

Simultaneous Analysis of 53 Pesticides in Safflower (*Carthamus tinctorius* L.) by using LC–MS/MS Coupled with a Modified QuEChERS Technique

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Table S1. MS parameters of 53 pesticides.

Pesticide	Qualitative Ion Pair	Quantitative Ion Pair	FP(V)	CE (eV)	RT
Carbendazim	192.1/160	192.1/132	118	13,25	2.8
Thiabendazole	202/175	202/131	120	30,30	3.0
Thiophanate-Methyl	343/311	343/151	120	10,20	5.6
Simetryn	214/144	214/124	120	20,20	5.2
Terbumeton	226.2/170	226.2/114	120	15,20	5.7
Rabenzazole	213.1/172	213.1/118	122	21,37	6.5
Carbofuran	222/165.1	222/123	92	8,16	6.1
Carbaryl	202/145	202/127	80	5,10	6.4
Thiofanox	241/184	241/57.1	100	5,20	6.6
Cycluron	199.1/89.1	199.1/72.2	106	13,21	6.6
Methoprotryne	272.2/198.1	272.2/170.1	140	20,30	6.6
Ametryn	228/186	228/96	120	20,25	6.7
Norflurazon	304/284	304/160	140	25,35	7.2
Pyrimethanil	200.2/168.1	200.2/107	41	40,34	7.6
Chlorantraniliprole	484/453	484/286	102	13,10	8.4
Prometryn	242.2/200.2	242.2/158.1	120	20,20	8.7
Flonicamid	230/203.1	230/174.1	120	13,17	9.0
Mefenacet	299/148	299/120	100	15,25	11.1
Cyprodinil	226.1/118	226.1/93.1	152	49,37	11.9
Mandipropamid	412.1/328	421.1/125	100	10,40	12.0
Bupirimate	317/272	317/166	120	20,25	12.6
Metconazole	320/125	320/70	110	40,25	12.8
Isazofos	314.1/162.1	314.1/120	120	15,20	12.9
Rotenone	395.1/213	395.1/192	130	20,25	13.4
Triflumuron	359/156	359/139	120	15,25	14.6
Difenoconazole	406/337	406/251	160	15,20	14.9
Diazinon	305.1/169	305.1/153	140	20,20	15.0
Triflumizole	346/278	346/73	80	5,10	15.2
Myclobutanil	289.2/125	289.2/70	60	35,15	10.9
3-Hydroxycarbofuran	238/163	238/181	69	8,4	3.6
Aldicarb	208.1/116	208.1/89.1	62	5,13	2.4
aldicarb sulfone	223/148	223/86	111	4,12	2.7
aldicarb sulfoxide	207/132	207/89	77	4,10	2.3
Fenobucarb	208.2/152.1	208.2/95	80	5,10	9.0
Isoprocarb	194.1/137	194.1/95	75	5,10	7.4
Methomyl	163.2/106	163.2/42.1	50	8,20	3.1
Metolcarb	166.1/109	166.1/91	80	5,10	15.8
Propoxur	210/168	210/111	80	5,10	5.7
Imidacloprid	256.1/209	256.1/175.1	106	13,13	3.8

Thiamethoxam	292/181.03	292/108	80	20,29	3.2
Clothianidin	250.2/169.1	250.2/132	80	10,15	3.6
Thiacloprid	253/186	253/126	120	10,15	4.6
Acetamiprid	223.1/126	223.1/90	102	21,13	4.0
Chlorpyrifos	350/198	350/97.1	100	15,30	17.8
Fenthion	279/247	279/169	100	10,15	14.8
Coumaphos	363/307	363/227	120	15,20	15.7
Propachlor	212.1/170	212.1/152	80	10,15	4.4
Atrazine	216/174	216/132	100	15,20	6.5
Acetochlor	270.1/224	270.1/148	90	5,20	12.7
Metolachlor	284.2/252.2	284.2/176.2	90	8,24	12.4
Dimethenamid	276.1/244	276.1/168	120	10,15	9.7
Alachlor	270/238	270/162	80	10,20	12.6
Butachlor	312.1/238	312.1/162	80	10,20	17.5

Table S2. Standard quantitative curves of 53 pesticides.

Pesticide	Linear Regression Equation	Correlation Coefficient (R ²)
Carbendazim	y=2272.1x+1086.9	0.9995
Thiabendazole	y=1802.3x+1718.3	0.9997
Thiophanate-Methyl	y=926.4x+285.6	0.9983
Simetryn	y=1741.5x+51.7	1.0000
Terbumeton	y=1453.4x-454.6	0.9991
Rabenzazole	y=366.2x+47.2	0.9979
Carbofuran	y=1541.8x-126.8	0.9999
Carbaryl	y=1761.3x+143.9	0.9988
Thiofanox	y=155.5x-13.4	0.9993
Cycluron	y=657.3x+43.3	0.9991
Methoprottryne	y=1815.8x+84.0	0.9985
Ametryn	y=1301.5x+67.8	0.9998
Norflurazon	y=863.2x+81.5	0.9992
Pyrimethanil	y=247.3x+147.2	0.9999
Chlorantraniliprole	y=593.2x+318.1	0.9982
Prometryn	y=2128.5x+451.5	0.9998
Flonicamid	y=353.7x-245.8	0.9986
Mefenacet	y=1317.1x-16.4	1.0000
Cyprodinil	y=468.0x+11.7	0.9999
Mandipropamid	y=855.9x+160.8	0.9989
Bupirimate	y=593.7x+35.2	0.9985
Metconazole	y=362.2x+102.8	0.9993
Isazofos	y=1912.1x+1245.8	0.9983
Rotenone	y=651.5x+223.5	0.9994
Triflumuron	y=931.1x+125.6	0.9991
Difenoconazole	y=347.5x-36.0	0.9988
Diazinon	y=820.6x-371.0	0.9995
Triflumizole	y=2049.5x+848.2	0.9998
Myclobutanil	y=778.2x+363.8	0.9994
3-Hydroxycarbofuran	y=514.2x-260.8	0.9989
Aldicarb	y=653.4x+405.9	0.9991
aldicarb sulfone	y=498.6x-265.6	0.9978
aldicarb sulfoxide	y=641.7x+421.6	0.9981
Fenobucarb	y=661.3x+55.0	0.9998
Isoprocarb	y=2203.1x+38.5	0.9991

Methomyl	$y=1398.4x+148.9$	0.9987
Metolcarb	$y=1408.8x-44.4$	0.9990
Propoxur	$y=2328.1x+55.1$	0.9999
Imidacloprid	$y=364.6x+821.4$	0.9976
Thiamethoxam	$y=593.3x+120.7$	0.9992
Clothianidin	$y=364.8x+184.1$	0.9985
Thiacloprid	$y=1136.4x+779.2$	0.9979
Acetamiprid	$y=852.6x-41.8$	0.9982
Chlorpyrifos	$y=214.3x-79.8$	0.9989
Fenthion	$y=331.6x-239.2$	0.9981
Coumaphos	$y=304.3x+108.1$	0.9983
Propachlor	$y=1482.2x+150.3$	0.9998
Atrazine	$y=628.8x+108.6$	0.9996
Acetochlor	$y=554.9x-362.3$	0.9992
Metolachlor	$y=1832.2x+13.8$	0.9989
Dimethenamid	$y=1517.2x+98.8$	0.9996
Alachlor	$y=415.4x-111.2$	0.9991
Butachlor	$y=303.2x-15.6$	0.9993
