

Supplementary material

Table S1. Parameters for determination of pesticides residues in rice by HPLC-MS/MS in ESI+ mode. Transition 1: Quantification transition; Transition 2: Confirmation transition.

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
TPP			327	152	106	47	10
Acetamiprid	Insecticide, acaricide	Transition 1	223	126	74	27	4
		Transition 2	225	128	61	29	8
Azoxystrobin	Fungicide	1	404	372	46	21	10
		2	404	344	46	35	20
Bixafen	Fungicide	1	414	394	76	21	24
		2	416	396	81	23	16
Boscalid	Fungicide	1	343	307	76	29	18
		2	343	140	116	27	6
Bupirimate	Fungicide	1	317	272	61	27	22
		2	317	108	91	41	6
Buprofezin	Insecticide	1	306	201	51	17	14
		2	306	116	56	23	20
Cadusafos	Insecticide	1	271	159	86	19	6.5
		2	271	131	71	31	6.5
Carbaryl	Insecticide, plant growth regulator	1	202	145	86	17	16
		2	202	127	86	28	14
Carbendazim	Fungicide	1	192	160	51	25	10
		2	192	105	61	51	18

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Carbofuran	Insecticide	1	222	165	56	15	22
		2	222	123	56	25	14
Carbofuran-3-hydroxi	Insecticide	1	238	181	82	17	10
		2	238	163	82	21	10
Carboxin	Fungicide	1	236	143	46	23	8
		2	236	87	46	35	14
Cymoxanil	Fungicide	1	199	128	46	13	8
		2	199	83	46	33	14
Cyproconazol	Fungicide	1	292	70	71	35	4
		2	294	125	16	35	14
Cyprodinil	Fungicide	1	226	91	81	49	16
		2	226	93	81	47	16
Clofentezine	Insecticide, acaricide	1	303	138	56	21	20
		2	303	102	56	59	18
Chlorfenvinphos	Insecticide	1	359	99	75	41	6
		2	359	155	75	19	8
Chlorantraniliprole	Insecticide	1	484	286	61	21	16
		2	484	453	61	23	6
Chlorpyrifos-methyl	Insecticide	1	324	125	66	25	8
		2	322	125	66	29	6
Chlorpirifos	Insecticide	1	350	97	21	47	6
		2	350	198	80	25	6
Clothianidin	Insecticide	1	250	169	76	19	13
		2	250	132	94	19	13

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Coumaphos	Insecticide	1	363	227	84	37	12
		2	363	307	84	23	7
Demeton-S-methylsulfone	Insecticide	1	263	109	76	37	6
		2	263	169	76	16	6
Desmethyl-pirimicarb	Insecticide	1	225	72	56	27	7
		2	225	168	61	21	8
Diazinon	Insecticide, acaricide	1	305	100	76	49	4
		2	305	97	76	95	4
Dichlorvos	Insecticide, acaricide	1	221	109	76	25	4
		2	223	109	66	23	18
Dicrotophos	Insecticide	1	238	112	70	17	6
		2	238	193	70	15	8
Diethofencarb	Fungicide	1	268	124	61	43	6
		2	268	226	61	15	12
Difenoconazole	Fungicide	1	406	251	81	37	4
		2	406	337	41	23	13
Diflubenzuron	Insecticide	1	311	158	81	19	18
		2	311	141	81	43	20
Dimethoate	Insecticide, acaricide	1	230	199	61	13	8
		2	230	125	61	29	6
Dimethomorph	Fungicide	1	388	301	51	45	10
		2	388	165	51	29	18
DMST	Fungicide	1	215	106	100	10	13
		2	215	151	100	5	13

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Diniconazole	Fungicide	1	326	159	56	39	13
		2	326	70	56	45	13
EPN	Insecticide, acaricide	1	324	296	16	19	6
		2	324	157	16	29	6
Epoxiconazole	Fungicide	1	330	101	36	63	13
		2	330	121	36	27	13
Spiroxamine	Fungicide	1	298	144	41	27	10
		2	298	100	41	41	6
Ethion	Insecticide	1	385.1	97	61	53	4
		2	385	199	61	13	4
Ethiofencarb	Insecticide	1	226	107	51	23	18
		2	226	164	51	13	10
Ethirimol	Fungicide	1	210	140	71	31	22
		2	210	98	66	37	18
Ethoprophos	Insecticide, nematicide	1	243	97	71	41	4
		2	243	131	66	29	8
Etrinphos	Insecticide	1	293	125	64	33	8
		2	293	265	61	21	10
Fenamidone	Fungicide	1	312	65	81	71	4
		2	312	236	41	19	4
Fenamiphos	Nematocide	1	304	217	81	31	4
		2	304	202	81	47	4
Fenamiphos sulfone	Nematocide	1	336	266	81	29	13
		2	336	188	81	41	13

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Fenamiphos sulfoxide	Nematocide	1	320	233	86	35	12
		2	320	108	86	59	6
Fenarimol	Fungicide	1	331	268	86	31	10
		2	331	139	96	49	14
Fenpropathrin	Acaricide, insecticide	1	350	97	81	43	4
		2	350	125	76	19	6
Fenpropidin	Fungicide	1	274	147	51	37	7
		2	274	117	51	65	7
Fenpropimorph	Fungicide	1	304	147	74	39	7
		2	304	117	11	71	6
Fenezaquin	Insecticide	1	307	161	51	31	13
		2	307	147	51	25	13
Fenhexamid	Fungicide	1	302	55	96	59	4
		2	302	97	91	35	6
Fenitrothion	Insecticide	1	278	125	71	31	6
		2	278	109	71	25	6
Fenoxycarb	Insecticide	1	302	116	36	15	16
		2	302	88	36	23	16
Fenthion	Insecticide	1	279	169	56	25	14
		2	279	247	56	19	16
Fenthion oxon	Insecticide	1	263	231	66	23	14
		2	263	216	76	33	14
Fenthion oxon sulfone	Insecticide	1	295	217	96	27	12
		2	295	104	96	35	6

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Fenthion oxon sulfoxide	Insecticide	1	279	264	56	27	18
		2	279	104	56	39	18
Fenthion-sulfone	Insecticide	1	311	125	76	28	8
		2	311	279	76	27	16
Fenthion sulfoxide	Insecticide	1	295	280	76	25	16
		2	295	109	76	45	18
Phenthoate	Insecticide, acaricide	1	321	79	36	51	6
		2	321	247	16	13	10
Flufenoxuron	Insecticide	1	489	158	31	25	10
		2	489	141	31	73	20
Fluopyram	Fungicide	1	397	145	81	79	8
		2	397	173	81	43	10
Fluquinconazole	Fungicide	1	376	307	56	33	7
		2	376	349	56	25	14
Flusilazole	Fungicide	1	316	247	76	27	14
		2	316	165	76	37	12
Flutriafol	Fungicide	1	302	123	41	39	13
		2	302	109	41	43	13
Fonofos	Insecticide	1	247	109	61	26	6
		2	247	137	61	15	6
Phosalone	Insecticide	1	368	182	66	19	14
		2	368	111	51	51	18
Phosphamidon	Insecticide, acaricide	1	300	127	66	27	6
		2	300	227	66	19	14

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Phosmet	Insecticide, acaricide	1	318.1	160	56	21	12
		2	318.1	77	56	69	13
Fosthiazate	Insecticide, nematicide	1	284	104	11	27	6
		2	284	228	11	15	8
Phoxim	Insecticide	1	299	77	56	47	12
		2	299	129	56	17	12
Hexaconazole	Fungicide	1	316	70	81	23	14
		2	314	159	71	39	4
Hexythiazox	Acaricide	1	353	228	66	21	4
		2	353	168	66	37	14
Imazalil	Fungicide	1	297	159	56	31	14
		2	299	161	46	29	10
Imidacloprid	Insecticide	1	256	209	89	23	4
		2	256	175	89	25	4
Indoxacarb	Insecticide	1	528	150	26	31	18
		2	528	203	96	51	7
Iprodione	Fungicide	1	330	245	61	21	14
		2	332	247	61	21	14
Iprovalicarb	Fungicide	1	321	119	56	27	8
		2	321	186	56	17	16
Isoprocarb	Insecticide	1	194	95	65	19	14
		2	194	152	65	11	20
Isoprothiolane	Fungicide	1	291	231	51	17	14
		2	291	189	51	31	12

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Isoproturon	Herbicide	1	207	72	61	35	12
		2	207	165	61	21	10
Kresoxim-methyl	Fungicide	1	314	267	75	5	13
		2	314	222	75	9	13
Linuron	Herbicide	1	249	160	61	25	18
		2	249	182	61	21	22
Lufenuron	Insecticide	1	511	158	79	27	4
		2	511	141	79	67	4
Malaaxon	Insecticide	1	315	99	71	31	4
		2	315	127	71	17	6
Malathion	Insecticide	1	331	127	64	17	4
		2	331	285	64	13	4
Mandipropamid	Fungicide	1	412	328	76	21	16
		2	412	125	76	55	8
Mepanipyrim	Bactericide, fungicide	1	224	106	66	35	7
		2	224	77	66	49	7
Methacrifos	Insecticide, acaricide	1	241	209	71	13	6
		2	241	125	61	27	6
Metaflumizone	Insecticide	1	507	178	86	35	10
		2	507	89	86	123	4
Metalaxyl	Fungicide	1	280	192	61	25	10
		2	280	220	61	21	12
Metalaxyl-M	Fungicide	1	280	220	46	19	13
		2	280	160	46	31	13

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Metazachlor	Herbicide	1	278	210	41	15	4
		2	278	134	41	29	8
Metconazole	Fungicide	1	320	70	76	45	7
		2	320	125	81	49	6
Methiocarb	Insecticide	1	226	169	101	13	20
		2	226	121	101	25	18
Methiocarb sulfoxide	Insecticide	1	242	185	56	19	10
		2	242	122	56	41	10
Metobromuron	Herbicide	1	261	172	76	25	6.5
		2	261	148	76	21	4
Methomyl	Insecticide, acaricide	1	163	88	46	13	4
		2	163	106	46	15	18
Metribuzin	Herbicide	1	215	187	31	25	13
		2	215	84.1	31	29	13
Mevinfos	Insecticide, acaricide	1	225	127	69	19	4
		2	225	193	69	13	4
Myclobutanil	Fungicide	1	289	70	61	37	12
		2	289	125	61	49	8
Monocrotophos	Insecticide, acaricide	1	224	127	86	21	6
		2	224	193	86	13	14
Nitenpyram	Insecticide	1	271	225	79	15	4
		2	271	99	79	21	4
Omethoate	Insecticide, acaricide	1	214	125	51	29	8
		2	214	109	51	35	8

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Oxadixyl	Fungicide	1	279	219	66	15	4
		2	279	132	66	41	4
Oxidemeton methyl	Insecticide, acaricide	1	247	169	71	19	6
		2	247	109	8	40	7
Paclobutrazol	Regulator of systemic plant growth	1	294	70	71	39	4
		2	294	89	71	81	4
Paraoxon-ethyl	Insecticide	1	276	220	61	19	6
		2	276	248	61	15	16
Paraoxon-methyl	Insecticide	1	248	202	96	25	7
		2	248	90	66	37	6
Parathion	Insecticide	1	292	236	81	21	6.5
		2	292	264	81	15	13
Parathion-methyl	Insecticide	1	264	125	76	25	7
		2	264	109	120	21	13
Pencycuron	Fungicide	1	329	125	71	33	8
		2	329	218	71	23	14
Penconazole	Fungicide	1	284	70	61	49	12
		2	284	159	61	47	14
Pendimethalin	Herbicide	1	282	212	41	17	12
		2	282	194	41	27	12
Pyraclostrobin	Fungicide	1	388	194	51	19	16
		2	388	163	51	35	14
Pyrazophos	Fungicide	1	374	222	81	29	6
		2	374	194	11	43	7

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Pyridaben	Acaricide	1	365	147	26	31	13
		2	365	309	26	19	13
Pyrimethanil	Fungicide	1	200	107	71	35	8
		2	200	82	71	37	14
Pirimicarb	Insecticide	1	239	72	51	37	12
		2	239	182	51	23	12
Pirimiphos-ethyl	Insecticide, acaricide	1	334	198	85	29	8
		2	334	182	85	31	8
Pirimiphos-methyl	Insecticide, acaricide	1	306	108	71	43	6
		2	306	67	71	65	6
Pyriproxyfen	Insecticide	1	322	96	56	21	4
		2	322	78	56	81	2
Prochloraz	Fungicide, herbicide	1	376	308	16	17	13
		2	376	266	16	23	13
Profenofos	Insecticide, acaricide	1	373	303	115	17	13
		2	375	305	115	17	13
Propiconazol	Fungicide	1	342	159	46	37	13
		2	342	89	86	99	4
Propyzamide	Herbicide	1	256	173	56	31	8
		2	256	190	56	21	10
Propoxur	Insecticide, acaricide	1	210	168	58	11	24
		2	210	93	58	33	7
Prothioconazole-desthio	Fungicide	1	312	70	76	61	2
		2	312	125	76	49	6

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Quinoxifen	Fungicide	1	308	197	61	43	7
		2	308	162	61	57	7
Rotenone	Insecticide, acaricide	1	395	213	81	33	12
		2	395	192	91	31	12
Spinosad A	Insecticide	1	732.5	142	51	37	13
		2	732.5	98	51	75	13
Spinosad D	Insecticide	1	746.5	142	66	39	13
		2	746.5	98	66	79	13
Tebuconazol	Fungicide	1	308	70	21	39	13
		2	308	125	21	47	13
Tebufenpyrad	Acaricide	1	334	117	86	57	6
		2	334	145	86	38	8
Terbuthylazine	Herbicide	1	232	176	81	25	7
		2	230	104	81	45	6
Teflubenzuron	Insecticide	1	381	141	86	53	9
		2	381	158	86	23	4
Tetraconazole	Fungicide	1	372	159	81	39	14
		2	374	161	76	35	8
Tetramethrin	Insecticide	1	332	164	71	35	10
		2	332	135	71	25	8
Thiabendazole	Fungicide	1	202	175	79	35	4
		2	202	131	81	47	10
Thiacloprid	Insecticide, moluscicide	1	253	126	99	29	4
		2	255	128	76	31	6

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
Thiamethoxam	Insecticide	1	292	211	74	17	7
		2	292	181	96	31	7
Thiodicarb	Insecticide	1	355	88	31	19	12
		2	355	108	61	21	20
Thiophanate-methyl	Fungicide	1	343	151	76	23	14
		2	343	93	81	71	6
Tolclofos-methyl	Fungicide	1	301	175	66	37	14
		2	303	177	61	37	12
Triadimefon	Fungicide	1	294	225	61	19	14
		2	296	199	36	21	12
Triadimenol	Insecticide, fungicide	1	296	70	41	37	12
		2	296	227	11	15	13
Triazophos	Insecticide, acaricide, nematocide	1	314	119	76	47	6
		2	314	286	76	10	24
Trifloxystrobin	Fungicide	1	409	186	59	23	7
		2	409	145	116	63	8
Triflumuron	Insecticide	1	359	156	21	21	18
		2	359	139	21	45	18
Tricyclazole	Fungicide	1	190	163	89	31	7
		2	190	136	91	36	7
Zoxamide	Fungicide	1	336	187	46	31	24
		2	336	159	46	55	20

DP- Declustering potential (V); CE- Collision energy (V); CXP- Collision cell exist potential (V); DMST- N,N-dimethyl-N'-p-tolysulphamide; EPN- O-ethyl O-4-nitrophenyl phosphonothiate

Table S2. Parameters for determination of pesticides residues in rice by HPLC-MS/MS in ESI- mode. Transition 1: Quantification transition; Transition 2: Confirmation transition.

Pesticide	Functional class	Transitions	Precursor ion (m/z ± 0.5)	Product ion (m/z ± 0.5)	DP (V)	CE (V)	CXP (V)
DNC			301	137	-120	-16	-15
Fludioxonil	Fungicide	Transition 1	247	180	-65	-40	-9
		Transition 2	247	126	-65	-42	-7
Fipronil	Insecticide	1	435	330	-60	-20	-4
		2	437	332	-60	-20	-4
Methoxyfenozide	Insecticide	1	367	149	-142	-17	-16
		2	367	105	-142	-29	-16

DP- Declustering potential (V); CE- Collision energy (V); CXP- Collision cell exist potential (V)