	GC	80.8	1.4	1.8	99.2	5.8	5.8
G080	Flutolanil	GC	85.0	4.3	5.1	110.8	6.3	5.7
G081	Fluvalinate	GC	110.0	2.5	2.3	110.8	5.2	4.7
G082	Fluxapyroxad	GC	75.8	1.4	1.9	105.8	1.4	1.4
G083	Fonofos	GC	78.3	1.4	1.8	94.2	1.4	1.5
G084	Formothion	GC	92.4	1.0	1.1	97.5	9.0	9.2
G085	Fthalide(Phthalide)	GC	84.2	1.4	1.7	86.3	2.4	2.7
G086	Halfenprox	GC	70.0	0.0	0.0	107.5	10.0	9.3
G087	Heptachlor epoxide	GC	80.0	4.3	5.4	98.3	6.3	6.4
G088	Heptachlor	GC	71.9	0.6	0.9	94.2	2.9	3.1
G089	Heptenophos	GC	85.8	1.4	1.7	101.7	3.8	3.8
G090	Hexazinone	GC	80.0	0.0	0.0	107.5	2.5	2.3
G091	Imibenconazole	GC	71.7	1.4	2.0	85.6	4.9	5.7
G092	Iprobenfos	GC	77.5	2.5	3.2	100.0	5.0	5.0
G093	Iprodione	GC	82.5	1.3	1.5	115.8	3.8	3.3
G094	Isofenphos	GC	88.3	3.8	4.3	79.8	1.9	2.3
G095	Isoprothiolane	GC	84.2	3.8	4.5	100.8	1.4	1.4
G096	Isotianil	GC	84.2	5.2	6.2	118.2	1.3	1.1
G097	Isoxathion	GC	89.3	5.1	5.7	111.7	10.1	9.0
G098	Kresoxim-methyl	GC	95.8	1.4	1.5	96.7	5.2	5.4
G099	Malathion	GC	98.3	1.4	1.5	111.7	7.6	6.8
G100	Mefenacet	GC	79.2	1.4	1.8	108.4	5.1	4.7
G101	Mephosfolan	GC	93.3	2.9	3.1	102.5	9.0	8.8
G102	Mepronil	GC	91.7	2.9	3.1	110.8	5.2	4.7
G103	Metazachlor	GC	86.7	5.2	6.0	99.2	3.8	3.9
G104	Methacrifos	GC	80.8	2.9	3.6	90.0	5.0	5.6



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G105	Methidathion	GC	88.3	1.4	1.6	106.7	5.2	4.9
G106	Methyl pentachlorophenyl sulfide	GC	71.7	1.4	2.0	101.7	1.4	1.4
G107	Metolachlor	GC	83.3	1.4	1.7	101.7	5.2	5.1
G108	Mirex	GC	87.5	2.5	2.9	99.2	3.8	3.9
G109	Molinate	GC	80.0	2.5	3.1	86.7	1.4	1.7
G110	Myclobutanil	GC	83.3	1.4	1.7	88.8	2.8	3.2
G111	Napropamide	GC	82.5	0.0	0.0	106.7	11.5	10.8
G112	Nuarimol	GC	80.8	1.4	1.8	97.5	2.5	2.6
G113	o,p'-DDD	GC	87.5	2.5	2.9	80.0	2.5	3.1
G114	o,p'-DDE	GC	90.8	1.4	1.6	100.0	4.3	4.3
G115	o,p'-DDT	GC	76.7	1.4	1.9	98.3	3.8	3.9
G116	Oxadiazon	GC	83.3	1.4	1.7	97.5	5.0	5.1
G117	Oxadixyl	GC	80.8	1.4	1.8	98.3	1.4	1.5
G118	Oxyfluorfen	GC	88.3	3.8	4.3	108.3	5.2	4.8
G119	Paclobutrazol	GC	81.7	2.9	3.5	116.8	1.5	1.3
G120	Parathion	GC	88.3	2.9	3.3	107.5	4.3	4.0
G121	Parathion-methyl	GC	80.8	3.8	4.7	101.7	5.2	5.1
G122	Penconazole	GC	85.8	5.8	6.7	99.2	3.8	3.9
G123	Pendimethalin	GC	87.5	2.5	2.9	98.3	9.5	9.6
G124	Penflufen	GC	85.8	1.4	1.7	104.2	2.9	2.8
G125	Pentachloroaniline	GC	83.3	3.8	4.6	92.5	4.3	4.7
G126	Permethrin	GC	80.0	5.0	6.3	115.6	5.1	4.4
G127	Phenothiol	GC	76.7	1.4	1.9	98.3	5.2	5.3
G128	Phenothrin	GC	75.8	3.8	5.0	105.0	2.5	2.4
G129	Phenthoate	GC	92.5	4.3	4.7	100.8	5.2	5.2
G130	Phorate	GC	74.2	1.4	1.9	88.3	5.8	6.5
G131	Phosalone	GC	84.2	2.9	3.4	114.2	6.3	5.5
G132	Phosmet	GC	81.5	3.6	4.4	110.0	6.6	6.0
G133	Pirimiphos-ethyl	GC	84.2	2.9	3.4	99.2	7.6	7.7
G134	Pirimiphos-methyl	GC	80.8	1.4	1.8	95.0	5.0	5.3
G135	p,p'-DDD	GC	81.7	1.4	1.8	80.8	1.4	1.8
G136	p,p'-DDE	GC	75.8	3.8	5.0	98.3	3.8	3.9
G137	p,p'-DDT	GC	90.2	2.5	2.8	95.0	2.5	2.6
G138	Procymidone	GC	81.7	3.8	4.7	100.0	6.6	6.6
G139	Prometryn	GC	79.2	1.4	1.8	100.8	2.9	2.9

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G140	Propaphos	GC	86.7	1.4	1.7	95.8	5.8	6.0
G141	Propiconazole	GC	77.0	3.0	3.9	117.5	2.5	2.1
G142	Prothiofos	GC	85.8	1.4	1.7	103.3	6.3	6.1
G143	Pyraclufos	GC	71.2	2.0	2.8	109.9	9.0	8.2
G144	Pyraflufen-ethyl	GC	83.3	1.4	1.7	96.7	1.4	1.5
G145	Pyrazophos	GC	79.2	2.9	3.6	106.7	6.3	5.9
G146	Pyridaphenthion	GC	70.8	1.4	2.0	104.2	5.2	5.0
G147	Pyrimethanil	GC	76.7	1.4	1.9	100.0	2.5	2.5
G148	Pyrimidifen	GC	91.0	1.5	1.6	90.6	4.0	4.4
G149	Pyriproxyfen	GC	82.5	2.5	3.0	80.3	2.7	3.3
G150	Pyroquilon	GC	80.8	1.4	1.8	100.0	2.5	2.5
G151	Quinalphos	GC	81.7	1.4	1.8	105.0	8.7	8.2
G152	Quintozene (PCNB)	GC	73.3	1.4	2.0	95.8	3.8	4.0
G153	Salithion	GC	74.2	5.2	7.0	100.0	4.3	4.3
G154	Sedaxane	GC	80.0	2.5	3.1	114.2	8.0	7.0
G155	Silafluofen	GC	80.0	0.0	0.0	110.8	3.8	3.4
G156	Tebuconazole	GC	83.3	1.4	1.7	96.7	3.8	4.0
G157	Terbufos	GC	75.0	2.5	3.3	92.5	2.5	2.7
G158	Tetraconazole	GC	80.8	1.4	1.8	100.8	3.8	3.8
G159	Tetradifon	GC	77.5	4.3	5.6	100.0	4.3	4.3
G160	Tetramethrin	GC	80.8	3.8	4.7	102.5	4.3	4.2
G161	Thenylchlor	GC	85.8	1.4	1.7	93.3	3.8	4.1
G162	Thifluzamide	GC	96.7	1.4	1.5	110.0	2.5	2.3
G163	Thiometon	GC	76.7	1.4	1.9	98.8	15.4	15.6
G164	Tolclofos-methyl	GC	79.2	1.4	1.8	94.2	3.8	4.1
G165	trans-Chlordane	GC	75.0	2.5	3.3	97.5	0.0	0.0
G166	Triadimefon	GC	87.5	0.0	0.0	104.2	1.4	1.4
G167	Triadimenol	GC	87.5	2.5	2.9	109.2	3.8	3.5
G168	Triazophos	GC	90.8	1.4	1.6	104.2	7.6	7.3
G169	Tridiphane	GC	70.0	2.5	3.6	96.7	5.2	5.4
G170	Triflumizole	GC	82.5	0.0	0.0	90.0	7.5	8.3
G171	Trifluralin	GC	71.7	1.4	2.0	95.8	3.8	4.0
G172	Vinclozolin	GC	80.8	2.9	3.6	98.3	2.9	2.9
G173	$\alpha$ -BHC	GC	85.0	2.5	2.9	93.3	3.8	4.1
G174	$\alpha$ -Endosulfan	GC	108.3	2.9	2.7	96.7	5.2	5.4

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G175	β-BHC	GC	76.7	1.4	1.9	96.7	2.9	3.0
G176	β-Endosulfan	GC	88.3	1.4	1.6	100.8	7.6	7.6
G177	γ-BHC(Lindane)	GC	80.0	0.0	0.0	94.2	3.8	4.1
G178	δ-BHC	GC	90.8	3.8	4.2	95.8	1.4	1.5
L001	3-keto carbofuran	LC	103.4	4.2	4.1	79.0	2.6	3.3
L002	3-OH Carbofuran	LC	82.6	6.1	7.4	82.5	0.1	0.1
L003	Abamectin+Na	LC	77.0	5.0	6.5	102.7	14.9	14.5
L004	Acephate	LC	77.6	0.9	1.2	75.5	1.5	2.1
L005	Acequinocyl-hydroxyl	LC	90.0	14.5	16.1	84.0	11.7	13.9
L006	Acetamiprid	LC	79.8	2.3	2.9	84.7	3.8	4.5
L007	Acibenzolar-S-methyl	LC	96.3	10.8	11.2	85.3	6.6	7.7
L008	Aldicarb	LC	83.0	5.6	6.8	82.5	4.9	5.9
L009	Aldicarb sulfone	LC	79.3	1.8	2.2	72.8	2.0	2.7
L010	Aldicarb sulfoxide	LC	87.0	1.9	2.2	94.8	5.5	5.8
L011	Alloxydim(sodium)	LC	91.8	1.2	1.3	79.8	4.9	6.1
L012	Ametoctradin	LC	80.5	2.9	3.6	81.7	3.0	3.7
L013	Ametryn	LC	82.0	1.8	2.2	81.1	9.3	11.4
L014	Amisulbrom	LC	72.0	0.8	1.1	84.4	11.2	13.3
L015	Atrazine	LC	81.1	1.8	2.2	76.7	4.9	6.3
L016	Azoxystrobin	LC	81.4	4.9	6.0	79.0	6.9	8.7
L017	Benalaxyl	LC	79.9	0.7	0.8	87.6	0.5	0.6
L018	Bendiocarb	LC	87.8	4.5	5.1	83.9	2.9	3.5
L019	Benfuracarb	LC	80.7	7.0	8.7	78.0	1.6	2.0
L020	Bensulfuron-methyl	LC	75.0	3.0	4.0	85.5	0.7	0.8
L021	Bentazone	LC	85.6	5.1	5.9	82.4	2.7	3.3
L022	Benthiazole	LC	84.1	9.3	11.0	90.3	4.3	4.8
L023	Bifenazate	LC	83.3	4.4	5.3	90.7	1.7	1.9
L024	Boscalid	LC	79.1	6.2	7.9	99.4	10.3	10.3
L025	Bufencard 1+2	LC	74.9	3.0	4.1	91.9	2.8	3.1
L026	Buprofezin	LC	77.6	2.0	2.6	92.1	4.3	4.7
L027	Butocarboxim	LC	89.5	3.5	3.9	72.1	0.7	1.0
L028	Carbaryl	LC	86.1	4.6	5.3	85.0	2.6	3.1
L029	Carbendazim	LC	98.5	4.3	4.4	94.6	6.9	7.3
L030	Carbofuran	LC	95.0	2.3	2.4	97.4	11.6	11.9
L031	Carbosulfan	LC	86.5	2.4	2.8	86.8	3.8	4.4



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L032	Carfentrazone-ethyl	LC	81.5	10.0	12.2	81.1	6.0	7.4
L033	Carpropamid	LC	80.1	2.7	3.4	85.2	2.5	2.9
L034	Chlorantraniliprole	LC	78.5	5.0	6.4	87.5	5.8	6.6
L035	Chlorfluazuron	LC	77.1	5.4	7.0	74.2	3.2	4.4
L036	Chromafenozide	LC	76.7	2.3	2.9	77.0	5.3	6.9
L037	Cinern 1	LC	68.7	0.1	3.9	94.9	0.7	13.8
L038	Cinern 2	LC	44.7	0.2	12.1	52.9	0.2	7.7
L039	Cinosulfuron	LC	71.9	1.6	2.2	79.5	0.9	1.1
L040	Clethodim	LC	88.8	1.5	1.7	88.9	1.8	2.0
L041	Clofentezine	LC	81.4	8.9	10.9	81.3	4.3	5.3
L042	Clomazone	LC	79.6	2.3	2.9	80.3	3.6	4.5
L043	Clomeprop	LC	92.0	4.7	5.1	82.6	4.8	5.8
L044	Clothianidin	LC	76.6	4.6	6.0	80.7	0.3	0.3
L045	Cyanazine	LC	72.3	1.7	2.3	80.3	1.6	2.0
L046	Cyazofamid	LC	76.1	4.8	6.3	76.4	3.8	4.9
L047	Cyclosulfamuron	LC	86.7	11.2	12.9	86.6	1.0	1.2
L048	Cycloxydime	LC	76.2	4.1	5.4	89.6	1.0	1.2
L049	Cyflufenamide	LC	85.1	5.3	6.3	83.3	3.8	4.5
L050	Cyflumetofen	LC	106.6	14.7	13.8	86.5	5.7	6.6
L051	Cymoxanil	LC	77.6	2.5	3.2	78.4	7.0	9.0
L052	Cyprodinil	LC	74.5	2.1	2.8	83.5	5.3	6.4
L053	Demeton-S-methyl	LC	79.0	3.9	5.0	71.0	0.4	0.5
L054	Diclotophos	LC	97.7	1.5	1.5	80.7	1.0	1.3
L055	Diflubenzuron	LC	80.6	2.2	2.7	74.5	4.0	5.3
L056	Dimethenamid	LC	74.6	3.1	4.2	73.6	3.9	5.2
L057	Dimethoate	LC	98.8	4.2	4.2	104.5	4.5	4.3
L058	Dimethomorph 1+2	LC	74.9	4.5	6.0	81.3	1.8	2.2
L059	Dinotefuran	LC	74.2	1.6	2.1	78.4	3.0	3.9
L060	Diuron	LC	76.5	1.5	2.0	81.9	3.5	4.3
L061	Dymron	LC	75.5	4.0	5.3	75.6	4.3	5.7
L062	Emamectin benzoate B1a	LC	74.5	4.5	6.4	86.2	2.3	2.8
L063	Emamectin benzoate B1b	LC	69.8	0.1	1.7	73.3	0.2	3.7
L064	Ethiprole	LC	86.0	6.6	7.6	90.2	6.2	6.9
L065	Ethirimol	LC	78.3	1.8	2.3	78.2	5.4	6.9
L066	Etoxazole	LC	71.6	0.3	0.4	93.9	2.4	2.5

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L067	Famoxadone	LC	77.2	8.7	11.3	74.0	2.9	3.9
L068	Fenamiphos	LC	78.3	2.4	3.1	92.3	6.8	7.4
L069	Fenazaquin	LC	113.7	1.7	1.5	78.1	6.4	8.2
L070	Fenbutatin-oxide	LC	79.4	1.1	1.3	81.1	4.2	5.2
L071	Fenhexamid	LC	79.9	5.7	7.2	84.2	12.3	14.6
L072	Fenobucarb	LC	83.8	4.1	5.0	75.8	4.0	5.3
L073	Fenothiocarb	LC	77.0	3.4	4.4	80.9	3.7	4.6
L074	Fenoxanil 1+2	LC	79.1	6.4	8.1	75.7	5.0	6.7
L075	Fenoxycarb	LC	82.5	2.3	2.7	82.9	2.6	3.1
L076	Fenpyroximate	LC	82.2	1.9	2.3	81.5	3.3	4.1
L077	Fenthion	LC	84.1	12.4	14.7	98.4	8.5	8.7
L078	Ferimzone	LC	78.9	1.5	1.9	74.4	0.6	0.8
L079	Fipronil	LC	86.9	1.2	1.4	102.5	4.8	4.7
L080	Fipronil-sulfone	LC	82.1	5.5	6.7	86.3	4.5	5.2
L081	Flazasulfuron	LC	85.9	0.7	0.8	78.6	7.1	9.0
L082	Flonicamid	LC	74.5	1.2	1.6	71.4	2.1	2.9
L083	Fluazifop-P-butyl	LC	82.3	4.0	4.9	80.5	3.8	4.7
L084	Fluazinam	LC	73.1	3.4	4.7	79.5	1.9	2.3
L085	Flubendiamide	LC	87.2	3.0	3.4	95.7	8.1	8.4
L086	Fludioxonil_N	LC	102.4	9.7	9.4	96.5	4.9	5.1
L087	Flufenoxuron	LC	74.7	2.2	3.0	86.8	16.3	18.8
L088	Fluopicolide	LC	77.2	4.3	5.6	74.1	4.5	6.1
L089	Fluopyram	LC	80.5	1.5	1.8	86.4	6.1	7.1
L090	Flupyradifurone	LC	80.3	7.5	9.4	82.7	6.6	7.9
L091	Flusilazole	LC	72.1	1.0	1.4	74.0	4.6	6.2
L092	Flutriafol	LC	97.7	11.0	11.2	84.0	7.2	8.6
L093	Formetanate	LC	88.7	1.2	1.4	94.2	12.4	13.1
L094	Fosthiazate	LC	85.1	1.7	2.0	86.8	3.0	3.5
L095	Furametpyr	LC	81.6	3.3	4.0	84.5	3.4	4.1
L096	Haloxypop-methyl	LC	83.7	5.9	7.1	80.0	3.2	4.0
L097	Hexaconazole	LC	80.8	7.7	9.6	90.0	7.1	7.9
L098	Hexaflumuron	LC	81.1	14.2	17.5	86.6	10.7	12.4
L099	Hexythiazox	LC	89.4	1.6	1.8	85.2	5.3	6.2
L100	Imazalil	LC	80.0	1.5	1.9	77.5	6.7	8.7
L101	Imidacloprid	LC	88.8	3.1	3.4	82.0	2.9	3.5

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L102	Indoxacarb	LC	80.4	5.7	7.1	89.5	13.0	14.5
L103	Iprovalicarb 1+2	LC	78.0	3.2	4.2	78.1	2.3	2.9
L104	Isazofos	LC	82.0	4.7	5.7	81.1	8.4	10.3
L105	Isoprocarb	LC	80.8	5.5	6.8	83.4	4.4	5.3
L106	Isopyrazam	LC	80.0	3.9	4.9	82.7	4.9	6.0
L107	Isouron	LC	82.6	0.5	0.6	84.7	1.1	1.3
L108	Isoxaflutole	LC	86.3	1.1	1.2	79.7	5.5	6.9
L109	Jasmolin 1	LC	79.2	0.2	8.1	78.7	0.3	12.8
L110	Jasmolin 2	LC	116.8	1.0	43.1	88.9	0.4	18.5
L111	Linuron	LC	74.4	5.9	7.9	84.2	11.4	13.5
L112	Lufenuron	LC	72.0	0.8	1.2	91.3	16.8	18.4
L113	Mandipropamid	LC	75.7	1.7	2.3	75.7	4.5	6.0
L114	Mecarbam	LC	101.8	5.5	5.4	76.5	3.0	4.0
L115	Mepanipyrim	LC	79.0	0.3	0.4	85.0	5.5	6.5
L116	Metaflumizone	LC	76.2	3.2	4.2	98.3	2.5	2.6
L117	Metalaxyl	LC	85.5	2.0	2.3	85.7	1.6	1.9
L118	Metconazole-cis	LC	80.8	6.3	7.8	86.9	4.1	4.7
L119	Methamidophos	LC	93.5	0.4	0.4	71.9	0.8	1.1
L120	Methiocarb	LC	78.8	6.9	8.7	75.1	2.9	3.8
L121	Methomyl	LC	90.8	0.9	0.9	87.1	3.8	4.3
L122	Methoprene	LC	78.3	6.9	8.9	82.4	5.9	7.2
L123	Methoxyfenozide	LC	85.7	8.5	9.9	73.7	2.2	3.0
L124	Metobromuron	LC	78.8	11.2	14.2	83.0	10.7	12.8
L125	Metolcarb	LC	83.8	1.6	1.9	76.2	5.5	7.2
L126	Metrafenone	LC	90.4	4.2	4.6	75.7	3.5	4.6
L127	Metribuzin	LC	82.1	6.8	8.3	74.9	0.3	0.4
L128	Mevinphos(1+2)	LC	85.9	0.3	0.4	82.1	1.1	1.4
L129	Monocrotophos	LC	77.6	1.1	1.4	80.8	3.8	4.6
L130	MPMC(Xykykcarb)_back	LC	88.0	2.9	3.3	81.9	4.1	5.1
L131	Norflurazon	LC	80.0	1.9	2.4	80.9	1.3	1.6
L132	Novaluron	LC	81.7	7.6	9.3	89.4	10.1	11.4
L133	Omethoate	LC	79.3	2.5	3.1	77.0	3.3	4.2
L134	Oxamyl	LC	84.2	1.9	2.2	83.7	3.2	3.8
L135	Oxycarboxine	LC	76.3	3.0	4.0	81.4	0.9	1.1
L136	Oxydemeton-methyl	LC	84.5	2.2	2.6	103.9	13.0	12.5



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L137	Pencycuron	LC	84.8	2.6	3.0	77.8	3.1	4.0
L138	Penoxsulam	LC	73.4	0.7	1.0	82.7	3.3	4.0
L139	Penthiopyrad	LC	93.6	8.2	8.7	97.6	9.3	9.6
L140	Phosphamidon 1+2	LC	86.5	2.2	2.6	84.8	2.3	2.7
L141	Phoxim	LC	85.0	2.7	3.2	75.4	2.3	3.1
L142	Piperonyl butoxide	LC	89.4	4.9	5.5	88.5	4.3	4.9
L143	Pirimicarb	LC	86.6	3.0	3.5	88.9	1.9	2.2
L144	Pretilachlor	LC	82.4	7.5	9.1	79.0	4.0	5.1
L145	Probenazole	LC	79.0	0.3	0.4	85.0	5.5	6.5
L146	Prochloraz	LC	95.3	5.0	5.3	76.5	3.1	4.1
L147	Profenophos	LC	88.4	2.2	2.5	82.0	2.2	2.7
L148	Promecarb	LC	72.7	1.7	2.4	74.2	2.0	2.7
L149	Propamocarb hydrochloride	LC	75.0	1.0	1.3	81.2	6.1	7.5
L150	Propanil	LC	80.2	6.5	8.2	88.1	9.8	11.1
L151	Propargite	LC	77.3	6.4	8.3	80.3	2.0	2.5
L152	Propoxur	LC	90.4	1.6	1.7	82.4	1.3	1.5
L153	Proquinazid	LC	75.0	4.6	6.1	83.6	5.7	6.9
L154	Pymetrozine	LC	87.8	0.8	0.9	80.4	11.0	13.7
L155	Pyraclostrobin	LC	79.7	4.1	5.2	78.1	2.3	2.9
L156	Pyrazosulfuron-ethyl	LC	87.1	5.1	5.8	73.4	3.3	4.5
L157	Pyrethrin I	LC	76.1	3.4	8.6	77.8	0.6	1.4
L158	Pyrethrin II	LC	67.4	2.1	10.0	76.4	1.2	5.0
L159	Pyribencarb	LC	81.6	2.5	3.1	76.4	4.5	5.9
L160	Pyridaben	LC	73.0	2.4	3.3	81.8	0.8	1.0
L161	Pyridate	LC	103.9	1.9	1.8	74.8	3.8	5.1
L162	Pyrifenoxy 1+2	LC	80.2	1.9	2.3	73.1	2.6	3.5
L163	Pyriproquinazon	LC	82.0	8.8	10.7	81.4	8.8	10.9
L164	Quinoxifen	LC	91.1	2.6	2.9	88.4	7.7	8.7
L165	Quizalofop-ethyl	LC	75.9	3.7	4.9	76.7	4.8	6.3
L166	Rotenone	LC	76.9	4.3	5.6	80.2	4.6	5.8
L167	Saflufenacil	LC	75.0	4.3	5.7	100.4	19.2	19.1
L168	Sethoxydim	LC	84.9	12.2	14.4	85.8	12.6	14.7
L169	Simazine	LC	72.3	1.2	1.7	82.1	7.0	8.5
L170	Spinetoram J	LC	76.9	0.9	1.6	92.0	3.6	5.2
L171	Spinetoram L	LC	56.6	0.3	1.9	71.7	0.6	3.3

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L172	Spinosad A(spinosyn A)	LC	77.4	1.2	2.6	83.2	3.7	7.6
L173	Spinosad D(spinosynD)	LC	79.1	0.4	1.2	85.0	1.5	4.3
L174	Spirodiclofen	LC	87.8	2.7	3.1	82.9	4.6	5.5
L175	Spiromesifen	LC	84.2	10.8	12.8	90.6	0.7	0.7
L176	Spirotetramat	LC	77.6	2.5	3.3	72.5	1.9	2.6
L177	Sulfoxaflor 1+2	LC	76.0	3.7	4.9	79.4	6.1	7.7
L178	Tebufenozide	LC	78.0	4.2	5.3	79.0	5.3	6.7
L179	Tebufenpyrad	LC	86.4	3.2	3.8	80.3	7.0	8.7
L180	Teflubenzuron	LC	83.2	6.3	7.6	82.7	8.5	10.3
L181	Tepraloxydim	LC	85.3	11.8	13.9	70.8	1.0	1.4
L182	Thiabendazole	LC	97.2	2.9	3.0	85.2	6.0	7.0
L183	Thiacloprid	LC	83.5	1.0	1.2	83.9	3.8	4.5
L184	Thiamethoxam	LC	91.3	0.6	0.7	78.2	3.0	3.9
L185	Thiobencarb	LC	80.9	2.9	3.6	79.0	4.1	5.2
L186	Thiodicarb	LC	76.8	2.1	2.7	87.1	3.0	3.4
L187	Thiofanox	LC	76.7	2.7	3.5	74.1	1.7	2.3
L188	Tolfenpyrad	LC	73.4	1.6	2.1	86.4	3.7	4.3
L189	Tolyfluanid	LC	72.7	1.6	2.2	72.1	1.9	2.6
L190	Trichlorfon	LC	83.3	1.6	2.0	81.2	1.5	1.8
L191	Tricyclazole	LC	92.8	1.1	1.2	81.0	4.9	6.0
L192	Trifloxystrobin	LC	80.3	4.3	5.4	81.9	6.3	7.7
L193	Triforine_392	LC	111.3	6.6	5.9	96.5	7.0	7.3
L194	Vamidothion	LC	87.3	2.3	2.6	81.0	3.7	4.5
L195	XMC(Macbal)_front	LC	82.4	2.9	3.5	77.1	1.9	2.5
L196	Zoxamide	LC	78.45	5	6	82	9	11

Appendix III - Teas

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G001	2,6-Diisopropyl-naphthalene (2,6-DIPN)	GC	73.3	2.1	2.8	74.4	2.4	3.2
G002	2-Phenylphenol	GC	119.3	2.3	1.9	75.0	1.0	1.3
G003	Dicofol (DCBP)	GC	106.7	1.2	1.1	73.3	3.3	4.6
G004	Acetochlor	GC	115.0	2.0	1.7	74.3	0.7	1.0
G005	Acrinathrin	GC	112.0	8.9	7.9	92.7	2.1	2.2
G006	Alachlor	GC	115.0	3.6	3.1	74.3	1.5	2.1
G007	Aldrin	GC	107.7	1.5	1.4	76.6	1.7	2.2
G008	Allethrin	GC	101.4	12.1	11.9	77.3	2.4	3.1
G009	$\alpha$ -cypermethrin	GC	80.3	0.6	0.7	72.1	0.5	0.6
G010	Azinphos-methyl	GC	79.0	3.6	4.6	113.7	2.5	2.2
G011	Benfluralin	GC	75.3	4.0	5.4	71.2	0.9	1.2
G012	BifenoX	GC	92.7	9.2	10.0	98.3	5.5	5.6
G013	Bifenthrin	GC	90.7	2.9	3.2	73.3	0.6	0.8
G014	Bitertanol	GC	74.6	0.5	0.7	86.7	5.1	5.9
G015	Bromacil	GC	90.3	7.6	8.5	76.3	1.5	2.0
G016	Bromophos-ethyl	GC	108.3	8.4	7.7	72.7	1.5	2.1
G017	Bromophos-methyl	GC	107.0	3.0	2.8	73.1	1.8	2.4
G018	Bromopropylate	GC	78.0	1.0	1.3	73.3	1.5	2.1
G019	Bromuconazole	GC	90.0	1.7	1.9	86.7	4.0	4.7
G020	Bupirimate	GC	112.3	4.2	3.7	74.0	1.0	1.4
G021	Butachlor	GC	94.0	6.9	7.4	83.7	2.3	2.8
G022	Butralin	GC	82.0	6.9	8.4	86.0	1.7	2.0
G023	Cadusafos	GC	84.7	2.9	3.4	72.0	1.0	1.4
G024	Carbophenothion	GC	94.3	3.8	4.0	91.7	2.5	2.7
G025	Chinomethionat	GC	89.0	2.0	2.2	74.4	2.4	3.3
G026	Chlorfenapyr	GC	107.0	7.5	7.1	81.0	5.0	6.2
G027	Chloropropylate	GC	83.0	1.7	2.1	94.3	5.0	5.3
G028	Chlorothalonil	GC	76.3	5.1	6.7	81.1	6.5	8.0
G029	Chlorpropham	GC	95.7	6.4	6.6	77.4	5.7	7.4
G030	Chlorpyrifos	GC	92.3	6.6	7.2	71.9	1.0	1.4
G031	Chlorpyrifos-methyl	GC	112.1	8.7	7.8	72.4	2.8	3.9
G032	Chlorthal-dimethyl	GC	103.1	14.1	13.7	72.8	1.8	2.5



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G033	Chlozolate	GC	112.3	3.5	3.1	85.7	13.4	15.6
G034	cis-Chlordane	GC	107.7	5.9	5.5	81.4	15.2	18.7
G035	CPMC (Etofol)	GC	109.7	1.1	1.0	74.2	6.0	8.1
G036	Cyanofenphos	GC	93.0	5.0	5.4	79.0	1.0	1.3
G037	Cyanophos	GC	111.3	0.6	0.5	71.7	1.2	1.6
G038	Cyfluthrin	GC	91.0	3.0	3.3	84.4	6.4	7.6
G039	Cyhalofop-butyl	GC	77.0	2.0	2.6	79.3	9.7	12.2
G040	$\lambda$ -Cyhalothrin	GC	91.0	1.0	1.1	97.0	11.3	11.6
G041	Cypermethrin	GC	82.3	2.1	2.5	86.7	13.0	15.0
G042	Cyproconazole	GC	89.7	0.6	0.6	87.3	2.3	2.6
G043	Deltamethrin	GC	104.3	0.6	0.6	92.3	13.1	14.1
G044	Diazinon	GC	118.7	1.5	1.3	80.1	8.0	10.0
G045	Dichlorvos	GC	115.7	3.1	2.7	85.9	5.0	5.8
G046	Dicloran	GC	108.7	4.9	4.5	80.7	4.2	5.2
G047	Dicofol	GC	74.9	4.4	5.9	78.7	1.2	1.5
G048	Dieldrin	GC	117.1	2.6	2.3	81.3	0.1	0.1
G049	Difenoconazole	GC	77.7	9.1	11.8	87.9	1.3	1.5
G050	Dimethipin	GC	95.4	3.5	3.7	73.0	1.2	1.6
G051	Diniconazole	GC	76.4	1.9	2.5	86.0	1.7	2.0
G052	Dinitramine	GC	81.5	1.5	1.8	75.8	4.9	6.5
G053	Diphenamid	GC	104.0	3.0	2.9	76.3	2.8	3.7
G054	Diphenylamine	GC	115.7	0.6	0.5	75.9	3.3	4.4
G055	Disulfoton	GC	74.3	1.9	2.5	84.9	1.3	1.5
G056	Ditalimfos	GC	81.7	3.1	3.7	75.7	1.2	1.5
G057	Dithiopyr	GC	112.3	3.5	3.1	81.1	9.9	12.3
G058	Edifenphos	GC	80.3	0.6	0.7	92.0	2.6	2.9
G059	Endosulfan-sulfate	GC	94.0	1.9	2.0	87.3	3.4	3.8
G060	Endrin	GC	108.7	10.0	9.2	79.0	5.1	6.4
G061	EPN	GC	77.7	6.7	8.6	95.3	4.5	4.7
G062	Epoxiconazole	GC	79.3	4.0	5.1	86.0	1.7	2.0
G063	Esfenvalerate	GC	73.0	1.7	2.3	87.3	1.5	1.7
G064	Ethion	GC	79.7	4.7	5.9	88.3	0.6	0.7
G065	Ethoprophos	GC	88.7	5.0	5.7	86.2	2.6	3.0
G066	Etofenprox	GC	82.0	2.6	3.2	75.0	0.0	0.0

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G067	Etridiazole	GC	78.3	1.2	1.5	76.3	0.6	0.8
G068	Etrimfos	GC	107.0	2.0	1.9	72.0	1.0	1.4
G069	Fenarimol	GC	74.3	3.7	5.0	78.7	1.2	1.5
G070	Fenbuconazole	GC	76.7	0.6	0.8	84.3	3.2	3.8
G071	Fenitrothion	GC	101.7	8.1	8.0	84.7	1.2	1.4
G072	Fenoxaprop-ethyl	GC	74.2	1.6	2.1	84.0	2.0	2.4
G073	Fenpropathrin	GC	87.3	4.5	5.2	78.7	3.2	4.1
G074	Fenpropimorph	GC	85.0	2.0	2.4	76.5	4.4	5.8
G075	Fensulfothion	GC	105.0	11.8	11.2	70.0	0.0	0.0
G076	Fenvalerate	GC	73.5	2.5	3.4	87.3	1.5	1.7
G077	Flucythrinate	GC	73.0	2.6	3.6	93.3	0.6	0.6
G078	Fluensulfone	GC	111.3	3.5	3.2	79.2	4.9	6.1
G079	Fluroxypyr-meptyl	GC	97.0	4.0	4.1	74.9	8.4	11.3
G080	Flutolanil	GC	71.9	0.6	0.8	84.7	0.6	0.7
G081	Fluvalinate	GC	104.3	5.1	4.9	106.7	0.6	0.5
G082	Fluxapyroxad	GC	72.5	1.5	2.1	83.0	3.0	3.6
G083	Fonofos	GC	102.0	1.7	1.7	79.2	9.9	12.4
G084	Formothion	GC	111.0	8.5	7.7	77.0	1.0	1.3
G085	Fthalide(Phthalide)	GC	98.2	0.6	0.6	90.1	3.6	4.0
G086	Halfenprox	GC	84.0	5.3	6.3	84.3	2.5	3.0
G087	Heptachlor epoxide	GC	88.6	5.0	5.6	87.5	8.7	9.9
G088	Heptachlor	GC	104.0	2.0	1.9	74.3	2.3	3.1
G089	Heptenophos	GC	110.7	1.2	1.0	72.0	1.0	1.4
G090	Hexazinone	GC	101.0	1.0	1.0	71.3	1.2	1.6
G091	Imibenconazole	GC	72.6	3.1	4.3	90.7	1.5	1.7
G092	Iprobenfos	GC	82.7	3.2	3.9	83.3	2.5	3.0
G093	Iprodione	GC	90.2	7.6	8.5	77.4	2.2	2.8
G094	Isofenphos	GC	89.7	4.0	4.5	77.0	1.0	1.3
G095	Isoprothiolane	GC	102.3	10.2	10.0	77.0	1.0	1.3
G096	Isotianil	GC	71.3	1.0	1.5	76.6	2.6	3.3
G097	Isoxathion	GC	74.1	3.5	4.7	84.0	8.9	10.6
G098	Kresoxim-methyl	GC	75.4	2.3	3.1	71.8	1.0	1.4
G099	Malathion	GC	106.3	2.1	2.0	91.7	3.1	3.3
G100	Mefenacet	GC	72.1	1.2	1.7	82.3	0.6	0.7

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G101	Mephosfolan	GC	86.7	13.6	15.7	88.3	8.1	9.2
G102	Mepronil	GC	75.8	0.7	0.9	85.7	1.2	1.3
G103	Metazachlor	GC	105.0	3.6	3.4	72.5	3.6	4.9
G104	Methacrifos	GC	115.0	3.0	2.6	76.5	1.8	2.3
G105	Methidathion	GC	96.0	1.0	1.0	88.7	1.2	1.3
G106	Methyl pentachlorophenyl sulfide	GC	80.8	2.9	3.6	76.2	2.1	2.7
G107	Metolachlor	GC	114.0	3.6	3.2	73.3	0.6	0.8
G108	Mirex	GC	75.4	3.4	4.5	76.4	2.7	3.5
G109	Molinate	GC	105.0	4.6	4.4	95.4	0.3	0.3
G110	Myclobutanil	GC	82.9	2.7	3.3	79.3	1.5	1.9
G111	Napropamide	GC	78.0	3.5	4.4	73.3	2.1	2.8
G112	Nuarimol	GC	88.3	1.2	1.3	72.2	2.7	3.7
G113	o,p'-DDD	GC	110.7	4.2	3.8	70.5	0.8	1.2
G114	o,p'-DDE	GC	85.5	5.0	5.9	74.2	2.5	3.3
G115	o,p'-DDT	GC	82.9	2.8	3.4	76.4	4.3	5.7
G116	Oxadiazon	GC	84.5	4.1	4.8	75.1	4.8	6.4
G117	Oxadixyl	GC	96.3	3.2	3.3	71.0	0.8	1.2
G118	Oxyfluorfen	GC	104.7	2.1	2.0	87.0	6.2	7.2
G119	Paclobutrazol	GC	72.2	2.6	3.6	96.7	1.2	1.2
G120	Parathion	GC	89.7	5.9	6.5	102.3	3.1	3.0
G121	Parathion-methyl	GC	113.9	1.0	0.9	88.7	4.5	5.1
G122	Penconazole	GC	111.7	5.0	4.5	75.3	2.3	3.1
G123	Pendimethalin	GC	79.3	7.5	9.5	81.0	4.4	5.4
G124	Penflufen	GC	79.0	2.0	2.5	75.0	0.0	0.0
G125	Pentachloroaniline	GC	115.3	1.6	1.3	73.8	3.5	4.8
G126	Permethrin	GC	73.3	2.2	2.9	80.6	13.6	16.9
G127	Phenothiol	GC	97.3	5.0	5.2	72.1	2.6	3.6
G128	Phenothrin	GC	83.7	12.1	14.4	77.8	9.7	12.5
G129	Phenthoate	GC	100.4	6.7	6.7	79.1	7.4	9.3
G130	Phorate	GC	87.7	7.5	8.6	72.7	3.1	4.2
G131	Phosalone	GC	74.7	2.1	2.8	88.7	2.5	2.8
G132	Phosmet	GC	73.2	1.3	1.8	83.3	0.6	0.7
G133	Pirimiphos-ethyl	GC	106.7	4.7	4.4	72.7	2.2	3.0



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G134	Pirimiphos-methyl	GC	85.4	0.8	0.9	75.0	1.0	1.3
G135	p,p'-DDD	GC	83.0	3.5	4.2	71.4	2.4	3.3
G136	p,p'-DDE	GC	104.7	1.6	1.5	73.2	2.0	2.8
G137	p,p'-DDT	GC	107.7	5.1	4.8	81.6	13.3	16.3
G138	Procymidone	GC	99.4	7.0	7.1	72.2	1.8	2.6
G139	Prometryn	GC	92.4	1.0	1.1	71.6	0.7	1.0
G140	Propaphos	GC	83.7	8.5	10.2	92.0	2.6	2.9
G141	Propiconazole	GC	108.0	3.5	3.2	92.3	2.1	2.3
G142	Prothiofos	GC	101.7	3.1	3.0	78.7	2.1	2.6
G143	Pyraclofos	GC	71.2	0.4	0.5	110.3	2.3	2.1
G144	Pyraflufen-ethyl	GC	96.3	9.7	10.1	77.0	3.6	4.7
G145	Pyrazophos	GC	72.1	1.8	2.5	89.7	1.5	1.7
G146	Pyridaphenthion	GC	76.3	5.5	7.2	84.7	2.1	2.5
G147	Pyrimethanil	GC	103.3	3.8	3.7	76.0	6.2	8.2
G148	Pyrimidifen	GC	75.6	0.2	0.3	79.3	1.5	1.9
G149	Pyriproxyfen	GC	84.4	1.9	2.3	77.7	0.6	0.7
G150	Pyroquilon	GC	91.3	0.0	0.0	81.3	5.3	6.6
G151	Quinalphos	GC	84.7	3.8	4.5	82.7	9.3	11.2
G152	Quintozene (PCNB)	GC	102.7	8.6	8.4	77.6	7.2	9.3
G153	Salithion	GC	111.1	10.0	9.0	76.6	8.3	10.9
G154	Sedaxane	GC	74.7	1.2	1.6	88.7	3.5	4.0
G155	Silafluofen	GC	85.7	1.2	1.3	76.3	4.4	5.7
G156	Tebuconazole	GC	86.0	3.0	3.5	82.7	3.2	3.9
G157	Terbufos	GC	79.0	3.0	3.8	71.8	2.0	2.8
G158	Tetraconazole	GC	109.7	2.3	2.1	83.7	4.9	5.9
G159	Tetradifon	GC	84.6	11.6	13.7	70.7	0.6	0.8
G160	Tetramethrin	GC	73.3	4.2	5.7	79.0	4.4	5.5
G161	Thenylchlor	GC	89.7	6.0	6.7	78.3	3.1	3.9
G162	Thifluzamide	GC	71.2	2.1	2.9	82.0	3.0	3.7
G163	Thiometon	GC	84.3	1.5	1.8	76.5	3.9	5.1
G164	Tolclofos-methyl	GC	116.7	1.5	1.3	72.7	4.7	6.4
G165	trans-Chlordane	GC	87.9	5.8	6.6	79.4	4.5	5.7
G166	Triadimefon	GC	104.3	2.5	2.4	79.0	3.6	4.6
G167	Triadimenol	GC	72.3	2.1	2.9	76.7	3.1	4.0

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
G168	Triazophos	GC	90.7	4.6	5.1	93.7	4.2	4.4
G169	Tridiphane	GC	106.4	14.1	13.2	76.7	2.1	2.7
G170	Triflumizole	GC	108.3	9.7	9.0	77.0	3.6	4.7
G171	Trifluralin	GC	79.0	1.7	2.2	78.5	2.4	3.1
G172	Vinclozolin	GC	87.9	5.8	6.6	75.8	7.1	9.4
G173	$\alpha$ -BHC	GC	109.3	2.1	1.9	73.1	5.1	6.9
G174	$\alpha$ -Endosulfan	GC	89.2	3.7	4.1	77.2	5.5	7.1
G175	$\beta$ -BHC	GC	110.0	3.0	2.7	80.0	7.3	9.2
G176	$\beta$ -Endosulfan	GC	114.5	3.2	2.8	86.0	9.9	11.5
G177	$\gamma$ -BHC(Lindane)	GC	114.9	1.1	1.0	85.3	11.3	13.3
G178	$\delta$ -BHC	GC	113.0	0.3	0.2	89.6	4.0	4.4
L001	3-keto carbofuran	LC	98.9	1.7	1.7	74.9	3.2	4.2
L002	3-OH Carbofuran	LC	75.3	3.2	4.3	88.6	7.5	8.5
L003	Abamectin+Na	LC	82.6	8.7	10.5	86.9	1.4	1.6
L004	Acephate	LC	83.2	2.2	2.6	80.6	13.1	16.2
L005	Acequinocyl-hydroxyl	LC	85.6	6.1	7.1	100.0	5.3	5.3
L006	Acetamiprid	LC	76.6	2.9	3.7	83.4	11.5	13.8
L007	Acibenzolar-S-methyl	LC	74.4	1.7	2.3	72.5	2.5	3.5
L008	Aldicarb	LC	79.1	2.5	3.2	83.5	9.8	11.7
L009	Aldicarb sulfone	LC	101.3	9.6	9.4	80.9	8.5	10.5
L010	Aldicarb sulfoxide	LC	99.9	3.8	3.8	86.7	13.6	15.7
L011	Alloxydim(sodium)	LC	99.1	8.4	8.5	79.7	9.4	11.8
L012	Ametoctradin	LC	95.4	0.9	0.9	87.5	8.5	9.8
L013	Ametryn	LC	102.0	4.1	4.0	91.0	13.6	14.9
L014	Amisulbrom	LC	89.4	10.7	12.0	90.9	17.6	19.3
L015	Atrazine	LC	92.5	2.2	2.4	85.0	8.2	9.6
L016	Azoxystrobin	LC	108.4	0.5	0.5	87.3	13.3	15.2
L017	Benalaxyl	LC	99.5	4.4	4.5	88.7	8.0	9.0
L018	Bendiocarb	LC	82.8	2.2	2.7	88.0	4.1	4.7
L019	Benfuracarb	LC	79.6	3.4	4.3	83.6	3.1	3.7
L020	Bensulfuron-methyl	LC	77.9	1.9	2.4	79.6	5.8	7.3
L021	Bentazone	LC	87.5	1.4	1.6	81.3	15.6	19.1
L022	Benthiazole	LC	97.9	5.2	5.3	80.7	2.6	3.2
L023	Bifenazate	LC	110.4	2.1	1.9	87.0	4.9	5.7

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L024	Boscalid	LC	83.4	6.8	8.1	93.6	6.7	7.2
L025	Bufencard 1+2	LC	106.0	9.5	9.0	83.5	8.0	9.6
L026	Buprofezin	LC	101.3	3.7	3.7	89.1	7.6	8.5
L027	Butocarboxim	LC	83.4	0.9	1.1	92.4	13.5	14.6
L028	Carbaryl	LC	103.3	6.4	6.2	83.9	5.2	6.2
L029	Carbendazim	LC	85.3	1.7	2.0	78.4	3.0	3.8
L030	Carbofuran	LC	114.0	1.8	1.6	106.4	3.3	3.1
L031	Carbosulfan	LC	73.8	1.5	2.1	73.7	2.7	3.7
L032	Carfentrazone-ethyl	LC	96.0	7.8	8.1	76.2	0.5	0.6
L033	Carpropamid	LC	96.7	10.6	10.9	80.6	15.4	19.1
L034	Chlorantraniliprole	LC	93.0	8.7	9.3	86.0	6.6	7.7
L035	Chlorfluazuron	LC	95.8	6.6	6.9	86.3	11.0	12.7
L036	Chromafenozide	LC	101.5	3.3	3.2	84.9	12.5	14.7
L037	Cinern 1	LC	105.5	0.7	12.5	89.8	0.5	9.9
L038	Cinern 2	LC	54.9	0.3	11.6	70.9	0.1	3.3
L039	Cinosulfuron	LC	85.9	2.4	2.7	79.4	10.6	13.3
L040	Clethodim	LC	73.8	2.7	3.7	81.8	7.3	8.9
L041	Clofentezine	LC	90.6	4.4	4.9	80.9	7.1	8.8
L042	Clomazone	LC	99.0	4.4	4.4	84.8	15.0	17.7
L043	Clomeprop	LC	76.3	2.9	3.9	80.1	8.4	10.5
L044	Clothianidin	LC	81.4	5.6	6.9	80.7	11.4	14.1
L045	Cyanazine	LC	96.7	3.1	3.2	83.2	10.6	12.7
L046	Cyazofamid	LC	98.4	3.0	3.0	80.8	5.5	6.8
L047	Cyclosulfamuron	LC	105.5	2.8	2.6	81.6	11.8	14.4
L048	Cycloxydime	LC	84.4	4.0	4.8	75.2	3.3	4.4
"?12+E 208/	Cyflufenamide	LC	94.7	2.2	2.4	90.6	6.0	6.7
L050	Cyflumetofen	LC	107.4	7.6	7.0	90.3	13.0	14.4
L051	Cymoxanil	LC	101.6	4.5	4.5	75.7	5.3	7.1
L052	Cyprodinil	LC	108.0	1.1	1.0	87.3	7.5	8.6
L053	Demeton-S-methyl	LC	76.2	3.2	4.2	86.5	8.6	9.9
L054	Diclotophos	LC	95.1	2.6	2.7	88.7	8.1	9.1
L055	Diflubenzuron	LC	94.7	1.0	1.1	82.6	16.4	19.9
L056	Dimethenamid	LC	100.9	5.4	5.3	85.3	8.2	9.6



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L057	Dimethoate	LC	110.0	2.2	2.0	91.6	3.5	3.8
L058	Dimethomorph 1+2	LC	70.4	0.3	0.5	90.5	12.5	13.8
L059	Dinotefuran	LC	87.0	7.2	8.3	79.1	8.9	11.3
L060	Diuron	LC	101.2	4.9	4.8	86.1	7.5	8.8
L061	Dymron	LC	110.8	1.9	1.8	85.1	15.0	17.6
L062	Emamectin benzoate B1a	LC	83.0	0.9	1.2	82.6	6.9	8.9
L063	Emamectin benzoate B1b	LC	79.9	0.1	1.3	80.2	0.3	6.9
L064	Ethiprole	LC	72.7	0.8	1.1	84.8	3.5	4.2
L065	Ethirimol	LC	82.3	2.3	2.8	85.3	2.6	3.0
L066	Etoxazole	LC	92.3	4.4	4.8	90.5	6.4	7.1
L067	Famoxadone	LC	89.4	6.0	6.7	82.7	5.8	7.0
L068	Fenamiphos	LC	96.7	5.2	5.3	81.3	11.0	13.5
L069	Fenazaquin	LC	107.1	1.5	1.4	93.9	9.8	10.5
L070	Fenbutatin-oxide	LC	81.1	7.1	8.7	86.6	9.1	10.5
L071	Fenhexamid	LC	87.5	9.5	10.8	83.3	10.9	13.1
L072	Fenobucarb	LC	83.2	3.5	4.2	83.4	11.9	14.3
L073	Fenothiocarb	LC	102.9	5.1	4.9	83.9	10.1	12.0
L074	Fenoxanil 1+2	LC	99.7	3.5	3.5	84.1	12.0	14.3
L075	Fenoxycarb	LC	83.8	4.7	5.6	85.9	9.4	10.9
L076	Fenpyroximate	LC	91.8	2.6	2.9	82.7	8.3	10.0
L077	Fenthion	LC	97.2	10.1	10.4	76.6	6.1	8.0
L078	Ferimzone	LC	110.3	5.7	5.2	91.2	14.6	16.0
L079	Fipronil	LC	83.2	6.0	7.2	101.4	14.1	13.9
L080	Fipronil-sulfone	LC	92.6	6.0	6.4	92.1	8.6	9.4
L081	Flazasulfuron	LC	74.7	2.8	3.8	78.8	7.4	9.4
L082	Flonicamid	LC	90.3	3.5	3.9	80.4	15.4	19.1
L083	Fluazifop-P-butyl	LC	101.3	1.4	1.4	85.3	8.4	9.8
L084	Fluzinam	LC	101.2	1.7	1.6	86.4	12.3	14.2
L085	Flubendiamide	LC	90.1	3.6	4.0	101.9	7.2	7.1
L086	Fludioxonil_N	LC	83.8	8.0	9.6	89.9	3.9	4.3
L087	Flufenoxuron	LC	95.2	7.5	7.9	84.3	5.0	5.9
L088	Fluopicolide	LC	96.4	1.6	1.7	84.7	7.2	8.5
L089	Fluopyram	LC	107.4	2.5	2.4	87.5	6.1	7.0
L090	Flupyradifurone	LC	83.4	10.2	12.2	82.6	8.4	10.2

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L091	Flusilazole	LC	92.4	14.7	16.0	84.1	8.6	10.2
L092	Flutriafol	LC	83.0	7.8	9.4	94.2	9.1	9.7
L093	Formetanate	LC	73.0	0.7	1.0	78.1	5.2	6.7
L094	Fosthiazate	LC	102.0	3.4	3.4	88.3	7.2	8.2
L095	Furametpyr	LC	96.9	3.4	3.5	83.7	6.8	8.1
L096	Haloxypop-methyl	LC	108.2	2.4	2.2	87.7	5.2	5.9
L097	Hexaconazole	LC	84.2	6.3	7.5	83.8	13.0	15.5
L098	Hexaflumuron	LC	86.0	13.0	15.1	86.9	16.9	19.4
L099	Hexythiazox	LC	101.2	4.9	4.9	84.4	5.4	6.4
L100	Imazalil	LC	97.2	5.3	5.4	81.3	7.8	9.7
L101	Imidacloprid	LC	89.6	1.6	1.8	92.1	6.9	7.5
L102	Indoxacarb	LC	99.3	6.5	6.5	96.5	2.2	2.3
L103	Iprovalicarb 1+2	LC	100.4	4.4	4.3	86.2	11.5	13.4
L104	Isazofos	LC	84.3	4.4	5.3	86.4	8.0	9.3
L105	Isoprocab	LC	90.7	6.6	7.3	83.1	6.1	7.3
L106	Isopyrazam	LC	102.2	1.6	1.6	84.3	8.3	9.9
L107	Isouron	LC	105.2	3.5	3.3	89.0	8.1	9.1
L108	Isoxaflutole	LC	95.4	8.4	8.8	84.4	4.7	5.6
L109	Jasmolin 1	LC	87.5	0.2	7.0	58.8	0.2	8.5
L110	Jasmolin 2	LC	82.9	0.1	4.2	50.2	0.2	17.8
L111	Linuron	LC	100.9	7.5	7.5	90.5	5.1	5.7
L112	Lufenuron	LC	110.0	7.7	7.0	96.4	13.2	13.7
L113	Mandipropamid	LC	93.2	3.4	3.6	85.4	10.5	12.3
L114	Mecarbam	LC	112.1	3.3	3.0	81.6	8.6	10.5
L115	Mepanipyrim	LC	72.5	2.1	2.9	82.3	3.3	4.0
L116	Metaflumizone	LC	83.5	7.7	9.3	88.1	6.4	7.2
L117	Metalaxyl	LC	106.2	5.4	5.1	90.3	9.3	10.3
L118	Metconazole-cis	LC	86.5	9.8	11.3	81.0	7.5	9.3
L119	Methamidophos	LC	77.6	2.2	2.9	87.7	7.1	8.1
L120	Methiocarb	LC	111.2	4.0	3.6	85.6	11.3	13.2
L121	Methomyl	LC	91.5	1.3	1.4	86.3	9.8	11.4
L122	Methoprene	LC	88.4	3.4	3.8	82.0	7.3	8.9
L123	Methoxyfenozide	LC	104.4	2.7	2.6	90.5	9.3	10.2
L124	Metobromuron	LC	104.9	9.9	9.5	82.4	11.5	13.9

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L125	Metolcarb	LC	92.9	3.3	3.5	83.5	7.2	8.7
L126	Metrafenone	LC	100.8	5.1	5.1	81.6	12.9	15.8
L127	Metribuzin	LC	87.0	3.0	3.4	88.3	12.1	13.7
L128	Mevinphos(1+2)	LC	96.1	3.6	3.7	85.7	9.3	10.9
L129	Monocrotophos	LC	110.2	2.1	1.9	80.2	9.1	11.3
L130	MPMC(Xykykcarb)_bac k	LC	98.2	6.1	6.3	85.1	10.5	12.4
L131	Norflurazon	LC	104.8	5.6	5.4	88.9	12.8	14.4
L132	Novaluron	LC	92.6	7.7	8.3	76.2	5.0	6.6
L133	Omethoate	LC	73.9	0.3	0.4	82.5	12.0	14.5
L134	Oxamyl	LC	95.5	2.9	3.1	85.0	11.9	14.0
L135	Oxycarboxine	LC	94.4	3.1	3.3	83.8	10.1	12.1
L136	Oxydemeton-methyl	LC	108.2	2.8	2.6	85.0	9.0	10.6
L137	Pencycuron	LC	100.6	5.0	4.9	82.4	6.0	7.3
L138	Penoxsulam	LC	79.3	1.6	2.0	81.2	16.0	19.7
L139	Penthiopyrad	LC	84.5	5.4	6.4	99.3	9.7	9.8
L140	Phosphamidon 1+2	LC	75.6	1.4	1.8	88.1	6.3	7.1
L141	Phoxim	LC	97.5	11.8	12.1	81.8	11.4	14.0
L142	Piperonyl butoxide	LC	103.4	4.5	4.3	92.9	7.1	7.7
L143	Pirimicarb	LC	95.0	3.3	3.5	87.9	7.8	8.9
L144	Pretilachlor	LC	101.5	3.5	3.5	85.2	12.9	15.1
L145	Probenazole	LC	99.1	3.9	4.0	82.3	3.3	4.0
L146	Prochloraz	LC	73.1	2.4	3.3	79.0	7.4	9.3
L147	Profenophos	LC	96.7	9.9	10.3	81.1	4.0	4.9
L148	Promecarb	LC	103.9	8.6	8.2	83.6	13.1	15.6
L149	Propamocarb hydrochloride	LC	75.6	2.3	3.0	82.4	14.2	17.3
L150	Propanil	LC	78.1	13.4	17.2	96.2	18.9	19.7
L151	Propargite	LC	108.4	1.7	1.6	89.8	7.6	8.5
L152	Propoxur	LC	98.6	3.0	3.1	87.8	3.6	4.1
L153	Proquinazid	LC	94.6	3.0	3.1	86.5	8.9	10.3
L154	Pymetrozine	LC	74.0	4.9	6.6	75.7	2.5	3.3
L155	Pyraclostrobin	LC	97.1	8.5	8.8	90.1	9.1	10.1
L156	Pyrazosulfuron-ethyl	LC	84.6	4.9	5.9	79.6	2.3	2.8
L157	Pyrethrin I	LC	98.2	2.6	5.0	85.9	7.0	15.6



No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L158	Pyrethrin II	LC	116.0	3.2	8.7	79.7	4.5	17.8
L159	Pyribencarb	LC	100.9	3.8	3.7	85.4	12.4	14.5
L160	Pyridaben	LC	98.3	1.9	1.9	86.6	7.7	8.9
L161	Pyridate	LC	106.7	6.4	6.0	108.0	5.7	5.3
L162	Pyrifenox 1+2	LC	103.6	0.7	0.7	74.3	3.6	4.8
L163	Pyrifluquinazon	LC	104.2	3.6	3.5	77.5	4.8	6.1
L164	Quinoxifen	LC	95.5	9.8	10.2	79.1	1.1	1.4
L165	Quizalofop-ethyl	LC	100.7	0.7	0.7	86.8	8.7	10.1
L166	Rotenone	LC	91.4	9.6	10.5	77.4	7.5	9.6
L167	Saflufenacil	LC	77.9	3.3	4.2	92.1	3.9	4.2
L168	Sethoxydim	LC	75.5	3.8	5.0	79.1	3.6	4.6
L169	Simazine	LC	91.6	4.4	4.8	83.0	9.1	11.0
L170	Spinetoram J	LC	91.0	1.7	2.5	89.6	6.4	9.6
L171	Spinetoram L	LC	75.2	0.8	4.4	59.8	1.8	11.9
L172	Spinosad A(spinosyn A)	LC	99.6	2.1	3.5	118.1	6.5	13.4
L173	Spinosad D(spinosynD)	LC	85.3	0.3	0.9	81.9	2.8	8.4
L174	Spirodiclofen	LC	91.3	5.1	5.6	101.7	4.8	4.7
L175	Spiromesifen	LC	86.2	11.4	13.2	81.8	6.4	7.9
L176	Spirotetramat	LC	87.9	12.5	14.3	80.8	5.6	6.9
L177	Sulfoxaflor 1+2	LC	84.4	0.9	1.0	78.9	10.7	13.5
L178	Tebufenozide	LC	100.3	5.9	5.8	86.7	9.0	10.4
L179	Tebufenpyrad	LC	73.9	3.6	4.9	85.0	10.8	12.6
L180	Teflubenzuron	LC	91.3	2.6	2.8	91.9	17.2	18.7
L181	Tepraloxydim	LC	97.2	1.7	1.7	77.0	2.4	3.1
L182	Thiabendazole	LC	76.0	2.0	2.6	76.0	5.2	6.8
L183	Thiacloprid	LC	85.8	1.8	2.1	86.2	7.4	8.6
L184	Thiamethoxam	LC	91.7	1.5	1.6	80.1	13.6	17.0
L185	Thiobencarb	LC	83.8	2.0	2.4	82.8	7.8	9.5
L186	Thiodicarb	LC	91.8	1.5	1.7	85.7	7.3	8.5
L187	Thiofanox	LC	80.9	6.2	7.7	98.9	17.3	17.5
L188	Tolfenpyrad	LC	94.7	1.5	1.6	86.5	10.1	11.6
L189	Tolyfluanid	LC	92.6	9.1	9.8	96.4	13.5	14.0
L190	Trichlorfon	LC	88.5	3.1	3.5	76.7	6.8	8.9
L191	Tricyclazole	LC	76.4	1.0	1.3	82.2	11.6	14.1

No.	Compound	Analysis Method	Experimental Group FT			Control Group CG		
			Recovery Average (%)	Recovery SD	Recovery CV (%)	Recovery Average (%)	Recovery SD	Recovery CV (%)
L192	Trifloxystrobin	LC	110.7	4.0	3.6	86.9	7.3	8.4
L193	Triforine_392	LC	76.3	3.7	4.8	79.9	10.5	13.1
L194	Vamidothion	LC	89.8	2.3	2.5	89.3	10.3	11.5
L195	XMC(Macbal)_front	LC	97.7	1.9	1.9	90.5	7.4	8.2
L196	Zoxamide	LC	97	13	14	82.62	4.76	5.76