

## Supplementary Materials

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
1	2,4-D	HB/PG	2.52	219.2	125.0; 161.0	27; 15
2	Acephate	IN	0.81	184.1	125.1; 143.0	18; 8
3	Acetamiprid	IN	1.91	223.0	56.1; 126.0	15; 20
4	Acibenzolar-S-methyl	PA	5.96	210.9	69.0; 135.9	52; 30
5	Acitidone	FU	3.35	282.1	246.1; 264.1	14; 11
6	Aldicarb	NE/IN/AC	3.00	208.2	89.1; 116.1	19; 8
7	Aldicarb-sulfone	NE/IN/AC	0.83	223.0	86.0; 148.0	14; 10
8	Aldicarb-sulfoxide	NE/IN/AC	0.79	207.0	89.0; 132.0	14; 10
9	Allethrin	IN	9.10	303.4	93.2; 135.2	13; 12
10	Alloxydim	HB	3.56	324.6	178.4; 234.4	22; 15
11	Ametryn	HB	6.10	228.1	68.1; 186.1	36; 18
12	Amidosulfuron	HB	1.20	370.0	218.0; 261.0	25; 15
13	Aminocarb	IN	3.60	209.0	137.0; 152.0	22; 14
14	Amisulbrom	FU	8.54	466.0	148.0; 227.0	49; 25
15	Amitraz	AC/IN	9.74	294.4	163.2; 253.3	14; 12
16	Anilofos	HB	7.95	367.9	124.9; 198.9	34; 15
17	Aramite	IN	8.94	352.5	191.4; 255.3	12; 8
18	Asulam	HB	0.69	230.9	92.0; 155.9	22; 12
19	Atrazine	HB	4.80	216.1	96.1; 174.1	23; 18
20	Atrazine-desethyl	HB	2.21	188.0	78.9; 146.0	26; 16
21	Atrazine-desisopropyl	HB	4.92	174.0	78.9; 96.0	18; 18
22	Azaconazole	IN/FU	5.14	300.0	159.0; 231.1	28; 18
23	Azamethiphos	IN	3.46	325.0	111.9; 138.9	35; 24
24	Azimsulfuron	HB	1.53	425.0	139.1; 182.0	40; 20
25	Azinphos-methyl	IN/AC	5.49	317.9	131.9; 159.9	15; 6
26	Aziprotryne	HB	6.05	226.0	68.0; 156.0	30; 16
27	Azoxystrobin	FU	6.02	404.0	329.0; 372.0	30; 15
28	Beflubutamid	HB	7.59	356.5	91.2; 221.3	18; 19
29	Bendiocarb	IN	3.76	224.1	109.0; 167.0	18; 8
30	Benfuracarb	IN/NE	8.63	410.9	190.0; 195.0	13; 23
31	Benodanil	FU	4.75	324.0	76.1; 231.1	58; 22
32	Bensulfuron-methyl	HB	5.08	410.8	149.0; 182.0	22; 20
33	Bensulide	HB	7.45	398.0	157.9; 313.9	24; 10
34	Benthiavalicarb-isopropyl	FU	6.84	382.4	116.3; 180.2	30; 37
35	Benzoximate	AC	7.93	364.2	105.2; 199.2	25; 8

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
36	Benzthiazuron	HB	3.68	208.0	109.0; 151.0	36; 16
37	Bifenazate	AC	6.84	301.1	170.0; 198.0	20; 10
38	Boscalid	FU	6.21	342.9	139.9; 307.0	20; 20
39	Bromacil	HB	3.71	261.0	187.9; 204.9	28; 14
40	Bromoxynil	HB	1.87	275.8	78.7; 80.6	17; 17
41	Bromuconazole	FU	6.64	376.0	70.1; 158.9	25; 35
42	Bupirimate	FU	7.25	317.0	125.0; 108.0	36; 28
43	Buprofezin	AC/IN	8.90	306.1	57.4; 201.0	20; 12
44	Butachlor	HB	9.08	312.2	57.3; 238.2	22; 12
45	Butafenacil	HB	7.30	492.6	180.0; 331.0	38; 18
46	Butocarboxim-sulfoxide	IN	0.75	207.3	88.1; 132.2	9; 7
47	Butoxycarboxym	IN/AC	0.89	223.0	106.0; 166.0	10; 7
48	Buturon	HB	5.07	237.1	84.1; 126.0	16; 30
49	Cadusafos	IN/NE	8.16	271.1	131.0; 159.0	22; 16
50	Carbaryl	IN/PG	4.19	202.0	117.0; 145.0	28; 22
51	Carbendazim	FU	2.22	192.1	132.1; 160.1	28; 18
52	Carbetamide	HB	3.37	237.0	118.0; 192.0	14; 9
53	Carbofuran	IN/NE/AC	3.84	222.1	123.0; 165.1	16; 16
54	Carbofuran-3-OH	IN/NE/AC	1.95	238.0	163.0; 181.0	16; 10
55	Carbofuran-3-keto	IN/NE/AC	2.87	236.2	161.1; 179.1	18; 12
56	Carboxin	FU	4.01	236.0	87.0; 143.0	22; 16
57	Carpropamide	FU	7.61	334.0	103.0; 138.9	40; 18
58	Chlorbromuron	HB	6.05	292.9	182.0; 203.9	16; 18
59	Chlorfluazuron	IN	10.13	539.8	158.0; 382.9	20; 20
60	Chloridazon	HB	1.93	222.0	77.0; 92.0	30; 30
61	Chlormequat chloride	PG	0.77	122.1	58.2; 59.2	19; 20
62	Chlorotoluron	HB	4.63	213.4	46.2; 72.2	16; 18
63	Chloroxuron	HB	6.90	291.1	72.0; 164.1	25; 15
64	Chlorsulfuron	HB	1.64	358.0	141.0; 167.0	16; 18
65	Chlorthiamid	HB	2.23	206.1	154.1; 189.2	33; 17
66	Cinidon-ethyl	HB	8.87	394.0	107.0; 348.0	28; 18
67	Cinosulfuron	HB	1.96	414.0	157.0; 183.0	24; 16
68	Clethodim	HB	5.21	360.0	164.0; 268.1	18; 12
69	Climbazole	FU	6.85	293.0	141.0; 197.0	22; 16
70	Clodinafop-propargyl	HB	7.40	350.0	91.0; 266.0	32; 16
71	Clofentezine	AC	7.81	303.0	102.0; 138.0	35; 22
72	Clomazone	HB	5.85	240.0	89.0; 125.0	46; 18

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	$t_R$ , min	Precursor ion, $m/z$	MRM transitions 1; 2, $m/z$	Collision energy fragment 1; 2, eV
73	Cloquintocet mexyl	SA	9.03	336.1	192.0; 238.0	30; 16
74	Clothianidin	IN	1.55	250.0	132.0; 169.0	18; 12
75	Coumachlor	RO	4.55	343.0	163.0; 285.0	14; 16
76	Coumaphos	IN	7.60	363.0	289.0; 307.0	24; 16
77	Cyanazine	HB	3.37	241.0	96.0; 214.0	25; 17
78	Cyazofamid	FU	7.12	325.0	107.9; 261.0	20; 10
79	Cyclanilide	PG	4.35	272.1	160.0; 228.0	23; 12
80	Cyclosulfamuron	HB	5.39	422.1	199.0; 261.0	12; 15
81	Cycloxydim	HB	6.30	326.0	180.0; 280.0	22; 16
82	Cycluron	HB	5.30	199.0	69.2; 89.1	22; 14
83	Cyflufenamid	FU	8.05	413.2	203.0; 295.1	35; 15
84	Cymoxanil	FU	2.17	199.0	111.0; 128.0	18; 8
85	Cyproconazole	FU	6.64	292.2	70.2; 125.1	18; 24
86	Cyprodinil	FU	7.39	226.0	93.0; 108.0	33; 25
87	Dazomet	NE/FU/HB	0.97	162.9	89.8; 119.9	9; 14
88	Deltamethrin	IN	10.07	505.9	93.2; 280.9	46; 12
89	Demeton-S-methyl	IN/AC	4.04	231.1	61.2; 89.1	30; 10
90	Demeton-S-methyl-sulfone	IN/AC	1.05	263.0	121.0; 169.0	17; 17
91	Demeton-S-methyl-sulfoxide	IN/AC	0.98	247.0	109.0; 169.0	25; 14
92	Desmedipham	HB	5.36	301.0	136.0; 168.0	22; 10
93	Desmetryn	HB	4.80	214.1	82.1; 172.1	30; 20
94	Diafenthiuron	IN/AC	9.68	385.4	278.3; 329.3	33; 19
95	Dialifos	IN/AC	8.19	394.0	187.0; 208.0	8; 16
96	Di-allate	HB	8.39	270.1	86.1; 128.1	15; 11
97	Dichlofenthion	IN	8.89	315.3	259.2; 287.2	14; 11
98	Dichlofluanid	FU	7.26	333.0	123.0; 224.0	24; 10
99	Dichlorvos	IN/AC	3.63	221.0	79.0; 109.0	34; 22
100	Diclobutrazol	FU	7.54	328.0	70.0; 158.9	20; 38
101	Dicrotophos	IN/AC	1.39	238.0	112; 193	10; 10
102	Diethofencarb	FU	5.86	268.0	124.0; 226.0	40; 10
103	Difenoconazole	FU	8.38	406.0	111.1; 251.1	60; 25
104	Diflubenzuron	IN	7.08	309.0	155.9; 289.0	11; 10
105	Dimefox	IN	1.53	155.0	109.9; 135.0	18; 17
106	Dimefuron	HB	5.81	339.0	72.0; 166.9	26; 20
107	Dimepiperate	HB	8.37	264.1	119.0; 146.0	16; 10
108	Dimethachlor	HB	5.92	256.2	148.2; 224.2	25; 15
109	Dimethenamid	HB	6.04	276.0	168.0; 244.0	26; 14

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
110	Dimethoate	IN/AC	1.85	230.1	125.0; 199.0	20; 10
111	Dimethomorph	FU	6.49	388.1	165.0; 300.9	30; 20
112	Dimetilan	IN	2.23	241.1	72.2; 196.1	16; 10
113	Dimoxystrobin	FU	7.55	327.1	116.1; 205.2	21; 10
114	Dinocap	FU/AC	7.61	295.1	209.0; 193.4	31; 28
115	Dioxacarb	IN	4.11	224.1	123.1; 167.1	16; 8
116	Disulfoton	IN	10.12	274.9	61.1; 89.0	35; 20
117	Disulfoton sulfone	IN	5.00	307.1	97.1; 153.1	28; 12
118	Disulfoton sulfoxide	IN	4.70	291.0	97.0; 185.0	31; 14
119	Ditalimfos	FU	6.97	300.1	130.1; 148.1	34; 20
120	Dithiopyr	HB	8.55	402.0	248.1; 354.1	34; 18
121	Diuron	HB	4.94	233.0	46.3; 72.1	14; 18
122	Dodemorph	FU	9.79	282.1	98.0; 116.0	28; 21
123	Dodine	FU	8.28	228.0	57.1; 60.1	23; 23
124	Edifenphos	FU	7.70	311.0	109.0; 111.0	32; 26
125	Emamectin benzoate B1a	IN	9.85	887.0	82.0; 158.0	70; 33
126	EPN	IN/AC	8.12	324.0	157.0; 296.0	25; 14
127	Epoxiconazole	FU	6.92	330.0	101.0; 121.0	50; 22
128	Esprocarb	HB	8.84	266.1	71.0; 91.0	16; 22
129	Ethiofencarb	IN	4.47	226.1	107.0; 164.0	17; 8
130	Ethiofencarb-sulfone	IN	1.88	258.0	107.0; 201.1	18; 5
131	Ethiofencarb-sulfoxide	IN	1.60	242.1	107.1; 185.1	18; 8
132	Ethiprole	IN	8.95	414.1	350.9; 396.9	25; 9
133	Ethirimol	FU	5.13	210.1	140.0; 93.0	22; 31
134	Ethofumesate	HB	5.88	287.1	121.1; 259.1	15; 10
135	Ethoxyquin	PG	8.03	218.2	148.1; 160.1	22; 32
136	Etofenprox	IN	10.43	394.3	106.9; 177.0	43; 15
137	Etoxazole	IN	9.41	360.5	141.2; 177.3	28; 20
138	Famoxadone	FU	7.80	392.2	238.0; 331.1	20; 10
139	Famphur	IN	5.09	326.0	93.0; 217.0	31; 20
140	Fenamidone	FU	6.14	312.1	92.0; 236.1	25; 14
141	Fenamiphos-sulfone	NE	4.22	336.1	188.2; 266.1	28; 20
142	Fenamiphos-sulfoxide	NE	5.09	320.1	108.0; 171.1	35; 22
143	Fenarimol	FU	6.93	331.0	81.0; 268.0	34; 22
144	Fenazaquin	AC	9.79	307.2	57.2; 161.0	25; 19
145	Fenbuconazole	FU	7.16	337.0	70.1; 125.0	20; 36
146	Fenbutatin oxide	AC	11.20	519.2	91.1; 197.0	55; 57

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	$t_R$ , min	Precursor ion, $m/z$	MRM transitions 1; 2, $m/z$	Collision energy fragment 1; 2, eV
147	Fenchlorazole-ethyl	SA	8.06	403.9	358.0; 376.0	20; 13
148	Fenfuram	FU	4.02	202.1	83.1; 109.0	14; 20
149	Fenhexamid	FU	6.84	302.1	55.3; 97.2	38; 22
150	Fenoxanil	FU	7.73	329.0	86.0; 302.1	20; 10
151	Fenoxaprop-P-ethyl	HB	8.58	362.1	121.0; 287.9	27; 18
152	Fenoxycarb	IN	7.28	302.1	88.0; 116.1	20; 11
153	Fenpiclonil	FU	5.63	236.9	140.0; 202.0	38; 20
154	Fenpropathrin	IN/AC	9.55	350.1	97.0; 125.0	34; 14
155	Fenpropidin	FU	6.85	274.2	86.1; 147.1	28; 28
156	Fenpropimorph	FU	10.33	304.4	130.3; 147.2	25; 29
157	Fenpyroximate	AC	9.56	422.2	138.1; 366.1	32; 15
158	Fensulfothion	IN/NE	5.35	309.0	157.1; 173.1	25; 22
159	Fenthion	IN	7.42	279.1	169.1; 247.1	16; 13
160	Fenthion-sulfone	IN	3.85	311.2	125.1; 139.1	19; 29
161	Fenthion-sulfoxide	IN	4.38	295.0	109.0; 280	32; 18
162	Fenuron	HB	1.84	165.0	71.9; 119.8	16; 15
163	Flamprop-M	HB	7.85	364.5	77.2; 105.2	49; 19
164	Florasulam	HB	2.07	360.0	108.9; 129.0	50; 22
165	Fluazinam	FU	8.85	463.0	398.0; 415.9	20; 19
166	Flucycloxuron	AC	9.38	484.0	132.1; 289.1	40; 12
167	Fludioxonil	FU	6.45	247.0	126.0; 180.0	35; 28
168	Flufenacet	HB	6.95	364.0	152.1; 194.1	20; 11
169	Flufenoxuron	IN	9.48	489.1	141.0; 158.0	46; 22
170	Fluometuron	HB	4.98	233.2	46.4; 72.2	18; 18
171	Fluoxastrobin	FU	6.95	459	188.0; 427.0	36; 18
172	Fluquinconazole	FU	6.76	376.0	306.9; 348.8	30; 18
173	Fluridone	HB	5.67	330.1	259.2; 310.2	40; 30
174	Fluroxypyr	HB	9.62	254.9	180.9; 208.8	22; 16
175	Fluroxypyr-meptyl	HB	9.17	367.0	181.0; 254.9	32; 11
176	Flurtamone	HB	5.97	334.0	178.0; 247.0	45; 27
177	Fluthiacet-methyl	HE	7.50	404.3	344.3; 404.3	21; 7
178	Flutolanil	FU	6.68	324.1	65.0; 262.1	40; 18
179	Flutriafol	FU	4.97	302.1	70.2; 123.1	18; 29
180	Fonofos	IN	7.44	247.1	109.0; 137.0	20; 10
181	Foramsulfuron	HB	2.20	453.0	182.0; 272.0	22; 14
182	Formetanete hydrochloride	IN/AC	1.09	222.0	46.0; 165.0	26; 15
183	Fosthiazate	NE	4.90	284.0	104.0; 228.0	22; 10

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
184	Fuberidazole	FU	3.19	185.0	156.0; 157.0	27; 22
185	Furathiocarb	IN	8.72	383.2	194.9; 252.0	18; 12
186	Furmecyclox	FU	7.62	252.2	110.1; 170.1	22; 14
187	Halosulfuron-methyl	HB	3.00	435.1	83.0; 182.1	40; 20
188	Haloxyfop	HB	8.74	434.0	91.0; 316.0	34; 20
189	Haloxyfop-P-methyl	HB	8.68	376.0	288.0; 316.0	25; 15
190	Heptenophos	IN	5.27	251.0	125.0; 127.0	14; 14
191	Hexaconazole	FU	7.82	314.0	70.1; 159.0	22; 28
192	Hexaflumuron	IN	8.44	459.0	276.0; 439.0	19; 12
193	Hexazinone	HB	3.84	253.1	71.0; 171.1	30; 16
194	Hexythiazox	AC/IN	9.13	353.0	168.1; 228.1	26; 14
195	Imazalil	FU	7.45	297.0	69.0; 159.0	22; 22
196	Imazapyr	HB	0.81	262.0	174.0; 217.1	26; 17
197	Imazethapyr	HB/PG	1.25	290.3	86.2; 177.2	24; 27
198	Imidacloprid	IN	1.51	256.1	175.1; 209.1	20; 15
199	Indoxacarb	IN	8.41	528.0	150.0; 203.0	22; 40
200	Iodosulfuron-methyl	HB	2.77	508.1	141.1; 167.1	25; 25
201	Ioxynil	HB	2.33	369.8	127.1; 215.1	31; 30
202	Iprobenfos	FU	7.40	289.0	91.0; 205.0	20; 10
203	Iprovalicarb	FU	6.71	321.1	119.1; 203.1	16; 10
204	Isocarbophos	AC/IN	6.39	291.1	121.1; 231.1	30; 13
205	Isoproc carb	IN	4.84	194.1	95.1; 137.1	14; 8
206	Isoprothiolane	FU	6.59	291.1	188.8; 230.9	22; 12
207	Isoproturon	HB	4.96	207.3	72.2; 165.3	19; 14
208	Isoxaben	HB	6.58	333.1	107.1; 165.1	58; 18
209	Isoxaflutole	HB	5.03	360.0	219.9; 250.9	40; 14
210	Isoxathion	IN	7.93	314.1	96.9; 104.9	35; 14
211	Karbutilate	HB	3.86	297.1	181.0; 280.0	15; 7
212	Lenacil	HB	4.84	235.2	136.1; 153.1	32; 16
213	Linuron	HB	5.68	249.1	160.1; 181.1	18; 16
214	Lufenuron	IN	9.08	509.2	175.0; 326.1	40; 22
215	Malaoxon	IN/AC	4.05	315.0	98.9; 127.0	24; 12
216	Malathion	IN/AC	6.30	331.0	99.0; 127.0	24; 12
217	Mecarbam	IN/AC	6.78	330.0	97.0; 227.1	35; 8
218	Mefenacet	HB	6.83	299.0	120.0; 148.0	25; 15
219	Mepanipyrim	FU	6.56	224.1	77.0; 106.0	40; 25
220	Mephosfolan	IN	3.71	270.1	75.1; 140.0	22; 24

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	tr, min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
221	Mepronil	FU	2.69	270.1	91.0; 119.0	44; 28
222	Metalaxyl-M	FU	5.20	280.3	192.4; 220.4	19; 14
223	Metamitron	HB	1.78	203.1	104.0; 175.1	22; 16
224	Metconazole	FU/PG	7.96	320.1	70.0; 125.0	22; 36
225	Methabenzthiazuron	HB	4.86	222.0	150.0; 165.0	32; 16
226	Methacrifos	IN	5.34	241.1	125.0; 209.1	20; 8
227	Methamidophos	IN/AC	0.93	142.0	93.9; 124.9	13; 13
228	Methiocarb	IN	6.01	226.0	121.0; 169.0	22; 10
229	Methiocarb-sulfone	IN	2.21	258.1	107.1; 122.1	38; 19
230	Methiocarb-sulfoxide	IN	1.80	242.0	122.0; 185.0	28; 14
231	Methomyl	IN	1.04	162.9	87.9; 105.9	9; 10
232	Methoprene	IN	6.35	311.2	170.2; 198.2	28; 22
233	Methoxyfenozide	IN	6.62	369.1	149.1; 313.2	18; 8
234	Metobromuron	HB	4.84	259.1	148.1; 170.0	15; 20
235	Metolcarb	IN	3.27	166.0	94.1; 109.0	27; 12
236	Metosulam	HB	3.22	418.2	140.2; 175.2	54; 23
237	Metoxuron	HB	2.83	229.0	72.0; 155.9	18; 25
238	Metrafenone	FU	8.06	409.0	209.1; 226.9	14; 16
239	Metribuzin	HB	3.63	215.0	89.0; 131.0	20; 18
240	Mevinphos	IN/AC	2.35	225.1	127.1; 193.1	15; 8
241	Monocrotophos	AC/IN	1.15	224.1	98.1; 127.1	12; 16
242	Monolinuron	HB	4.28	215.0	99.0; 126.0	34; 22
243	Monuron	HB	3.37	199.1	72.2; 126.0	16; 25
244	Myclobutanil	FU	6.56	289.1	70.2; 125.1	18; 32
245	N-(2,4-Dimethylphenyl) formamide	IN/AC	3.21	150.0	105.0; 132.0	20; 12
246	N-(2,4Dimethylphenyl)-N-methylformamide	IN/AC	1.98	163.0	107.0; 132.0	24; 16
247	Napropamide	HB	6.93	272.1	129.1; 171.1	16; 18
248	Neburon	HB	7.27	275.0	57.0; 88.0	24; 16
249	Nicosulfuron	HB	0.95	411.0	106.0; 182.0	32; 22
250	Nitenpyram	IN	0.78	271.1	125.9; 224.9	25; 12
251	Nitralin	HB	7.33	346.1	262.1; 304.1	20; 16
252	Nuarimol	FU	5.98	315.0	81.1; 252.0	28; 22
253	Ofurace	FU	4.04	282.0	160.0; 254.0	24; 12
254	Omethoate	IN/AC	0.73	214.1	125.1; 183.1	22; 11
255	Oxadiazon	HB	9.01	362.4	220.2; 303.2	24; 16
256	Oxadixyl	FU	3.28	279.0	132.0; 219.0	34; 10

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
257	Oxamyl	IN/NE	0.91	237.0	72.0; 90.0	10; 10
258	Oxasulfuron	HB	2.22	407.0	107.1; 150.1	50; 20
259	Oxycarboxin	FU	2.39	268.1	146.9; 174.8	25; 16
260	Paclobutrazol	PG	6.40	294.1	70.2; 125.1	20; 38
261	Paraoxon-ethyl	IN	4.81	276.4	174.3; 220.3	25; 14
262	Paraoxon-methyl	IN	2.97	248.0	90.0; 202.0	25; 19
263	Penconazole	FU	7.48	284.0	70.1; 159.0	16; 34
264	Pencycuron	FU	8.04	329.1	125.0; 125.1	40; 22
265	Pendimethalin	HB	9.07	282.2	194.1; 212.2	17; 10
266	Phenmedipham	HB	5.55	301.0	136.0; 168.0	22; 10
267	Phenthoate	IN	7.31	321.0	135.0; 163.0	20; 12
268	Phorate	IN	7.72	261.0	74.9; 170.9	8; 12
269	Phorate-sulfone	IN	4.82	293.0	96.9; 115.0	30; 24
270	Phorate-sulfoxide	IN	4.61	277.0	96.9; 143.0	32; 20
271	Phosalone	IN/AC	7.92	367.9	110.9; 181.9	42; 14
272	Phosmet	IN	5.57	318.0	77.0; 160.0	46; 22
273	Phosphamidon	IN/AC	3.48	300.1	127.1; 174.1	25; 14
274	Phoxim	IN	7.93	299.0	129.0; 153.0	13; 7
275	Picolinafen	HB	8.98	377.0	238.0; 359.0	28; 21
276	Picoxystrobin	FU	7.59	368.0	145.1; 205.1	22; 10
277	Piperophos	HE	8.38	354.1	143.0; 171.0	32; 22
278	Pirimicarb	IN	4.76	239.1	72.0; 182.1	18; 15
279	Primisulfuron-methyl	HE	4.47	469.0	199.0; 254.0	20; 20
280	Prochloraz	FU	7.95	376.2	70.1; 308.1	34; 11
281	Profoxydim	HB	8.71	466.5	180.3; 280.3	26; 24
282	Promecarb	IN	6.29	208.1	109.0; 151.0	15; 9
283	Prometon	HB	5.85	226.0	86.3; 184.3	28; 18
284	Prometryn	HB	6.73	242.0	158.0; 200.1	25; 17
285	Propachlor	HB	5.58	212.1	94.1; 170.1	25; 14
286	Propamocarb	FU	1.00	189.2	102.0; 144.0	18; 12
287	Propanil	HB	5.78	217.9	127.0; 161.9	22; 16
288	Propaquizafop	HB	8.78	444.2	100.0; 163.1	20; 60
289	Propargite	AC	9.40	368.4	57.1; 231.3	20; 8
290	Propazine	HB	5.97	230.2	146.1; 188.1	24; 18
291	Propiconazole	FU	7.74	342.0	69.0; 159.0	22; 34
292	Propoxur	IN	3.74	210.0	111.0; 168.0	16; 10
293	Propyzamide	HB	6.37	256.1	173.0; 190.0	23; 16



**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	$t_R$ , min	Precursor ion, $m/z$	MRM transitions 1; 2, $m/z$	Collision energy fragment 1; 2, eV
294	Proquinazid	FU	9.67	373.5	289.2; 331.3	22; 13
295	Prosulfocarb	HB	8.59	252.0	90.9; 127.9	22; 13
296	Prosulfuron	HB	3.96	420.0	141.0; 167.0	20; 20
297	Prothiofos	IN	10.05	345.1	133.0; 241.0	56; 18
298	Pymetrozine	IN	0.97	218.0	79.0; 105.0	30; 20
299	Pyraclostrobin	FU/PG	8.25	388.1	163.0; 193.9	25; 12
300	Pyraflufen-ethyl	HB	7.58	413.4	261.2; 339.2	37; 20
301	Pyridaben	AC/IN	9.92	365.1	147.1; 309.1	24; 12
302	Pyridaphenthion	IN/AC	6.58	341.0	92.0; 189.0	34; 22
303	Pyridate	HB	10.30	379.0	207.0; 351.1	18; 10
304	Pyrifenox	FU	7.07	295.0	67.2; 93.1	60; 22
305	Pyriproxyfen	IN	8.95	322.1	96.0; 227.1	14; 14
306	Pyroquilon	FU	3.53	174.0	117.0; 132.0	30; 23
307	Quinoclamine	AL/HB	3.29	208.0	77.0; 105.0	38; 21
308	Rimsulfuron	HB	1.47	431.9	182.1; 325.1	22; 14
309	Rotenone	IN	7.41	395.2	213.1; 367.2	22; 18
310	Sethoxydim	HB	7.38	328.0	178.0; 282.0	22; 10
311	Simazine	HB	3.66	202.0	96.0; 124.0	22; 16
312	Spinosyn A	IN	9.76	732.6	98.1; 142.0	59; 31
313	Spinosyn D	IN	10.11	746.5	98.1; 142.0	53; 31
314	Spirodiclofen	AC/IN	9.60	411.1	71.2; 313.0	13; 13
315	Spiromesifen	AC/IN	9.41	371.1	255.1; 273.1	24; 10
316	Spirotetramat	IN	7.05	374.3	302.2; 330.2	16; 13
317	Spirotetramat-enol	IN	1.90	302.1	117.0; 216.1	36; 26
318	Spirotetramat-enol-glicoside	IN	1.49	464.3	270.1; 302.1	32; 18
319	Spirotetramat-monohydroxy	IN	3.72	304.5	211.1; 254.1	18; 16
320	Spiroxamine	FU	7.70	298.0	100.0; 144.0	32; 20
321	Sulfometuron-methyl	HB	1.92	365.0	107.0; 150.0	43; 18
322	Sulfosulfuron	HB	2.00	471.0	211.0; 261.0	13; 18
323	Sulfotep	IN/AC	7.57	323.0	97.0; 171.0	32; 15
324	Tebuconazole	FU	7.80	308.0	70.1; 125.0	22; 40
325	Tebufenozide	IN	7.29	353.1	133.0; 297.1	20; 8
326	Tebufenpyrad	AC	8.81	334.0	117.0; 145.0	34; 28
327	Tebupirimfos	IN	8.94	319.0	153.0; 277.0	29; 15
328	Tebuthiuron	HB	3.95	229.0	116.0; 172.0	26; 18
329	Teflubenzuron	IN	8.82	380.9	140.9; 158.0	40; 20
330	Temephos	IN	8.91	466.8	125.0; 418.9	38; 22

**Table S1. LC-MS/MS instrumental conditions for 365 target analytes (continued)**

	Pesticide	Pesticide type	t <sub>R</sub> , min	Precursor ion, m/z	MRM transitions 1; 2, m/z	Collision energy fragment 1; 2, eV
331	Tepraloxydim	HB	3.16	342.1	166.1; 250.1	20; 12
332	Terbufos	IN	8.66	289.0	57.2; 103.0	22; 8
333	Terbufos-sulfone	IN	6.18	321.0	97.0; 171.0	40; 12
334	Terbufos-sulfoxide	IN	5.32	305.0	97.0; 187.0	40; 11
335	Terbumeton	HB	6.34	226.1	114.1; 170.1	25; 15
336	Terbuthylazine-desethyl	HB	4.08	202.1	79.1; 146.1	26; 16
337	Tetraconazole	FU	6.96	372.0	70.1; 159.0	20; 30
338	Thiabendazole	FU	2.92	202.0	131.0; 175.0	30; 25
339	Thiacloprid	IN	2.33	253.0	90.1; 126.0	40; 20
340	Thiamethoxam	IN	1.08	292.0	132.0; 211.2	22; 12
341	Thidiazuron	PG	3.54	221.0	93.9; 101.9	13; 15
342	Thifensulfuron-methyl	HB	1.27	388.0	56.0; 167.0	40; 15
343	Thiobencarb	HB	7.96	258.2	89.1; 125.1	48; 18
344	Thiodicarb	IN	4.58	355.0	87.9; 107.9	16; 16
345	Thiofanox-sulfone	IN	1.89	251.1	57.2; 76.1	10; 6
346	Thiofanox-sulfoxide	IN	1.73	252.3	57.2; 104.2	20; 14
347	Thiophanate-methyl	FU	3.78	343.0	93.0; 151.0	46; 22
348	Tralkoxydim	HB	7.37	330.2	138.1; 284.3	19; 13
349	Triadimefon	FU	6.58	294.1	69.3; 197.2	20; 15
350	Triadimenol	FU	6.75	296.1	70.2; 99.1	10; 15
351	Tri-allate	HB	9.17	304.0	86.0; 142.9	18; 28
352	Triasulfuron	HB	2.12	402.0	141.0; 167.1	20; 17
353	Triazamate	IN	3.55	315.2	224.0; 270.1	19; 12
354	Tribenuron-methyl	HB	2.03	396.1	154.9; 180.9	14; 22
355	Trichlorfon	IN	1.89	257.0	79.0; 109.0	30; 18
356	Tricyclazole	FU	2.68	190.0	136.0; 163.0	22; 22
357	Trifloxystrobin	FU	8.49	409.0	145.0; 186.0	40; 16
358	Triflumizole	FU	8.48	346.0	73.1; 277.9	10; 10
359	Triflumuron	IN	7.79	359.0	139.1; 156.1	35; 16
360	Triflusaluron-methyl	HB	4.83	493.2	96.0; 264.0	45; 18
361	Trinexapac-ethyl	PG	2.45	253.3	69.1; 207.2	20; 13
362	Triticonazole	FU	6.88	318.1	70.1; 124.9	16; 35
363	Vamidothion	IN/AC	1.91	288.0	118.0; 146.0	28; 10
364	Vernolate	HB	7.86	204.1	86.1; 128.1	14; 11
365	Zoxamide	FU	7.61	336.0	159.0; 187.1	38; 25

LC-MS/MS, liquid chromatography-tandem mass spectrometry; MRM, multiple reaction monitoring; AC, acaricide; AL, algicide; FU, fungicide; HB, herbicide; IN, insecticide; NE, nematocidal; PA, plant activator; PG, plant growth regulator; RO, rodenticide; SA, safener.

**Table S2. GC-MS/MS instrumental conditions for 142 target analytes**

	Pesticide	Pesticide type	tr, min	Quantifier, m/z	CE, eV	Qualifier, m/z	CE, eV
1	2-Phenylphenol	FU	4.08	170 → 141	24	169 → 115	28
2	2,4-Dimethylaniline	AC/IN	2.00	121 → 106	15	120 → 77	21
3	Acetochlor	HB	7.53	223 → 132	22	223 → 147	10
4	Acrinathrin	AC	14.43	289 → 93	14	289 → 77	26
5	Aldrin	IN	8.58	263 → 193	33	263 → 192	36
6	Azinphos-ethyl	IN/AC	14.38	160 → 132	4	160 → 77	18
7	Benazolin-ethyl	HB	9.58	198 → 170	6	170 → 134	12
8	Benoxacor	SA	7.13	259 → 120	18	259 → 176	8
9	Bifenthrin	IN/AC	13.43	181 → 166	12	181 → 153	8
10	Biphenyl	FU	3.23	154 → 152	24	154 → 115	24
11	Bitertanol	FU	14.70	170 → 141	22	170 → 115	28
12	Bromophos-ethyl	IN	10.24	359 → 303	16	359 → 331	10
13	Bromophos-methyl	IN	9.14	331 → 316	14	331 → 286	28
14	Bromopropylate	AC	13.39	341 → 183	18	341 → 185	20
15	Butralin	HB/PG	9.15	266 → 174	21	266 → 147	24
16	Butylate	HB	3.50	174 → 146	6	174 → 75	4
17	Captan	FU	9.78	149 → 79	14	149 → 105	4
18	Carbosulfan	IN/NE	13.29	323 → 160	8	323 → 118	18
19	Carfentrazone-ethyl	HB	12.41	340 → 312	14	340 → 151	28
20	Chinomethionat	FU/AC/IN	10.10	234 → 206	8	234 → 148	24
21	Chlorbufam	HB	6.18	127 → 65	21	223 → 53	18
22	Chlordane ( <i>cis</i> -)	IN	10.46	373 → 266	21	375 → 236	33
23	Chlordane ( <i>trans</i> -)	IN	10.12	373 → 266	24	373 → 264	39
24	Chlordimeform	AC/IN	5.20	196 → 181	9	181 → 140	15
25	Chlorfenvinphos	IN	9.78	323 → 267	16	323 → 295	6
26	Chlorobenzilate	AC	11.75	251 → 139	15	139 → 111	12
27	Chloroneb	FU	3.99	191 → 113	12	191 → 141	9
28	Chlorothalonil	FU	6.56	264 → 168	24	266 → 133	33
29	Chlorpropham	HB/PG	5.23	127 → 65	21	127 → 92	12
30	Chlorpyrifos-ethyl	IN/AC	5.23	213 → 171	6	213 → 127	14
31	Chlorpyrifos-methyl	IN/AC	7.53	286 → 93	24	288 → 93	24
32	Chlorthal-dimethyl	HB	8.74	299 → 221	27	301 → 167	42
33	Cyanophos	IN	6.37	243 → 109	12	109 → 79	9
34	Cybutryne	AL/HB	9.86	182 → 109	10	253 → 182	12
35	Cycloate	HB	5.04	154 → 83	9	154 → 72	9
36	Cyfluthrin ( <i>alpha</i> )	IN	15.21	226 → 206	14	226 → 199	6
37	Cyfluthrin ( <i>beta</i> )	IN	15.28	226 → 206	14	226 → 199	6

Table S2. GC-MS/MS instrumental conditions for 142 target analytes (continued)

	Pesticide	Pesticide type	t <sub>R</sub> , min	Quantifier, m/z	CE, eV	Qualifier, m/z	CE, eV
38	Cyhalofop-butyl	HB	14.11	256 → 120	9	256 → 91	27
39	Cyhalothrin ( <i>gamma</i> )	IN	14.10	197 → 141	12	197 → 161	8
40	Cyhalothrin ( <i>lambda</i> )	IN	14.27	197 → 141	12	197 → 161	8
41	Cypermethrin ( <i>alpha</i> )	IN/AC	15.41	181 → 152	22	181 → 127	22
42	Cypermethrin ( <i>beta</i> )	IN/AC	15.53	181 → 152	22	181 → 127	22
43	Cypermethrin ( <i>delta</i> )	IN/AC	15.55	181 → 152	22	181 → 127	22
44	Cypermethrin ( <i>gamma</i> )	IN/AC	15.60	181 → 152	22	181 → 127	22
45	<i>o,p'</i> -DDD	IN	12.54	235 → 165	24	235 → 199	14
46	<i>o,p'</i> -DDE	IN	11.06	246 → 176	30	246 → 211	22
47	<i>o,p'</i> -DDT	IN	11.9	235 → 165	24	235 → 199	16
48	<i>p,p'</i> -DDD	IN	11.88	235 → 165	24	235 → 199	14
49	<i>p,p'</i> -DDE	IN	10.28	246 → 176	30	246 → 211	22
50	<i>p,p'</i> -DDT	IN	11.16	235 → 165	24	235 → 199	16
51	DEET	IN/AC	4.52	119 → 91	9	119 → 65	21
52	Diazinon	IN/AC	6.61	304 → 179	10	304 → 162	8
53	Dibenzofuran	IN	4.06	141 → 115	15	170 → 141	21
54	Dichlobenil	HB	2.97	171 → 100	30	171 → 136	12
55	Dichlormid	SA	3.05	172 → 108	6	172 → 96	9
56	Diclofop-methyl	HB	12.89	340 → 253	14	340 → 281	10
57	Dicloran	FU	5.83	124 → 73	12	124 → 97	9
58	Dicofol	AC	8.96	250 → 139	14	250 → 215	8
59	Dieldrin	IN	11.03	79 → 77	12	79 → 51	24
60	Dimethipin	PG/HB	6.05	118 → 58	6	124 → 76	6
61	Diniconazole	FU	11.82	268 → 232	12	268 → 149	24
62	Dinobuton	FU/AC	9.90	211 → 163	9	211 → 117	18
63	Dioxabenzophos	IN	5.30	216 → 201	10	216 → 183	10
64	Diphenamid	HB	9.18	167 → 152	20	167 → 128	26
65	Diphenylamine	PG	4.93	169 → 66	24	169 → 77	28
66	Dipropetryn	HB	8.62	255 → 222	10	255 → 180	20
67	Endosulfan ( <i>alpha</i> )	IN/AC	10.42	160 → 125	15	241 → 206	12
68	Endosulfan ( <i>beta</i> )	IN/AC	5.83	160 → 125	12	159 → 123	12
69	Endosulfan sulfate	IN/AC	12.41	387 → 289	10	387 → 253	16
70	Endrin	IN/RO	11.44	263 → 191	30	263 → 193	36
71	Endrin ketone	IN/RO	13.15	281 → 245	12	281 → 209	24
72	EPTC	HB	3.08	189 → 128	4	189 → 86	12
73	Esfenvalerate	IN	16.08	419 → 225	6	419 → 167	12
74	Etaconazole	FU	11.83	245 → 173	15	245 → 191	18

**Table S2. GC-MS/MS instrumental conditions for 142 target analytes (continued)**

	Pesticide	Pesticide type	$t_R$ , min	Quantifier, $m/z$	CE, eV	Qualifier, $m/z$	CE, eV
75	Ethalfuralin	HB	5.20	316 → 276	10	316 → 202	24
76	Ethion	IN/AC	11.96	231 → 129	24	153 → 97	12
77	Ethoprophos	NE/IN	5.02	200 → 158	6	200 → 114	14
78	Etridiazole	FU	3.61	211 → 140	21	183 → 140	18
79	Fenamiphos	NE	10.82	303 → 195	8	303 → 154	18
80	Fenitrothion	IN	8.26	277 → 260	6	277 → 109	14
81	Fenobucarb	IN	4.76	150 → 121	10	150 → 103	24
82	Fipronil	IN	9.70	367 → 213	30	367 → 178	45
83	Fluazifop-butyl	HB	11.70	282 → 91	18	383 → 282	15
84	Flurochloridone	HB	9.08	313 → 174	15	313 → 187	15
85	Flusilazole	FU	11.25	233 → 152	14	233 → 165	14
86	Fluvalinate- $\tau$ 1	IN/AC	16.15	250 → 55	20	250 → 200	20
87	Fluvalinate- $\tau$ 2	IN/AC	16.23	250 → 55	20	250 → 200	20
88	Folpet	FU	9.91	104 → 76	9	260 → 130	21
89	Formothion	IN/AC	7.17	224 → 125	18	224 → 155	12
90	HCH ( <i>alpha</i> -)	IN/RO	5.59	219 → 183	8	219 → 145	20
91	HCH ( <i>beta</i> -)	IN/RO	6.07	219 → 183	8	219 → 145	20
92	HCH ( <i>gamma</i> -)	IN/RO	6.23	219 → 183	8	219 → 145	20
93	HCH ( <i>delta</i> -)	IN/RO	6.81	219 → 183	10	219 → 145	20
94	Heptachlor	IN	7.77	272 → 237	20	272 → 117	32
95	Heptachlor epoxide	IN	9.62	353 → 265	30	353 → 191	42
96	Hexachlorobenzene	FU	5.65	284 → 214	36	286 → 214	33
97	Iprodione	FU/NE	13.27	314 → 56	27	316 → 56	30
98	Isocarbamid	HB	6.33	142 → 70	15	142 → 113	10
99	Kresoxim-methyl	FU	11.36	206 → 131	14	206 → 116	6
100	Metalaxyl	FU	7.91	249 → 190	8	249 → 146	22
101	Methidathion	IN/AC	10.13	145 → 85	8	145 → 58	14
102	Methoxychlor	IN	13.49	227 → 169	24	227 → 212	14
103	Metolachlor	HB	8.60	238 → 162	12	238 → 133	26
104	Molinate	HB	4.25	126 → 55	12	126 → 83	6
105	Nereistoxin	IN	2.65	149 → 71	8	149 → 102	6
106	Nitrapyrin	BA	3.59	194 → 133	15	196 → 135	15
107	N-Methyl-N-(1-naphthyl) acetamide	IN/AC	6.42	214 → 71	21	214 → 132	9
108	Oxyfluorfen	HB	11.33	252 → 146	21	252 → 170	24
109	Parathion	IN/AC	8.86	291 → 109	14	291 → 137	6
110	Parathion-methyl	IN	7.65	263 → 109	15	263 → 79	30
111	Pentachlorobenzene	HB	4.07	250 → 215	15	250 → 142	33

**Table S2. GC-MS/MS instrumental conditions for 142 target analytes (continued)**

	Pesticide	Pesticide type	$t_R$ , min	Quantifier, $m/z$	CE, eV	Qualifier, $m/z$	CE, eV
112	Permethrin ( <i>cis</i> )	IN	14.86	183 → 168	14	183 → 165	14
113	Permethrin ( <i>trans</i> )	IN	14.76	183 → 168	14	183 → 165	14
114	Phthalimide	FU	3.73	147 → 103	6	147 → 76	27
115	Pirimiphos-ethyl	IN	9.31	333 → 163	6	333 → 168	33
116	Pirimiphos-methyl	IN	8.28	290 → 125	27	290 → 151	18
117	Procymidone	FU	9.92	283 → 96	10	283 → 255	12
118	Profenofos	IN	10.98	337 → 267	18	139 → 97	6
119	Propham	HB/PG	3.67	137 → 93	9	93 → 66	12
120	Pyrazophos	FU	14.33	221 → 193	12	221 → 149	14
121	Pyrimethanil	FU	6.61	198 → 183	14	198 → 158	18
122	Quinalphos	IN	9.88	146 → 118	10	157 → 129	14
123	Quinoxifen	FU	12.43	237 → 208	28	237 → 182	28
124	Quintozene	FU	6.13	295 → 237	21	237 → 119	30
125	Quizalofop-P-ethyl	HB	15.55	372 → 299	14	372 → 272	10
126	Tecnazene	FU/PG	4.62	261 → 203	12	203 → 85	21
127	Tefluthrin	IN	6.97	177 → 127	16	177 → 137	16
128	Terbumeton-desethyl	HB	5.23	141 → 111	9	141 → 69	21
129	Terbutylazine	HB	6.42	229 → 173	10	229 → 214	10
130	Terbutryn	HB	8.30	241 → 185	6	241 → 170	14
131	Tetrachlorvinphos	IN	10.36	331 → 109	20	331 → 79	25
132	Tetradifon	AC/IN	13.77	356 → 229	12	356 → 159	18
133	Tetrahydroptalamide	FU	3.89	151 → 79	15	151 → 122	20
134	Tetramethrin	IN	13.47	164 → 107	14	164 → 135	8
135	Tetrasul	AC	12.13	324 → 252	20	324 → 254	20
136	Thiazopyr	HB	8.62	255 → 222	10	255 → 180	20
137	Thiometon	IN/AC	7.66	125 → 47	14	125 → 79	10
138	Tolclofos-methyl	FU	7.69	265 → 250	12	265 → 93	27
139	Tolyfluanid	FU	9.66	238 → 137	14	238 → 91	28
140	Triazophos	IN/AC	12.21	257 → 162	8	257 → 134	22
141	Trifluralin	HB	5.35	306 → 264	8	306 → 206	14
142	Vinclozolin	FU	7.65	285 → 212	12	285 → 178	14

GC-MS/MS, gas chromatography-tandem mass spectrometry; AC, acaricide; AL, algicide; BA, bactericide; FU, fungicide; HB, herbicide; IN, insecticide; NE, nematocid; PG, plant growth regulator; RO, rodenticide; SA, safener; DDT, dichlorodiphenyltrichloroethane.

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
1	2-Phenylphenol	8.7	89.0	109.7	5.67	1.76	9.10	5.78	24.0
2	2,4-D	10.0	83.5	92.3	8.24	2.17	14.56	8.45	42.8
3	2,4-Dimethylaniline	11.3	78.3	87.6	12.12	8.55	10.59	6.19	36.8
4	Acephate	9.2	97.9	98.9	2.58	2.73	11.33	5.32	23.1
5	Acetamiprid	6.1	105.3	96.2	4.87	1.29	3.34	1.00	11.0
6	Acetochlor	6.9	96.7	114.1	5.43	1.96	9.30	3.07	26.6
7	Acibenzolar-S-methyl	4.7	97.2	99.5	3.36	1.48	4.84	2.49	10.2
8	Acitidone	10.8	105.2	100.9	2.68	1.58	11.98	5.21	23.0
9	Acrinathrin	8.4	84.9	107.2	3.55	5.26	6.96	12.19	33.8
10	Aldicarb	11.9	81.0	101.0	<b>21.65</b>	18.87	16.21	<b>27.91</b>	41.9
11	Aldicarb-sulfone	6.5	101.7	97.6	6.08	8.03	5.23	15.61	28.9
12	Aldicarb-sulfoxide	4.7	102.7	97.0	2.54	7.11	4.53	1.98	9.9
13	Aldrin	7.5	91.6	115.6	8.70	12.16	5.69	8.78	38.3
14	Allethrin	6.5	104.5	97.2	2.00	11.41	6.24	3.85	15.6
15	Alloxydim	12.5	105.2	101.2	3.38	3.17	17.22	4.44	31.3
16	Ametryn	6.2	104.7	101.4	1.38	2.18	4.45	1.53	10.7
17	Amidosulfuron	5.9	106.7	96.3	1.04	1.76	3.71	2.25	12.3
18	Aminocarb	9.9	100.9	94.9	1.75	2.55	11.71	6.24	30.1
19	Amisulbrom	6.2	98.7	105.4	3.78	8.31	4.26	7.20	19.1
20	Amitraz	10.1	94.4	94.5	3.46	5.15	10.11	7.52	32.3
21	Anilofos	6.4	99.7	97.0	4.96	3.68	13.10	15.68	30.5
22	Aramite	5.4	97.9	96.7	3.72	4.80	5.84	5.25	14.3
23	Asulam	9.2	93.8	93.9	8.68	13.24	9.12	4.14	23.6
24	Atrazine	4.2	102.4	100.4	1.49	1.81	4.19	2.04	8.7
25	Atrazine-desethyl	4.6	101.2	94.6	1.34	1.28	4.01	4.82	12.7
26	Atrazine-desisopropyl	2.4	101.2	95.0	1.65	0.66	3.11	1.26	9.7
27	Azaconazole	7.9	99.5	100.5	1.18	1.03	10.53	1.30	20.0
28	Azamethiphos	10.4	98.8	98.2	1.84	1.61	16.71	1.53	28.3
29	Azimsulfuron	6.8	102.3	97.2	1.28	2.29	7.00	4.40	14.8
30	Azinphos-ethyl	7.3	80.3	89.8	5.96	4.97	6.00	7.03	36.9
31	Azinphos-methyl	11.1	99.3	95.5	<b>25.19</b>	<b>20.07</b>	10.82	11.06	35.5
32	Aziprotryne	3.8	100.9	100.3	5.46	3.88	4.26	8.78	28.0
33	Azoxystrobin	7.9	102.3	97.5	1.46	4.06	8.59	4.21	17.1
34	Beflubutamid	4.9	102.7	99.3	1.43	2.54	4.46	3.91	12.2

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
35	Benazolin-ethyl	8.6	82.9	103.3	6.80	2.42	8.51	5.01	24.0
36	Bendiocarb	6.8	106.1	95.2	0.82	2.16	5.45	2.91	13.2
37	Benfuracarb	7.3	101.7	102.5	1.47	1.73	7.12	5.77	16.9
38	Benodanil	5.5	102.8	99.3	1.27	1.44	5.43	2.01	11.0
39	Benoxacor	5.1	95.9	111.2	3.61	1.96	4.92	2.84	15.9
40	Bensulfuron-methyl	11.5	101.7	98.6	4.11	2.25	12.60	3.78	23.7
41	Bensulide	3.4	102.1	96.2	1.03	10.57	2.78	9.44	19.3
42	Benthiavalicarb-isopropyl	4.7	101.8	104.7	2.27	2.10	5.93	5.97	18.7
43	Benzoximate	5.5	101.6	96.5	2.19	1.42	5.13	5.20	13.8
44	Benzthiazuron	3.4	100.1	99.5	8.53	12.06	<b>25.54</b>	<b>26.17</b>	28.9
45	Bifenazate	7.9	102.7	89.0	1.09	4.95	6.60	9.37	32.0
46	Bifenthrin	6.4	89.1	107.5	5.82	3.62	6.31	4.75	21.8
47	Biphenyl	9.2	84.4	107.7	10.55	2.15	8.30	6.38	28.5
48	Bitertanol	9.7	92.0	95.3	<b>24.33</b>	17.97	<b>29.77</b>	18.78	44.7
49	Boscalid	7.3	100.6	98.4	2.78	3.71	10.72	3.99	19.6
50	Bromacil	6.4	103.2	99.2	1.36	1.49	5.70	3.66	13.3
51	Bromophos-ethyl	9.2	77.9	102.6	5.31	2.45	9.78	10.99	32.7
52	Bromophos-methyl	5.7	93.9	108.8	5.18	1.34	7.19	3.75	19.7
53	Bromopropylate	8.7	95.3	104.7	6.01	1.73	8.75	7.11	25.3
54	Bromoxynil	12.0	<b>68.5</b>	93.6	<b>22.93</b>	18.34	<b>28.91</b>	<b>25.33</b>	<b>54.8</b>
55	Bromuconazole	7.6	100.7	95.0	1.81	5.42	9.78	5.68	20.4
56	Bupirimate	5.8	103.1	100.1	1.46	2.73	6.60	4.59	12.0
57	Buprofezin	5.5	103.3	98.4	0.89	3.66	5.92	3.34	13.2
58	Butachlor	4.7	101.9	97.9	9.07	6.26	<b>26.11</b>	<b>21.47</b>	28.8
59	Butafenacil	4.3	100.8	96.6	4.72	3.33	4.64	2.56	11.1
60	Butocarboxim-sulfoxide	2.4	101.4	97.5	2.86	1.42	3.18	1.91	7.8
61	Butoxycarboxim	5.2	103.1	97.9	1.99	1.44	4.57	2.93	11.1
62	Butralin	8.4	81.9	104.7	6.68	5.63	5.88	4.79	25.9
63	Butylate	8.7	<b>126.4</b>	117.1	10.77	11.58	<b>28.25</b>	18.46	31.6
64	Buturon	3.2	102.7	94.1	1.87	1.54	2.92	1.21	11.8
65	Cadusafos	4.9	102.0	103.7	2.22	5.42	4.85	8.18	20.4
66	Captan	11.3	84.5	88.1	<b>23.33</b>	<b>21.27</b>	<b>27.72</b>	<b>20.67</b>	<b>52.0</b>



**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
67	Carbaryl	3.2	101.8	97.9	1.39	2.04	3.19	2.14	7.6
68	Carbendazim	2.4	100.4	98.5	0.78	1.12	2.17	3.29	8.2
69	Carbetamide	9.1	102.6	96.7	2.26	2.29	13.12	4.10	24.3
70	Carbofuran	4.9	102.7	103.2	1.41	0.74	4.81	18.78	32.3
71	Carbofuran-3-OH	4.7	102.8	95.1	1.54	1.89	4.15	2.95	14.2
72	Carbofuran-3-keto	9.2	99.9	97.4	4.29	2.72	9.34	4.68	22.3
73	Carbosulfan	8.9	80.9	93.8	9.34	6.55	11.18	8.33	41.3
74	Carboxin	4.2	97.9	96.4	2.09	2.11	4.32	2.26	10.3
75	Carfentrazone-ethyl	9.0	81.9	96.0	3.19	6.36	9.10	6.09	33.8
76	Carpropamide	3.2	103.5	95.7	1.37	2.05	3.62	2.39	9.9
77	Chinomethionat	10.4	90.6	92.2	6.10	10.48	10.61	11.28	43.5
78	Chlorbromuron	4.7	102.3	98.0	0.65	2.31	4.96	2.28	11.1
79	Chlorbufam	5.1	95.3	103.1	5.55	7.10	5.16	7.77	18.7
80	Chlordane ( <i>cis</i> -)	5.7	<b>66.1</b>	70.9	<b>24.53</b>	19.26	<b>21.91</b>	<b>21.65</b>	35.1
81	Chlordane ( <i>trans</i> -)	6.7	<b>68.3</b>	<b>64.6</b>	<b>24.58</b>	<b>20.90</b>	18.83	7.97	<b>53.1</b>
82	Chlordimeform	7.1	77.6	109.2	6.24	3.52	6.42	2.77	30.7
83	Chlorfenvinphos	5.9	94.5	112.7	6.48	1.10	4.81	2.78	22.1
84	Chlorfluazuron	7.6	99.7	92.9	1.93	10.32	5.13	4.96	17.0
85	Chloridazon	4.9	107.5	95.2	0.98	0.60	1.87	4.47	13.9
86	Chlormequat chloride	7.7	100.9	97.6	3.65	2.72	11.33	3.25	20.1
87	Chlorobenzilate	7.6	89.1	108.1	1.83	2.92	7.67	5.34	24.5
88	Chloroneb	6.7	90.8	112.7	7.57	1.32	8.10	4.84	24.6
89	Chlorothalonil	3.4	101.6	95.4	2.25	3.96	3.28	12.23	22.1
90	Chlorotoluron	7.1	104.0	95.7	10.01	12.07	<b>25.56</b>	17.83	30.7
91	Chloroxuron	5.1	102.5	98.3	1.59	1.73	3.75	3.53	10.8
92	Chlorpropham	4.9	96.3	107.6	6.43	1.33	6.50	3.15	17.1
93	Chlorpyrifos-ethyl	5.0	92.2	112.3	6.47	2.02	4.53	927	31.7
94	Chlorpyrifos-methyl	5.1	94.7	111.6	8.75	2.66	6.13	2.25	19.1
95	Chlorsulfuron	5.5	105.0	96.5	2.73	3.21	6.04	2.21	12.1
96	Chlorthal-dimethyl	7.0	94.0	111.4	8.32	1.55	7.82	2.93	24.3
97	Chlorthiamid	3.8	102.4	97.6	0.48	1.23	3.52	2.77	9.6
98	Cinidon-ethyl	4.2	97.8	100.4	3.42	4.43	3.14	7.48	15.4

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
99	Cinosulfuron	5.4	102.4	98.1	2.81	1.23	4.94	1.39	9.7
100	Clethodim	7.3	105.3	100.1	3.08	2.45	7.79	11.15	26.0
101	Climbazole	5.1	101.3	100.4	1.56	2.65	4.59	2.13	10.9
102	Clodinafop-propargyl	4.9	100.8	94.3	2.50	3.28	3.87	3.11	13.1
103	Clofentezine	5.8	99.5	105.1	4.29	3.95	5.49	4.71	14.5
104	Clomazone	4.2	101.9	103.2	10.51	8.91	<b>24.47</b>	<b>20.18</b>	28.4
105	Cloquintocet mexyl	2.7	101.5	97.8	2.69	3.46	2.23	4.06	10.0
106	Clothianidin	8.0	103.6	99.6	1.61	1.36	8.82	2.76	16.8
107	Coumachlor	4.7	102.7	92.5	1.27	2.46	4.79	4.11	15.4
108	Coumaphos	5.8	100.1	102.3	3.41	1.68	7.00	2.68	13.4
109	Cyanazine	6.4	105.8	101.9	2.76	0.89	8.30	2.53	16.8
110	Cyanophos	4.6	96.6	105.7	3.32	2.64	3.59	2.99	10.9
111	Cyazofamid	5.1	103.1	101.6	1.18	3.14	5.74	3.62	13.7
112	Cybutryne	7.6	84.0	109.3	8.13	2.03	10.68	2.53	26.6
113	Cyclanilide	7.7	102.1	88.6	1.08	3.26	8.34	9.39	29.0
114	Cycloate	6.9	<b>127.8</b>	<b>121.2</b>	15.91	4.68	<b>25.52</b>	18.26	<b>51.5</b>
115	Cyclosulfamuron	5.5	97.3	102.7	2.53	2.01	5.82	6.98	17.3
116	Cycloxydim	5.5	101.7	92.8	10.08	12.83	<b>25.45</b>	17.42	30.7
117	Cycluron	6.8	103.2	93.1	0.79	2.34	7.87	4.00	20.0
118	Cyflufenamid	4.3	101.0	98.5	2.58	3.45	5.09	5.22	13.5
119	Cyfluthrin ( <i>alpha</i> )	9.9	81.4	84.0	<b>23.04</b>	<b>20.36</b>	10.63	10.96	42.6
120	Cyfluthrin ( <i>beta</i> )	7.5	74.1	109.1	6.82	7.85	8.37	15.92	45.9
121	Cyhalofop-butyl	9.7	74.9	81.3	11.16	12.31	<b>26.78</b>	18.78	39.9
122	Cyhalothrin ( <i>gamma</i> )	8.9	71.6	8.32	6.23	3.86	11.05	8.91	44.8
123	Cyhalothrin ( <i>lambda</i> )	6.8	89.0	103.4	6.05	3.80	4.58	8.61	25.6
124	Cymoxanil	5.5	102.2	98.9	2.24	3.37	4.74	5.30	16.3
125	Cypermethrin ( <i>alpha</i> )	8.7	86.3	95.1	4.29	5.48	12.51	8.06	32.3
126	Cypermethrin ( <i>beta</i> )	8.3	88.1	85.3	5.10	8.44	8.54	8.86	35.6
127	Cypermethrin ( <i>delta</i> )	8.5	86.5	85.5	4.81	2.96	8.08	5.41	33.3
128	Cypermethrin ( <i>gamma</i> )	9.8	79.5	96.4	<b>25.88</b>	16.63	8.77	11.13	35.7
129	Cyproconazole	8.7	98.8	95.5	5.71	4.74	8.58	10.62	24.9
130	Cyprodinil	4.7	101.9	104.5	1.39	0.85	4.27	1.54	11.0

**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
131	Dazomet	8.4	102.7	98.0	1.21	0.63	10.89	9.91	30.3
132	<i>o,p'</i> -DDD	3.7	99.6	101.7	6.72	3.96	2.24	4.37	11.0
133	<i>o,p'</i> -DDE	7.0	97.5	115.1	4.74	1.48	8.56	2.34	23.9
134	<i>o,p'</i> -DDT	22.7	84.6	76.0	8.93	8.76	7.66	8.51	39.5
135	<i>p,p'</i> -DDD	17.7	85.6	108.3	8.64	3.75	7.65	5.44	30.3
136	<i>p,p'</i> -DDE	5.8	97.3	118.9	9.79	2.09	5.30	2.95	27.2
137	<i>p,p'</i> -DDT	7.9	84.4	112.3	6.18	2.35	6.88	3.81	27.9
138	DEET	6.1	90.9	115.7	2.37	1.42	8.29	4.12	27.4
139	Deltamethrin	7.1	97.8	97.2	3.49	7.88	6.26	9.38	22.6
140	Demeton-S-methyl	2.4	99.7	98.3	2.78	2.74	3.71	5.87	12.7
141	Demeton-S-methyl-sulfone	7.7	103.5	100.3	12.61	10.11	<b>28.54</b>	19.11	31.0
142	Demeton s methyl sulfoxide	8.3	102.5	99.6	11.68	10.81	11.79	10.71	20.1
143	Desmedipam	2.4	101.4	102.9	2.90	1.64	3.71	8.95	17.2
144	Desmetryn	2.4	99.3	100.4	1.35	1.09	3.65	2.59	7.8
145	Diafenthiuron	5.5	101.4	94.7	3.41	7.47	6.09	7.90	18.7
146	Dialifos	7.3	97.4	94.5	3.20	3.84	8.79	5.99	18.6
147	Di-allate	4.9	97.7	101.5	4.72	2.87	4.48	4.32	11.7
148	Diazinon	6.4	85.1	113.6	9.01	1.78	7.57	5.29	27.1
149	Dibenzofuran	7.0	91.6	108.8	7.01	2.15	8.51	2.94	19.9
150	Dichlobenil	7.8	91.9	111.4	10.26	9.54	7.06	8.78	34.7
151	Dichlofenthion	4.7	98.6	106.9	4.39	6.30	4.30	6.43	17.0
152	Dichlofluanid	10.8	101.4	77.5	1.60	10.77	12.46	5.19	39.5
153	Dichlormid	9.2	80.5	115.8	8.89	1.86	11.52	7.81	36.7
154	Dichlorvos	9.8	95.5	101.0	3.91	2.36	15.05	2.15	25.9
155	Diclofop-methyl	12.0	83.7	97.7	14.49	4.13	11.54	3.74	31.1
156	Diclobutrazol	4.9	100.7	97.3	1.22	1.57	3.25	2.29	8.6
157	Dicloran	5.9	96.0	92.2	3.16	2.31	6.10	6.52	24.0
158	Dicofol	7.1	83.2	109.9	5.81	5.87	6.57	4.24	28.5
159	Dicrotophos	3.2	97.4	99.9	12.07	11.72	<b>22.50</b>	<b>20.82</b>	27.3
160	Dieldrin	6.9	101.9	114.2	<b>21.79</b>	19.93	9.82	12.99	29.1
161	Diethofencarb	3.8	102.6	91.8	2.38	2.13	5.31	3.22	14.0
162	Difenoconazole	4.2	102.7	98.6	1.49	4.01	4.21	3.52	10.5

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
163	Diflubenzuron	6.4	105.4	97.3	3.06	2.18	6.15	5.09	15.8
164	Dimefox	2.4	99.6	101.7	2.60	1.32	2.52	3.79	13.8
165	Dimefuron	3.2	102.0	96.8	2.68	2.53	3.46	2.14	8.6
166	Dimepiperate	10.4	92.7	82.0	7.91	8.77	10.34	11.75	33.3
167	Dimethachlor	3.8	98.1	101.2	1.66	1.23	6.69	2.75	13.6
168	Dimethenamid	5.5	99.3	98.1	2.39	4.96	5.54	6.08	15.1
169	Dimethipin	7.5	92.0	106.0	7.84	5.06	6.68	4.41	22.0
170	Dimethoate	5.5	101.4	97.4	0.90	1.60	<b>26.44</b>	18.78	29.4
171	Dimethomorph	4.9	98.0	96.7	4.71	3.28	3.87	3.53	12.1
172	Dimetilan	3.8	99.4	99.3	1.97	1.09	5.11	1.22	9.3
173	Dimoxystrobin	2.4	98.7	96.6	2.03	2.28	2.67	3.90	9.4
174	Diniconazole	9.8	87.1	92.7	10.93	7.14	9.08	14.50	37.6
175	Dinobuton	5.0	<b>128.2</b>	118.5	<b>22.07</b>	18.52	<b>24.89</b>	<b>22.65</b>	48.9
176	Dinocap	8.1	102.6	97.4	2.56	8.19	8.29	4.65	20.0
177	Dioxabenzophos	7.8	86.3	111.0	14.62	12.31	<b>24.35</b>	<b>20.23</b>	33.3
178	Dioxacarb	5.1	102.8	99.2	1.31	1.66	3.57	1.73	8.8
179	Diphenamid	4.2	96.1	113.1	4.08	2.69	3.96	3.56	18.3
180	Diphenylamine	9.1	88.9	110.2	5.48	3.57	11.60	5.37	28.3
181	Dipropetryn	8.6	84.1	110.0	7.10	1.79	8.18	3.79	28.2
182	Disulfoton	19.3	82.7	97.9	8.39	12.67	13.52	12.64	40.2
183	Disulfoton sulfone	5.9	100.1	99.1	1.55	2.15	4.05	3.71	11.0
184	Disulfoton sulfoxide	3.8	101.7	101.5	0.98	3.16	3.27	4.83	11.4
185	Ditalimfos	11.1	93.7	80.0	<b>20.58</b>	<b>28.32</b>	16.04	6.02	37.8
186	Dithiopyr	7.3	99.4	101.4	13.46	8.56	<b>28.56</b>	<b>23.18</b>	31.0
187	Diuron (DCMU)	2.4	102.5	94.9	1.49	2.29	3.76	3.52	10.4
188	Dodemorph	3.8	91.8	101.1	2.36	7.14	2.76	5.52	16.3
189	Dodine	7.3	97.8	97.2	0.79	5.20	9.56	3.09	22.5
190	Edifenphos	4.6	102.6	97.8	1.41	3.19	3.30	4.42	12.5
191	Emamectin benzoate B1a	7.9	91.4	88.7	3.49	6.31	7.78	6.29	25.3
192	Endosulfan ( <i>alpha</i> )	7.0	<b>126.8</b>	<b>122.9</b>	5.37	2.49	8.45	2.58	32.5
193	Endosulfan ( <i>beta</i> )	7.9	95.6	97.2	7.59	1.66	7.98	3.71	21.7
194	Endosulfan sulfate	10.0	86.6	105.7	11.33	6.41	12.77	9.85	33.3

**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
195	Endrin	6.2	85.3	116.0	11.87	4.97	11.37	4.58	34.6
196	Endrin ketone	7.3	93.6	115.0	8.89	4.60	6.45	3.42	25.2
197	EPN	4.7	101.3	97.0	1.01	11.50	4.80	4.74	15.8
198	Epoxiconazole	6.9	103.3	102.8	1.05	4.59	8.13	2.72	16.0
199	EPTC	8.3	89.1	111.0	11.67	2.48	10.13	7.91	29.2
200	Esfenvalerate	7.5	82.0	97.8	10.86	4.46	7.01	18.78	40.9
201	Esprocarb	6.2	102.3	100.5	1.82	1.72	6.86	4.31	15.0
202	Etaconazole	7.3	76.5	91.1	7.37	2.78	15.02	7.32	42.8
203	Ethalfuralin	8.5	89.7	92.6	6.27	1.90	12.36	11.35	35.6
204	Ethiofencarb	5.1	95.3	101.6	0.60	1.93	6.13	5.41	15.3
205	Ethiofencarb-sulfone	1.9	100.6	98.6	1.46	1.66	2.91	1.54	5.8
206	Ethiofencarb-sulfoxide	2.0	100.4	97.6	1.94	1.30	2.51	0.92	6.3
207	Ethion	9.8	86.8	93.2	4.07	4.29	10.30	7.44	33.6
208	Ethiprole	4.7	101.3	99.5	1.71	4.84	5.64	3.18	12.6
209	Ethirimol	8.3	97.3	98.1	2.72	1.81	7.35	2.59	18.1
210	Ethofumesate	7.3	101.7	99.1	0.96	1.75	7.15	3.07	14.6
211	Ethoprophos	4.9	92.4	114.2	6.89	1.67	6.37	3.47	23.1
212	Ethoxyquin	10.8	75.1	83.1	3.71	8.37	10.37	8.20	42.8
213	Etofenprox	4.7	97.5	96.7	5.18	3.56	7.43	5.21	11.3
214	Etoazole	4.6	106.2	100.5	11.68	10.89	13.00	11.78	27.8
215	Etridiazole	6.9	92.5	111.7	10.11	2.71	7.54	8.41	25.4
216	Famoxadone	7.3	<b>127.3</b>	114.2	4.72	3.92	8.07	5.64	20.2
217	Famphur	5.5	100.4	102.8	1.35	1.85	6.74	2.91	14.9
218	Fenamidone	7.3	103.0	100.4	2.16	1.03	7.20	2.95	15.0
219	Fenamiphos	10.0	81.2	107.6	7.70	6.62	9.50	13.14	40.2
220	Fenamiphos-sulfone	5.9	96.8	102.7	2.76	1.85	6.02	2.56	14.4
221	Fenamiphos-sulfoxide	3.4	101.3	100.7	0.76	0.80	5.20	0.89	9.2
222	Fenarimol	5.8	101.2	91.0	2.86	4.89	6.63	5.97	18.3
223	Fenazaquin	9.2	86.1	98.8	7.45	5.50	8.02	6.42	22.4
224	Fenbuconazole	5.5	101.4	103.7	3.74	3.09	7.14	3.89	15.1
225	Fenbutatin oxide	9.7	96.0	94.0	4.03	10.87	12.13	5.79	26.7
226	Fenclorazole-ethyl	3.8	101.9	97.3	2.33	2.68	<b>22.37</b>	18.03	28.3

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
227	Fenfuram	5.1	101.3	96.2	2.27	1.60	4.25	4.11	11.1
228	Fenhexamid	4.7	100.8	93.2	2.99	2.54	3.45	3.74	16.1
229	Fenitrothion	5.7	87.7	97.3	2.96	4.92	4.83	9.49	35.9
230	Fenobucarb	5.9	94.3	112.9	9.47	11.40	<b>26.38</b>	<b>20.12</b>	33.1
231	Fenoxanil	5.5	101.5	95.4	1.69	4.05	6.90	4.83	15.9
232	Fenoxaprop-P-ethyl	6.8	107.7	97.3	0.69	7.84	5.11	10.91	26.0
233	Fenoxycarb	4.6	98.8	97.2	1.77	3.72	3.90	4.77	12.5
234	Fenpiclonil	7.1	102.4	104.8	2.39	4.16	7.76	4.02	20.7
235	Fenpropathrin	10.1	88.0	102.7	<b>23.03</b>	18.07	5.48	5.49	23.1
236	Fenpropidin	4.6	98.4	98.1	3.72	2.28	3.88	3.05	10.2
237	Fenpropimorph	2.4	92.0	99.5	1.40	10.07	2.00	7.15	20.1
238	Fenpyroximate	4.2	100.3	105.1	12.52	11.80	<b>23.55</b>	18.34	28.0
239	Fensulfothion	5.7	103.3	100.4	0.59	3.00	7.53	3.67	15.1
240	Fenthion	3.8	104.4	103.6	3.52	1.57	3.14	4.74	12.5
241	Fenthion-sulfone	7.3	97.7	95.8	5.00	6.91	8.34	5.66	20.5
242	Fenthion-sulfoxide	5.7	99.0	100.9	2.05	1.78	7.02	3.96	15.2
243	Fenuron	4.3	102.3	98.3	2.01	2.79	2.12	1.90	8.5
244	Fipronil	4.8	91.1	94.1	2.08	3.77	5.84	8.86	21.2
245	Flamprop-M	2.4	99.8	94.9	3.45	1.12	3.65	3.15	10.8
246	Florasulam	8.0	101.8	98.9	11.62	11.10	19.27	<b>21.78</b>	31.6
247	Fluazifop-butyl	10.8	80.0	99.2	7.15	3.17	9.57	5.61	33.7
248	Fluazinam	8.4	89.1	87.0	5.34	7.27	9.74	7.38	32.9
249	Flucycloxuron	5.4	98.9	98.7	8.34	7.18	2.80	3.88	12.0
250	Fludioxonil	7.7	92.4	94.0	8.83	4.84	8.61	9.26	34.3
251	Flufenacet	5.1	103.2	96.4	0.81	4.15	3.40	4.86	12.0
252	Flufenoxuron	6.8	94.8	106.2	5.18	2.20	5.46	3.27	17.1
253	Fluometuron	5.7	106.0	98.7	2.31	2.58	5.37	4.28	14.0
254	Fluoxastrobin	5.1	96.6	100.8	14.50	6.14	<b>27.85</b>	<b>23.14</b>	31.8
255	Fluquinconazole	4.2	101.3	101.1	3.25	2.07	6.17	6.55	17.0
256	Fluridone	4.9	103.0	98.7	2.68	2.63	4.71	4.25	12.3
257	Flurochloridone	9.2	87.1	89.7	3.48	4.62	9.20	4.92	32.4
258	Fluroxypyr	5.1	97.7	102.2	5.75	3.57	3.11	2.95	10.2

**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
259	Fluroxypyr-meptyl	4.2	104.3	101.9	4.73	5.50	2.73	3.72	13.9
260	Flurtamone	7.6	101.5	96.3	1.98	3.01	8.37	3.12	18.0
261	Flusilazole	10.6	77.1	94.5	8.45	4.92	12.38	4.85	38.0
262	Fluthiacet-methyl	4.7	102.7	94.6	2.53	1.62	5.53	1.75	15.1
263	Flutolanil	4.2	100.9	96.5	1.92	4.31	4.37	4.25	11.6
264	Flutriafol	5.4	101.2	96.2	2.44	2.12	7.72	1.88	14.2
265	Fluvalinate-τ 1	7.0	97.3	101.2	3.07	15.95	5.91	8.03	23.5
266	Fluvalinate-τ 2	4.3	90.3	114.1	1.17	3.38	3.91	4.91	22.3
267	Folpet	6.5	95.2	105.5	5.58	9.22	5.36	4.46	15.8
268	Fonofos	4.7	101.3	98.8	2.24	2.05	2.06	4.12	11.1
269	Foramsulfuron	3.8	103.4	96.1	11.38	8.18	<b>22.26</b>	1,853	29.1
270	Formetanete hydrochloride	9.1	94.8	87.7	12.99	2.05	9.13	5.66	23.7
271	Formothion	6.2	83.1	90.3	5.95	8.48	6.20	5.09	29.9
272	Fosthiazate	6.2	97.8	98.8	2.42	2.41	5.57	2.05	13.0
273	Fuberidazole	6.1	96.1	98.2	2.07	1.74	5.73	1.66	14.4
274	Furathiocarb	3.2	101.7	101.0	1.71	4.12	3.81	3.05	9.6
275	Furmecyclox	2.4	103.1	94.1	2.66	2.87	2.16	2.74	11.1
276	Halosulfuron-methyl	4.2	102.1	97.4	1.89	1.87	6.08	3.17	12.8
277	Haloxyfop	12.4	95.5	92.9	<b>22.61</b>	18.19	17.29	13.39	39.2
278	Haloxyfop-P-methyl	7.3	101.0	84.0	2.31	2.80	8.18	6.14	28.4
279	HCH ( <i>alpha</i> -)	8.3	87.4	111.6	4.76	1.29	6.20	5.38	23.8
280	HCH ( <i>beta</i> -)	8.7	83.1	116.1	9.72	1.98	8.08	1.54	30.9
281	HCH ( <i>gamma</i> -, lindane)	8.4	88.6	110.9	5.21	1.71	5.73	4.63	21.8
282	HCH ( <i>delta</i> -)	5.7	96.6	113.8	6.40	3.00	5.06	2.08	23.0
283	Heptachlor	5.9	93.6	113.4	2.56	1.04	4.05	3.11	20.4
284	Heptachlor epoxide	7.7	85.1	109.4	9.48	4.10	9.45	3.23	29.2
285	Heptenophos	5.9	100.7	103.6	1.0	1.53	6.29	3.11	14.1
286	Hexachlorobenzene	7.1	88.2	112.9	6.81	2.69	8.26	4.08	25.3
287	Hexaconazole	6.1	102.5	101.3	1.44	3.47	6.81	3.94	14.6
288	Hexaflumuron	9.2	106.3	101.3	0.92	3.47	6.81	3.94	37.9
289	Hexazinone	6.4	103.3	98.6	1.08	2.75	8.71	1.69	15.5
290	Hexythiazox	6.2	105.0	101.7	1.73	5.74	4.29	5.93	14.9

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
291	Imazalil	1.4	102.4	100.2	1.28	0.91	1.85	2.31	5.4
292	Imazapyr	7.7	<b>63.8</b>	<b>62.1</b>	<b>20.46</b>	<b>22.99</b>	<b>25.98</b>	18.50	<b>51.7</b>
293	Imazethapyr	7.0	96.3	99.0	3.20	5.51	8.85	5.85	19.3
294	Imidacloprid	4.6	103.6	97.6	8.72	4.63	5.95	8.54	28.1
295	Indoxacarb	4.7	98.3	99.6	4.43	3.66	2.05	4.38	10.5
296	Iodosulfuron-methyl	6.2	102.6	101.0	0.56	1.04	7.48	2.0	14.9
297	Ioxynil	10.2	93.8	92.1	5.53	6.18	12.53	7.32	34.9
298	Iprobenfos	5.7	102.1	99.0	2.27	3.96	6.89	3.78	14.8
299	Iprodione	6.9	94.4	91.1	12.33	8.80	4.33	10.68	28.3
300	Iprovalicarb	5.5	102.5	98.8	3.09	2.04	2.89	3.50	10.6
301	Isocarbamid	8.3	77.0	74.6	11.89	6.64	8.24	5.46	48.2
302	Isocarbophos	4.3	102.9	95.6	1.02	1.60	2.51	4.04	10.7
303	Isoprocarb	4.3	101.5	99.3	1.76	1.67	3.36	2.01	8.5
304	Isoprothiolane	2.8	100.2	101.1	3.15	4.00	2.21	7.84	16.6
305	Isoproturon	4.2	98.1	96.2	1.62	1.18	2.13	1.89	10.0
306	Isoxaben	3.8	100.7	99.0	2.15	2.43	2.78	3.51	9.1
307	Isoxaflutole	3.9	102.5	97.6	1.20	1.66	3.59	3.47	11.2
308	Isoxathion	6.2	102.4	97.6	7.13	4.11	5.36	3.25	12.8
309	Karbutilate	3.2	98.5	100.9	2.79	2.43	3.04	2.57	8.4
310	Kresoxim-methyl	9.6	88.6	106.4	3.57	3.22	9.64	3.76	29.2
311	Lenacil	5.5	100.2	100.8	3.32	1.83	6.89	2.23	13.0
312	Linuron	3.8	101.1	98.7	3.03	4.05	4.33	5.04	13.5
313	Lufenuron	10.4	88.4	93.5	9.04	6.29	12.38	9.75	36.4
314	Malaoxon	5.5	100.6	99.7	1.84	1.67	7.62	3.06	14.3
315	Malathion	4.6	105.2	98.2	3.80	2.51	2.94	3.56	9.9
316	Mecarbam	6.8	103.4	94.0	0.76	3.15	6.87	4.16	15.6
317	Mefenacet	5.4	101.8	97.6	1.70	4.12	8.89	5.49	18.5
318	Mepanipyrim	4.7	103.4	99.7	1.39	2.05	6.88	3.58	14.0
319	Mephosfolan	5.5	99.7	97.0	2.25	2.51	6.59	2.78	13.8
320	Mepronil	3.8	104.0	95.6	0.74	2.31	3.16	3.52	11.5
321	Metalaxyl	6.9	85.7	115.9	6.14	2.23	6.78	3.07	28.2
322	Metalaxyl-M	5.7	102.3	98.0	1.49	1.81	7.28	5.57	7.2



**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
323	Metamitron	4.2	103.5	94.7	3.80	1.40	4.54	4.14	12.2
324	Metconazole	4.7	101.8	102.0	2.81	2.12	4.83	8.54	28.2
325	Methabenzthiazuron	2.0	102.0	97.8	1.91	1.04	1.87	2.11	6.5
326	Methacrifos	4.7	100.6	105.4	3.49	2.41	3.73	3.10	15.7
327	Methamidophos	4.3	102.9	98.0	1.40	0.99	6.15	6.08	16.2
328	Methidathion	5.1	98.7	92.1	2.23	5.18	3.33	7.08	20.8
329	Methiocarb	4.2	102.0	96.9	3.14	1.05	4.76	3.36	10.9
330	Methiocarb-sulfone	11.0	101.7	94.7	1.80	4.99	11.10	5.31	25.2
331	Methiocarb-sulfoxide	5.0	106.1	94.7	4.20	2.96	3.44	2.67	14.9
332	Methomyl	6.4	101.5	102.7	2.70	2.19	6.56	4.58	16.5
333	Methoprene	8.1	99.2	105.0	5.40	6.26	9.38	12.49	27.2
334	Methoxychlor	4.2	97.5	95.3	4.08	3.85	3.29	6.99	15.3
335	Methoxyfenozide	6.5	99.4	105.0	3.25	9.17	4.71	10.98	22.3
336	Metobromuron	9.6	102.2	96.7	11.69	12.25	<b>23.11</b>	17.91	35.9
337	Metolachlor	5.0	91.8	111.8	3.13	1.62	5.30	3.91	20.1
338	Metolcarb	3.8	97.6	98.8	2.68	3.50	3.06	2.44	8.4
339	Metosulam	9.1	103.7	94.6	1.02	1.75	10.25	2.80	20.1
340	Metoxuron	5.5	99.0	99.6	1.57	1.22	5.97	1.63	11.5
341	Metrafenone	4.3	103.5	99.5	1.13	2.99	4.04	2.69	10.3
342	Metribuzin	5.9	101.0	99.7	0.98	1.62	8.79	1.69	14.6
343	Mevinphos	1.7	100.9	97.6	0.66	1.54	2.53	2.36	8.1
344	Molinate	6.2	92.9	111.1	6.22	2.72	6.55	6.28	23.3
345	Monocrotophos	7.1	96.7	100.6	8.47	1.35	5.05	1.76	10.9
346	Monolinuron	2.4	99.7	96.5	1.53	1.64	2.64	2.34	9.9
347	Monuron	4.2	100.7	96.1	0.85	1.60	5.45	18.78	29.2
348	Myclobutanil	3.2	103.8	98.7	4.65	3.95	2.73	6.14	15.3
349	N-(2,4 Dimethylphenyl) formamide	4.6	103.3	99.4	0.92	2.20	3.39	3.28	11.5
350	N-(2,4Dimethylphenyl)-N-methylformamide	5.7	103.6	97.1	1.62	1.38	4.60	4.63	13.4
351	Napropamide	4.7	98.6	104.2	3.01	2.16	3.69	3.96	13.1
352	Neburon	6.4	104.7	108.9	6.45	4.03	4.88	7.11	17.8
353	Nereistoxin	12.0	84.3	105.6	<b>22.56</b>	18.23	<b>22.58</b>	<b>20.35</b>	46.0
354	Nicosulfuron	2.4	103.3	98.4	1.62	2.45	2.92	1.20	7.7

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
355	Nitenpyram	7.9	101.9	98.9	1.07	2.65	8.63	3.66	16.8
356	Nitralin	5.1	99.3	99.6	1.82	3.63	5.34	4.12	12.7
357	Nitrapyrin	5.9	103.3	107.5	2.83	3.35	5.93	6.89	19.4
358	N-Methyl-N-(1-naphthyl) acetamide	5.1	94.2	115.4	5.85	1.46	6.11	3.20	22.8
359	Nuarimol	8.6	99.4	97.2	5.50	4.16	8.97	5.78	32.0
360	Ofurace	3.4	101.3	99.4	2.47	1.97	3.69	2.56	8.7
361	Omethoate	2.4	100.6	93.6	4.36	2.98	2.58	3.10	14.5
362	Oxadiazon	4.7	102.7	98.0	0.91	10.22	5.60	7.85	18.5
363	Oxadixyl	7.0	94.9	99.1	1.99	2.79	7.52	2.43	16.5
364	Oxamyl	2.4	100.6	100.2	1.11	1.82	2.96	1.54	6.2
365	Oxasulfuron	5.5	102.6	94.8	2.01	1.75	3.00	1.83	11.0
366	Oxycarboxin	4.7	102.1	95.1	6.15	1.50	4.63	1.68	11.6
367	Oxyfluorfen	6.8	<b>60.3</b>	74.6	7.17	6.25	8.51	13.57	43.9
368	Paclobutrazol	5.8	104.8	102.3	6.51	3.36	4.79	9.54	29.9
369	Paraoxon-ethyl	4.9	101.9	104.1	1.88	6.85	4.18	11.63	23.1
370	Paraoxon-methyl	8.4	100.6	105.6	2.26	3.47	9.01	4.10	20.8
371	Parathion	8.6	87.3	103.2	10.48	3.83	7.12	3.81	29.8
372	Parathion-methyl	6.9	83.0	108.0	5.11	6.91	6.47	9.91	33.2
373	Penconazole	4.3	102.2	97.2	1.14	3.20	4.00	2.04	9.6
374	Pencycuron	6.4	102.4	100.7	2.12	4.32	7.89	4.18	15.7
375	Pendimethalin	3.2	98.0	101.1	3.46	4.84	2.61	3.55	8.9
376	Pentachlorobenzene	10.2	78.8	116.7	6.62	2.35	9.61	2.83	36.0
377	Permethrin ( <i>cis</i> )	9.9	94.0	106.3	13.88	13.13	<b>23.12</b>	17.50	36.0
378	Permethrin ( <i>trans</i> )	8.9	78.6	90.2	4.04	8.62	10.15	5.52	32.8
379	Phenmedipham	2.4	101.4	90.9	1.79	1.67	3.16	3.92	15.1
380	Phenthoate	4.7	103.3	96.3	1.30	4.13	2.82	4.75	11.7
381	Phtalimide	4.3	97.5	94.2	5.72	4.30	5.77	6.19	16.5
382	Phorate	5.4	102.8	103.2	0.89	3.43	5.67	4.05	14.2
383	Phorate-sulfone	6.8	104.9	101.8	6.76	1.95	6.57	3.79	14.1
384	Phorate-sulfoxide	7.3	102.7	99.2	10.68	8.14	9.46	12.53	31.3
385	Phosalone	4.9	102.6	104.8	1.01	4.13	4.77	5.23	15.3
386	Phosmet	9.8	98.9	94.6	6.44	6.53	8.38	9.32	30.9

**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
387	Phosphamidon	4.3	98.6	101.4	1.01	2.47	5.55	2.40	11.5
388	Phoxim	6.0	102.6	108.1	2.68	4.36	5.87	2.26	15.0
389	Picolinafen	5.8	103.0	96.4	3.99	2.81	6.27	2.70	13.2
390	Picoxystrobin	3.2	96.9	93.0	3.03	1.86	3.79	5.01	13.6
391	Piperophos	4.3	99.3	101.0	2.19	1.54	3.48	3.54	10.2
392	Pirimicarb	6.8	104.4	89.7	3.39	1.40	7.46	5.54	33.7
393	Pirimiphos-ethyl	10.0	80.6	110.3	11.52	4.84	9.67	5.52	36.1
394	Pirimiphos-methyl	5.9	82.4	114.3	6.90	1.65	5.58	3.50	27.6
395	Primisulfuron-methyl	5.4	102.7	98.1	4.08	1.67	6.05	3.53	12.6
396	Prochloraz	5.0	103.8	96.2	1.61	3.56	4.60	3.69	12.8
397	Procymidone	6.4	88.5	112.4	6.14	3.49	6.43	2.01	23.5
398	Profenofos	8.3	94.8	90.0	9.47	7.43	7.12	5.53	23.6
399	Profoxydim	7.6	<b>124.5</b>	119.6	17.93	13.39	<b>25.67</b>	16.75	20.2
400	Promecarb	4.7	98.4	103.8	3.79	2.22	5.98	3.42	12.8
401	Prometon	4.2	100.4	99.3	4.18	3.07	3.78	3.86	10.1
402	Prometryn	4.7	101.3	100.5	1.78	0.86	4.97	2.51	10.3
403	Propachlor	4.3	103.1	96.0	3.21	1.40	2.07	1.46	8.8
404	Propamocarb	5.1	92.2	99.8	2.03	0.83	3.48	2.41	11.3
405	Propanil	3.2	101.7	93.1	1.90	2.79	6.44	3.36	16.7
406	Propaquizafop	4.2	102.1	98.5	2.47	1.93	4.97	2.42	10.3
407	Propargite	4.7	103.0	107.4	4.47	4.12	4.62	3.87	13.9
408	Propazine	7.3	102.3	93.6	4.99	6.05	8.71	5.09	21.2
409	Propham	6.4	89.6	114.0	3.72	2.26	7.37	7.31	29.2
410	Propiconazole	2.4	102.6	100.7	1.84	1.96	3.12	1.31	6.9
411	Propoxur	4.2	103.7	97.3	4.41	1.52	3.94	2.31	9.6
412	Propyzamide	4.7	102.6	106.0	1.56	2.23	6.51	5.02	17.5
413	Proquinazid	3.8	97.0	93.7	2.98	11.65	4.93	8.54	20.2
414	Prosulfocarb	5.4	100.9	104.5	2.72	2.76	6.22	2.84	13.8
415	Prosulfuron	6.8	102.4	94.2	10.29	11.72	8.85	965	32.9
416	Prothiofos	5.8	99.2	95.5	4.13	1.43	5.93	7.21	17.8
417	Pymetrozine	6.5	102.7	98.7	3.94	1.73	6.70	3.02	14.0
418	Pyraclostrobin	5.4	104.1	95.0	1.17	2.62	4.25	2.42	11.1

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
419	Pyraflufen-ethyl	6.9	106.9	101.1	3.82	3.31	6.37	4.05	14.5
420	Pyrazophos	8.1	75.6	79.8	4.61	5.81	6.49	5.92	46.4
421	Pyridaben	2.4	97.3	99.2	2.69	4.15	2.79	3.96	10.0
422	Pyridaphenthion	5.5	104.3	97.2	2.98	3.90	6.21	3.18	13.5
423	Pyridate	3.4	102.4	101.0	3.76	2.66	3.17	2.29	8.2
424	Pyrifenox	3.8	90.6	102.1	3.68	1.45	3.27	4.80	15.9
425	Pyrimethanil	5.5	90.2	107.6	3.79	4.49	6.18	5.33	20.4
426	Pyriproxyfen	5.5	106.4	102.1	3.90	2.03	5.24	2.54	12.3
427	Pyroquilon	3.8	98.9	96.9	8.91	6.05	3.85	9.72	28.9
428	Quinalphos	7.7	82.3	93.7	4.16	1.82	6.98	8.13	28.1
429	Quinoclamine	9.4	104.4	93.4	4.28	3.50	10.72	4.20	22.0
430	Quinoxifen	5.1	91.3	104.5	5.69	1.74	6.97	18.78	32.9
431	Quintozene	4.2	97.9	110.8	4.77	3.70	3.22	6.30	16.6
432	Quizalofop-P-ethyl	10.3	72.6	112.4	4.17	9.45	7.42	6.48	40.5
433	Rimsulfuron	4.7	103.4	97.1	1.72	0.83	4.24	3.35	10.9
434	Rotenone	5.5	98.2	96.0	2.75	1.57	5.08	5.79	14.5
435	Sethoxydim	8.8	103.8	96.1	4.73	3.19	11.82	5.79	23.9
436	Simazine	6.7	97.4	102.8	6.37	2.85	7.19	1.99	14.0
437	Spinosyn A	4.9	103.2	86.0	1.03	10.15	5.07	5.50	24.8
438	Spinosyn D	5.0	92.9	94.1	2.28	2.33	6.23	6.58	19.2
439	Spirodiclofen	5.5	105.0	96.7	5.76	8.63	2.28	7.24	15.6
440	Spiromesifen	11.3	86.8	88.4	9.10	12.54	15.84	16.88	42.9
441	Spirotetramat	4.9	105.6	94.6	3.64	4.34	3.62	9.78	29.6
442	Spirotetramat-enol	4.2	98.3	95.0	1.22	1.41	4.43	3.44	11.6
443	Spirotetramat-enol-glicoside	4.7	105.0	95.8	1.12	1.61	4.44	2.70	11.4
444	Spirotetramat-monohydroxy	2.4	100.5	98.4	3.59	2.85	2.35	2.99	7.9
445	Spiroxamine	3.4	98.5	99.4	2.02	1.52	3.58	1.16	7.0
446	Sulfometuron-methyl	2.4	100.8	101.5	1.79	2.20	3.68	5.53	11.7
447	Sulfosulfuron	4.9	102.7	97.7	1.40	1.77	4.03	2.81	10.4
448	Sulfotep	2.4	98.9	102.9	2.64	4.17	2.91	3.45	8.7
449	Tebuconazole	5.5	105.2	98.7	6.43	2.71	3.38	7.63	28.0
450	Tebufenozide	5.4	102.3	91.6	1.30	9.42	6.71	7.39	21.3

**Table S3. Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (U) values for 507 target analytes (continued)**

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		U %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
451	Tebufenpyrad	6.2	103.3	102.3	1.27	2.99	4.65	4.54	13.0
452	Tebupirimfos	6.7	97.4	105.1	2.63	2.80	8.73	5.99	20.1
453	Tebuthiuron	7.7	103.0	98.4	0.89	1.68	8.19	1.83	15.1
454	Tecnazene	6.2	92.4	106.6	7.18	4.64	5.62	3.02	16.9
455	Teflubenzuron	10.4	86.5	88.9	<b>22.36</b>	<b>20.51</b>	11.25	16.64	33.8
456	Tefluthrin	7.3	86.5	114.7	2.95	1.13	6.32	3.13	26.6
457	Temephos	5.0	107.1	96.1	1.25	6.89	4.17	6.40	16.3
458	Tepraloxymid	5.7	101.6	95.4	1.75	2.53	6.69	6.65	17.8
459	Terbufos	9.1	87.8	93.5	9.83	12.56	10.99	10.27	30.0
460	Terbufos-sulfone	5.8	105.4	98.7	4.82	1.67	5.71	4.34	13.4
461	Terbufos-sulfoxide	4.6	102.5	95.0	4.81	1.59	3.42	18.78	29.0
462	Terbumeton	4.7	102.4	98.7	1.59	2.34	4.58	3.14	10.4
463	Terbumeton-desethyl	6.1	94.2	105.8	3.40	1.42	4.42	3.59	12.4
464	Terbuthylazine	5.9	94.6	114.6	6.43	2.91	7.26	2.58	25.9
465	Terbuthylazine-desethyl	3.2	100.6	96.3	1.03	1.67	3.71	1.70	9.1
466	Terbutryn	5.9	91.4	111.5	3.03	1.17	6.90	2.29	21.2
467	Tetrachlorvinphos	3.8	96.3	91.9	17.71	15.89	<b>23.33</b>	<b>20.85</b>	30.8
468	Tetraconazole	7.3	103.8	101.3	4.16	2.77	9.25	2.18	17.1
469	Tetradifon	7.5	83.7	111.3	7.88	2.60	7.29	4.08	28.4
470	Tetrahydrophtalamide	6.1	95.2	102.2	4.23	4.73	7.42	6.30	19.5
471	Tetramethrin	5.5	92.3	101.4	3.43	2.30	4.23	4.78	16.0
472	Tetrasul	8.4	82.5	108.8	3.58	4.72	9.58	5.02	26.1
473	Thiabendazole	4.3	98.9	101.9	2.73	1.35	4.79	1.76	9.8
474	Thiacloprid	5.5	98.2	100.1	1.85	1.14	9.36	1.56	16.5
475	Thiamethoxam	4.7	104.9	97.4	2.97	2.67	7.54	4.39	15.4
476	Thiazopyr	8.6	80.2	110.9	6.35	3.10	9.71	3.50	30.3
477	Thidiazuron	8.7	106.0	94.6	14.14	13.74	<b>23.50</b>	17.78	31.9
478	Thifensulfuron-methyl	6.5	103.3	98.7	1.46	1.38	7.61	2.13	14.2
479	Thiobencarb	6.4	<b>127.4</b>	<b>121.3</b>	<b>24.50</b>	18.49	<b>25.48</b>	17.37	<b>50.9</b>
480	Thiodicarb	8.0	103.6	97.9	3.36	1.48	11.17	2.34	19.1
481	Thiofanox-sulfone	5.5	104.8	97.0	3.80	4.30	5.41	5.23	15.4
482	Thiofanox-sulfoxide	7.6	99.8	102.8	2.46	5.03	6.89	3.81	15.0

**Table S3.** Limit of quantification (LOQ), recovery, precision (%RSDs) and measurement uncertainty (*U*) values for 507 target analytes (continued)

	Pesticide	LOQ (mgkg <sup>-1</sup> )	Recovery (%)		Repeatability (%RSD, n=5)		Within-laboratory reproducibility (%RSD, n=10)		<i>U</i> %
			0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mg kg <sup>-1</sup>	0.01 mgkg <sup>-1</sup>	0.05 mgkg <sup>-1</sup>	
483	Thiometon	5.0	95.2	96.3	5.78	3.16	3.98	3.83	13.7
484	Thiophanate-methyl	7.8	101.0	97.0	1.34	1.18	12.06	1.73	20.5
485	Tolclofos-methyl	6.2	92.2	115.4	3.61	2.11	6.27	2.63	21.7
486	Tolyfluanid	4.9	77.6	102.7	13.76	15.35	12.27	19.05	44.1
487	Tralkoxydim	10.2	105.3	104.1	5.00	2.27	13.07	3.74	23.2
488	Triadimefon	5.8	104.5	98.2	4.86	2.74	5.20	7.68	30.8
489	Triadimenol	5.7	105.6	95.3	4.74	3.70	4.27	4.21	12.9
490	Tri-allate	6.2	107.6	103.5	1.89	3.44	3.60	6.74	16.1
491	Triasulfuron	6.2	105.8	96.7	3.55	1.63	4.13	4.18	12.0
492	Triazamate	4.2	101.9	95.5	2.25	1.50	4.39	4.02	14.1
493	Triazophos	8.6	74.5	81.5	5.25	7.30	6.10	8.02	47.4
494	Tribenuron-methyl	5.4	101.7	102.5	2.30	3.71	4.32	2.76	10.7
495	Trichlorfon	8.0	104.7	98.3	5.81	2.53	9.06	2.22	16.3
496	Tricyclazole	3.8	96.3	93.8	1.03	1.92	3.61	3.37	14.4
497	Trifloxystrobin	5.4	103.3	97.8	1.65	2.34	5.54	3.10	11.8
498	Triflumizole	3.2	101.7	100.3	1.60	3.15	5.17	1.88	9.5
499	Triflumuron	4.7	102.9	94.1	1.91	6.84	4.98	7.52	29.6
500	Trifluralin	5.8	88.8	90.7	5.87	2.49	4.47	11.12	32.9
501	Triflusulfuron-methyl	6.8	103.0	87.4	3.37	1.71	7.96	5.46	22.9
502	Trinexapac-ethyl	4.6	104.0	98.2	5.25	2.29	3.00	4.48	11.2
503	Triticonazole	6.5	106.0	104.7	3.97	2.46	6.32	4.38	16.8
504	Vamidothion	2.4	102.9	99.8	1.97	0.92	3.07	1.92	7.3
505	Vernolate	4.7	104.6	103.9	4.39	3.90	4.33	2.18	12.1
506	Vinclozolin	7.0	92.0	114.4	7.44	2.12	6.72	3.95	23.5
507	Zoxamide	6.5	103.0	97.7	1.42	4.33	5.10	3.41	12.4

Note: Recoveries of <70% and >120%, RSDs>20% and *U*>50% are in bold.  
DDT, dichlorodiphenyltrichloroethane; RSD, relative standard deviations.