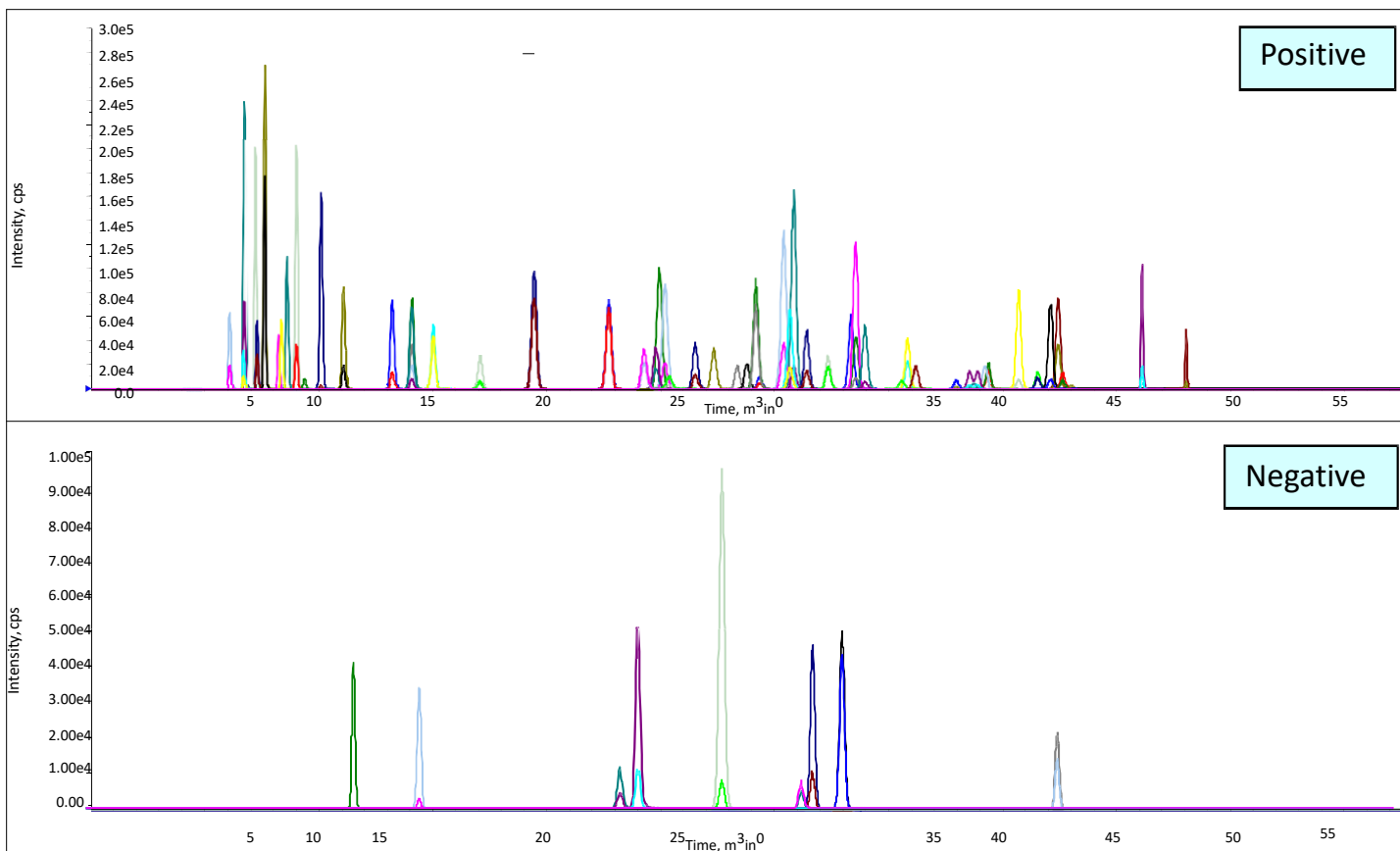


Testing methods of Japanese Water Supply Act were revised in April 2013, and 64 pesticides were added to the target compounds of the simultaneous analytical method using LC/MS/MS. In this note, an InertSustain C18 HPLC column and a 4000QTRAP linear tandem mass spectrometer (AB Sciex) were used. As a result, all the compounds added by the revision were detected with excellent peak shape.



Compound name	MW	RT (min)	Ionization	Monitoring (m/z)	
				Precursor	Product
Dinotefuran	202.2	6.1	ESI(+)	203	129 87
Nitenpyram	270.7	6.7	ESI(+)	271	126 237
Oxamyl	219.3	6.7	ESI(+)	237	72 90
Pymetrozine	217.2	7.2	ESI(+)	218	105 78
Thiamethoxam	291.7	7.3	ESI(+)	292	211 181
Monocrotophos	223.2	7.6	ESI(+)	224	127 193
Imidacloprid	255.7	8.2	ESI(+)	256	209 175
Clothianidin	249.7	8.3	ESI(+)	250	169 132
Trinexapac-ethyl	252.3	8.5	ESI(+)	253	69 207
Cinosulfuron	413.4	8.6	ESI(+)	414	183 83
Acetamiprid	222.7	9.0	ESI(+)	223	126 90
Thiacloprid	252.7	10.1	ESI(+)	253	126 90
Pyrazosulfuron-ethyl	414.4	11.1	ESI(+)	415	182 83
Cyanazine	240.7	13.2	ESI(+)	241	214 104
Ethoxysulfuron	398.4	14.1	ESI(+)	399	261 218
Metribuzin	214.3	14.1	ESI(+)	215	187 49
Bromacil	261.1	14.1	ESI(+)	261	205 188
Bendiocarb	223.2	15.0	ESI(+)	224	167 109
Fluzifop	327.3	17.1	ESI(+)	328	282 254
Furametpyr	333.8	19.5	ESI(+)	334	157 290
Metominostrobin(E)	284.3	22.7	ESI(+)	285	194 140
Linuron	249.1	24.8	ESI(+)	249	182 160
Pyriminobac-methyl(Z)	361.4	24.9	ESI(+)	362	330 284
Ametryn	227.3	25.2	ESI(+)	228	186 96
Acilbenzolar-s-methyl	210.3	25.3	ESI(+)	211	136 211
Boxacalid	343.2	26.5	ESI(+)	343	307 140
Cyproconazole	291.8	27.3	ESI(+)	292	70 125
Pyriminobac-methyl(E)	361.4	28.4	ESI(+)	362	330 284
Cyproconazole	291.8	28.8	ESI(+)	292	70 125
Cumyluron	302.8	29.2	ESI(+)	303	185 125
Benzobicyclon	447.0	29.3	ESI(+)	447	257 229
Dicloromezine	255.1	29.7	ESI(+)	255	89 159
Prometryn	241.4	30.4	ESI(+)	242	158 200
Simeconazole	293.4	30.7	ESI(+)	294	70 73
Chromafenozide	394.5	30.9	ESI(+)	395	175 147
Tetraconazole	372.1	31.4	ESI(+)	372	159 70
Indanofan	340.8	32.3	ESI(+)	341	175 187
Naprosanilide	291.4	33.3	ESI(+)	292	171 120
Tebuconazole	352.5	33.5	ESI(+)	353	133 297
Tetrachlorovinphos(CVMP)	366.0	33.6	ESI(+)	367	127 206
Diflubenzuron	307.8	34.0	ESI(+)	308	70 125
Cyprodinil	225.3	35.6	ESI(+)	226	93 77

Compound name	MW	RT (min)	Ionization	Monitoring (m/z)	
				Precursor	Product
Etobenzanide	340.2	36.2	ESI(+)	340	179 149
Oxadiazyl	341.2	38.0	ESI(+)	341	223 358/223
Difenoconazole	406.3	38.5	ESI(+)	406	251 337
Pyrazolate	439.3	38.7	ESI(+)	439	91 173
Difenoconazole	406.3	38.8	ESI(+)	406	251 337
Pirimiphos-methyl	305.3	39.2	ESI(+)	306	164 108
Phoxim	298.3	39.3	ESI(+)	299	77 129
Trifluzimole	345.8	40.7	ESI(+)	346	278 73
Benzozenap	431.3	41.5	ESI(+)	431	105 119
Quilzalofop-ethyl	372.8	42.1	ESI(+)	373	299 271
Oxazicloromefone	376.3	42.4	ESI(+)	376	190 161
Closteprop	324.2	42.7	ESI(+)	324	120 203
Pentozazole	353.8	43.0	ESI(+)	354	286 186
Amiltraz	293.4	46.1	ESI(+)	294	163 122
Silafiufofen	408.6	48.0	ESI(+)	426	287 168

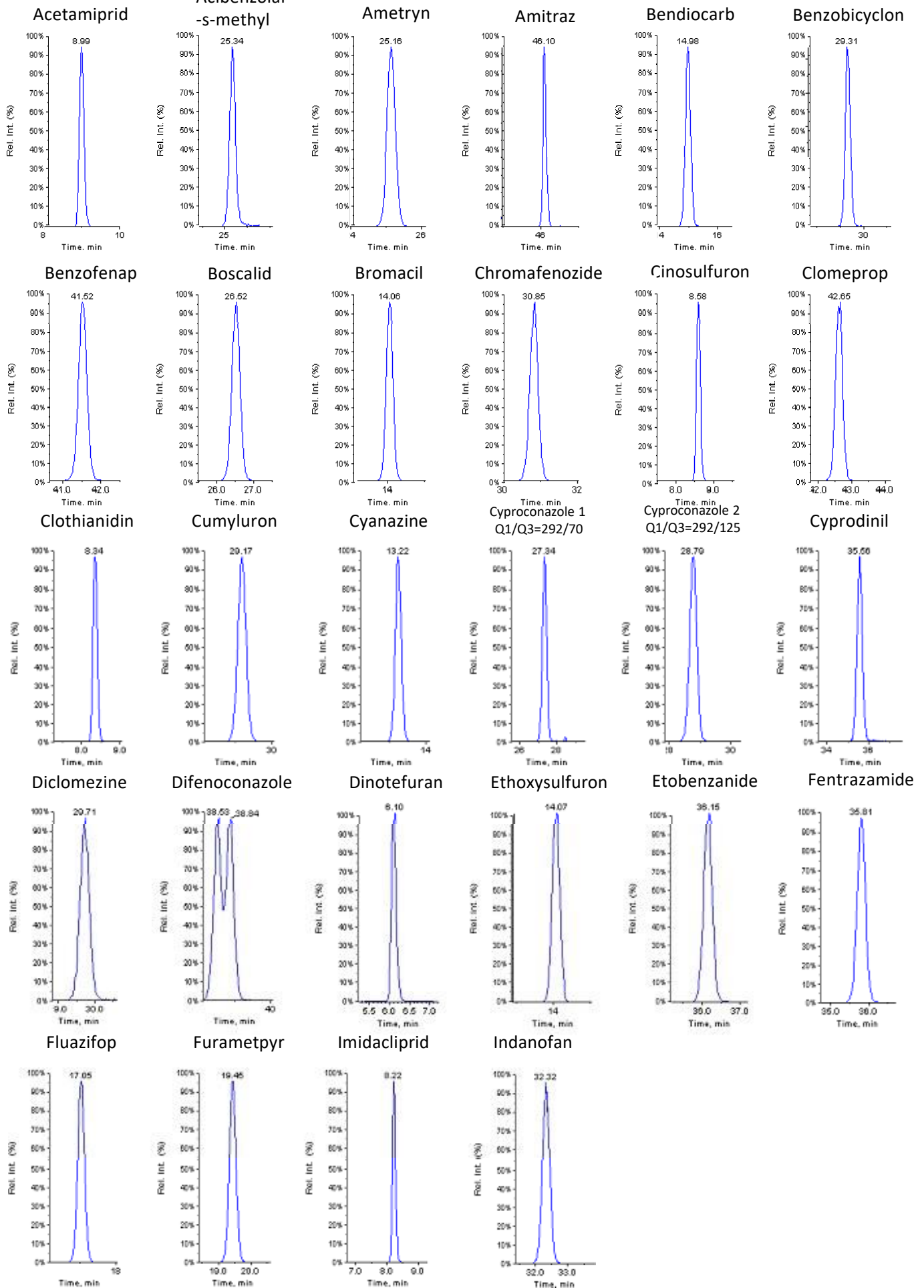
Compound name	MW	RT (min)	Ionization	Monitoring (m/z) (min)	
				Precursor	Product
MCPA	200.6	11.5	ESI(-)	199	141 -
Dichlorprop	235.1	14.4	ESI(-)	233	161 125
Propanil	218.1	24.5	ESI(-)	216	160 35
Inabandif	338.8	25.3	ESI(-)	337	122 78
Tiadinil	267.7	27.8	ESI(-)	266	71 238
Fentrazimide	415.2	31.7	ESI(-)	413	171 179
Diflubenzuron	310.7	32.8	ESI(-)	309	156 289
Thifluzamide	528.1	33.0	ESI(-)	527	125 166
Fluziam	465.1	42.5	ESI(-)	463	416 398

HPLC Conditions;

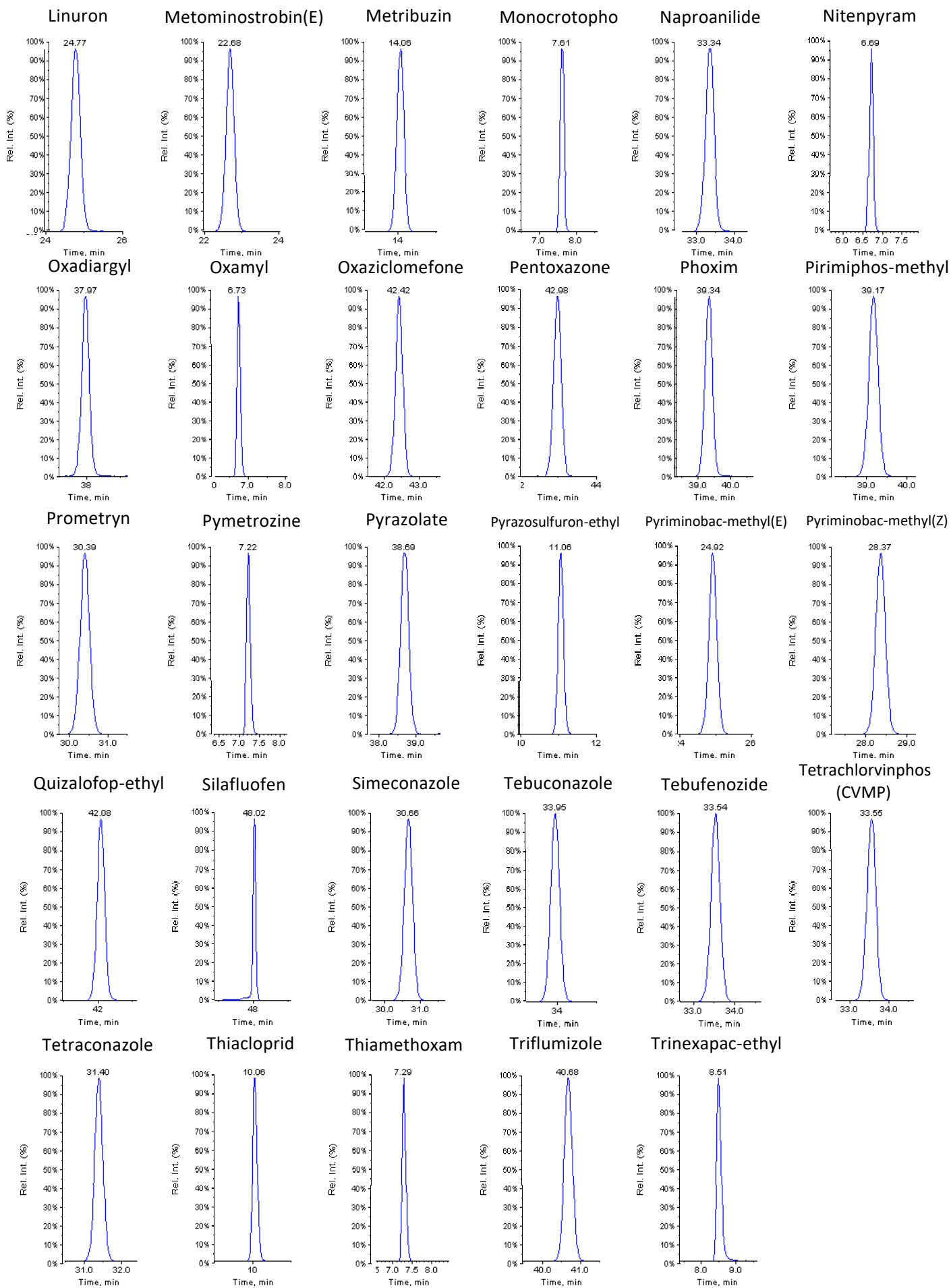
(1.0 $\mu\text{g/L}$ each)

- Column** : InertSustain C18 (3 μm , 75 x 2.1 mm I.D.)
- Eluent** : A) 5 mM ammonium acetate in water
 B) 5 mM ammonium acetate in methanol
 A/B = 95/5 – 4 min – 60/40 – 35 min – 25/75
 – 5 min – 0/100 – 6 min – 0/100 –
 – (equilibration for 10 min), v/v
- Flow rate** : 0.15 mL/min
- Col. Temp.** : 40 $^{\circ}\text{C}$
- Sample Temp.:** 5 $^{\circ}\text{C}$
- Detection** : MS/MS (4000 QTRAP: ESI, MRM)
- Inj. Volume** : 100 μL

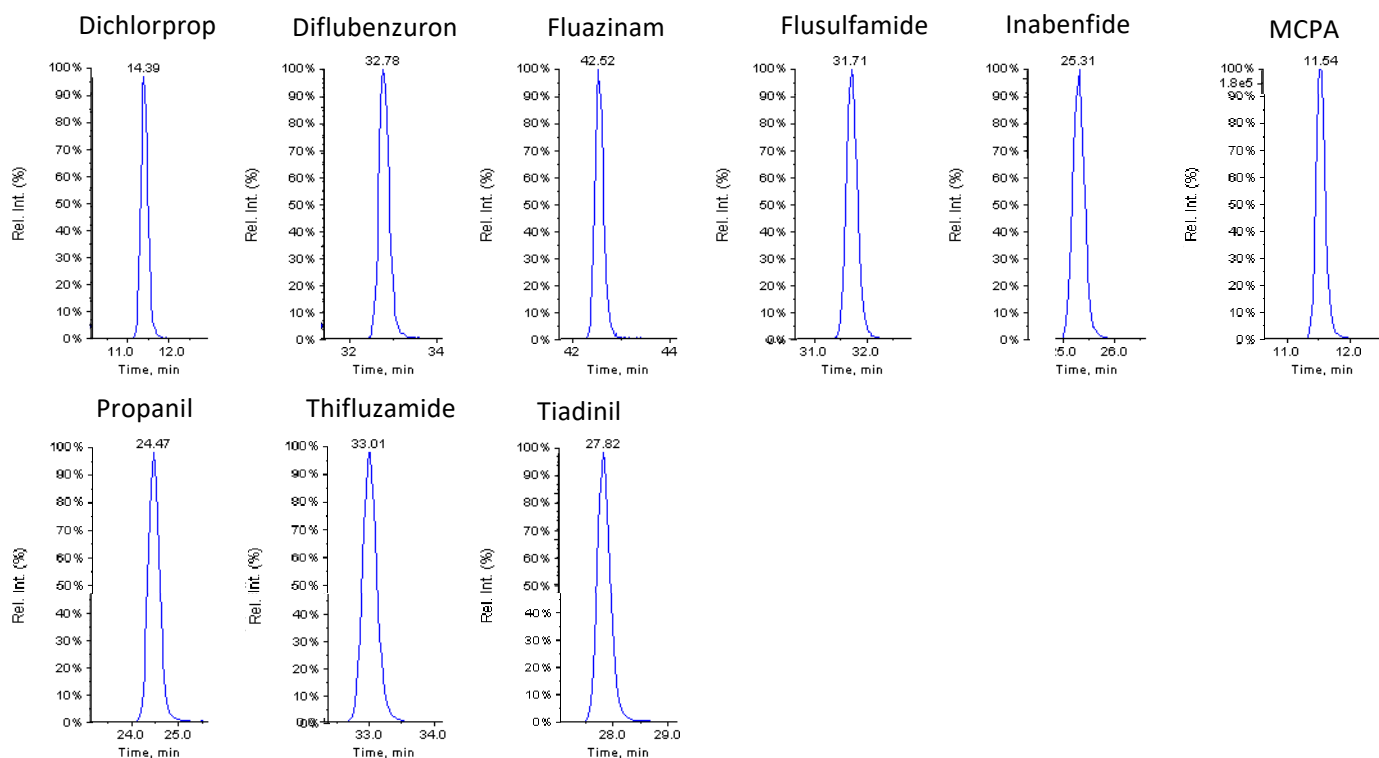
Cyproconazole and difenoconazole are detected as two peaks owing to existence of their isomers.



< Compounds detected in positive mode (2) >



< Compounds detected in negative mode >



HPLC column

InertSustain C18 3 μm , 75 x 2.1 mm I.D.
Cat.No. 5020-07413

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