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MDPI

Supplementary Material

Response Surface Methodology-Optimized QuEChERS Combined with Liquid Chromatography–Quadrupole-Time-of-Flight Mass Spectrometry for Simultaneous Screening of Pesticides and Mycotoxins in Astragalus

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Table S1. SDL, LOQ, Linear range, R^2, Spiked recoveries and precision of of 187 pesticides and 10 mycotoxins.

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Pesticides (187)													
Acetamiprid	5	10	4-60	0.9965	-49.92	113.00	4.05	103.44	11.76	114.06	5.40	7.85	8.04
Acetochlor	5	10	4-60	0.9974	-18.38	99.27	3.77	119.43	5.79	109.87	1.20	4.97	8.71
Alachlor	5	10	4-60	0.9977	-41.06	99.27	3.77	117.43	3.97	109.87	1.20	4.97	8.38
Aldicarb-sulfone	20	20	8-100	0.9973	-12.39	97.28	5.59	101.37	6.15	79.55	7.33	7.64	11.95
Ametryn	1	5	2-40	0.9977	-21.92	99.45	2.75	108.01	1.75	112.11	2.41	4.06	12.73
Atrazine	1	5	2-40	0.9972	-8.88	99.42	4.72	102.55	1.22	118.46	2.34	3.67	11.54
Avermectin	10	10	4-60	0.9985	-31.81	105.12	8.45	110.09	6.18	109.11	12.35	8.95	11.81

https://doi.org/10.3390/xxxxx

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Azaconazole	20	20	8-100	0.9997	-2.23	99.38	9.65	111.21	6.74	101.74	15.27	5.13	9.57
Azinphos-ethyl	20	20	8-100	0.9980	13.29	112.91	11.35	116.80	5.77	78.33	4.18	4.95	10.25
Azoxystrobin	1	5	2-40	0.9988	-20.69	103.41	2.86	103.96	7.98	117.29	2.11	4.39	6.97
Benalaxyl	1	5	2-40	0.9991	-27.94	98.62	3.58	113.07	3.36	112.38	2.63	3.49	8.16
Bifenazate	10	10	4-60	0.9981	-40.53	63.81	9.17	67.06	6.08	72.03	7.71	8.25	9.69
Bitertanol	20	20	8-100	0.9976	27.54	102.82	5.42	98.36	9.92	110.40	5.29	8.48	16.06
Boscalid	1	5	2-40	0.9980	-6.12	116.00	6.05	111.41	1.43	110.35	1.51	2.02	4.25
Bromuconazole	10	10	4-60	0.9956	-1.09	97.93	2.28	113.98	3.98	105.78	10.90	3.53	7.55
Buprofezin	5	10	4-60	0.9986	-58.23	114.60	4.88	110.76	6.25	113.18	6.34	5.41	9.13
Cadusafos	10	20	8-100	0.9992	-77.55	91.02	7.60	89.97	6.09	73.37	2.08	7.62	7.83
Carbendazim	5	10	4-60	0.9970	-37.49	65.58	2.89	71.25	5.24	76.47	9.20	3.76	4.67
Carbofuran	1	5	2-40	0.9958	-3.86	106.77	5.89	104.38	2.28	117.23	1.28	5.97	7.00
Carbofuran-3-Hydroxy	10	20	8-100	0.9986	-19.48	99.83	4.60	109.59	6.80	112.14	6.08	3.65	12.61
Carboxin	1	5	2-40	0.9989	-40.77	95.01	3.68	91.49	2.35	112.54	1.00	6.71	18.25
Chlordimeform	1	5	2-40	0.9975	-29.58	104.05	6.55	110.47	8.92	79.29	5.13	5.49	9.21
Chlorfenvinphos	1	5	2-40	0.9999	-17.96	105.34	1.55	114.50	3.48	118.23	2.24	4.62	9.35
Chlorpyrifos	5	10	4-60	0.9989	-70.14	118.16	2.92	108.12	5.50	114.42	9.03	5.78	7.51
Chlorsulfuron	5	10	4-60	0.9954	33.69	117.39	5.93	106.60	12.46	92.45	15.03	9.98	11.07
Clothianidin	20	20	8-100	0.9979	-7.54	106.28	7.69	114.44	2.65	116.42	5.50	8.03	13.23
Coumaphos	1	5	2-40	0.9984	-21.64	109.60	3.90	105.21	1.72	111.33	1.90	3.20	8.73
Cyproconazole	5	10	4-60	0.9994	1.22	102.37	2.44	113.55	5.43	103.38	12.16	2.75	8.68
Cyprodinil	1	5	2-40	0.9989	-48.27	86.36	7.27	100.95	3.31	111.48	2.56	2.00	9.13
Cyromazine	2	5	2-40	0.9989	-19.05	92.71	3.52	74.07	11.03	82.12	2.85	3.40	7.21
Diazinon	5	10	4-60	0.9954	-46.71	68.53	8.45	72.02	6.19	75.33	5.65	9.41	14.79
Dichlorvos	20	20	8-100	0.9993	-52.55	61.45	4.74	68.91	6.71	72.88	6.10	3.80	5.81

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Dicrotophos	1	5	2-40	0.9983	-11.31	111.87	7.54	104.83	4.96	116.92	1.47	5.20	7.72
Diethofencarb	5	10	4-60	0.9992	15.06	98.68	6.19	104.78	7.22	102.11	13.87	9.55	9.33
Difenoconazole	1	5	2-40	0.9975	-46.01	92.26	3.82	100.50	1.68	116.97	1.49	3.28	6.67
Diflubenzuron	10	10	4-60	0.9955	-29.09	102.11	7.01	117.04	4.28	98.70	4.45	4.52	7.72
Diflufenican	1	5	2-40	0.9970	-70.14	110.59	12.88	99.87	8.07	112.96	3.83	3.49	7.71
Dimethoate	1	5	2-40	0.9969	15.16	109.22	10.04	119.61	3.84	113.27	2.25	6.34	6.13
Dimethomorph	2	5	2-40	0.9985	-4.50	97.76	14.85	117.48	5.89	115.13	4.71	2.66	4.68
Diniconazole	2	5	2-40	0.9996	-23.14	101.73	7.41	106.62	3.29	117.72	1.53	2.53	6.08
Dioxacarb	5	5	2-40	0.9990	-72.51	98.28	5.87	77.29	1.67	103.86	12.92	5.80	19.57
Edifenphos	1	5	2-40	0.9977	-41.48	101.64	3.63	109.18	2.31	112.56	1.90	4.18	4.75
Epoxiconazole	5	10	4-60	0.9955	-12.45	97.81	13.43	118.26	3.22	115.38	9.58	4.29	10.68
Ethametsulfuron	10	20	8-100	0.9995	-55.27	116.69	5.88	87.20	9.31	91.42	2.35	9.75	9.14
Ethion	10	10	4-60	0.9960	-86.35	95.98	6.98	96.96	9.63	113.49	12.97	3.55	6.81
Ethoprophos	10	10	4-60	0.9970	-38.32	116.93	3.02	99.33	1.03	117.17	0.88	3.50	8.46
Ethoxyquin	10	10	4-60	0.9986	-63.03	63.51	8.57	68.31	7.16	79.42	6.23	2.06	18.47
Etofenprox	10	20	8-100	0.9984	-79.75	104.91	10.44	93.00	9.37	95.04	3.11	7.05	11.72
Etrimfos	20	20	8-100	0.9993	-43.19	111.70	17.11	73.17	6.10	113.02	3.26	7.58	12.53
Fenamiphos	1	5	2-40	0.9999	-17.73	105.38	3.56	107.63	2.34	118.44	2.10	3.56	7.80
Fenamiphos-sulfone	1	5	2-40	0.9974	7.76	102.19	6.85	119.01	3.04	117.25	4.19	6.59	11.94
Fenamiphos-sulfoxide	1	5	2-40	0.9976	4.18	104.96	2.65	105.71	7.17	116.78	0.87	3.19	7.41
Fenarimol	1	5	2-40	0.9982	31.17	111.70	7.02	98.91	3.25	112.99	3.05	3.02	6.50
Fenazaquin	5	10	4-60	0.9997	-81.97	82.51	7.56	99.49	13.08	76.03	10.77	9.51	18.88
Fenbuconazole	5	5	2-40	0.9999	35.83	110.60	10.13	102.63	3.13	112.83	5.35	3.38	10.40
Fenhexamid	2	5	2-40	0.9994	-18.90	84.88	10.51	90.88	15.37	118.29	2.94	5.16	5.37
Fenpropathrin	20	20	8-100	0.9984	-8.30	92.82	6.19	88.46	11.78	76.60	6.70	7.43	8.83

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Fenpropimorph	1	5	2-40	0.9991	-22.06	107.40	6.98	110.38	4.02	103.42	3.12	2.41	6.57
Fensulfothion	5	10	4-60	0.9987	-23.58	117.85	4.03	115.43	5.26	87.45	11.74	4.96	10.40
Fensulfothion-oxon	1	5	2-40	0.9970	-12.58	118.29	4.55	111.09	2.46	102.69	0.72	3.73	9.90
Fensulfothion-Oxon-Sulfone	2	5	2-40	0.9966	-12.74	89.57	7.42	106.46	3.42	105.72	2.49	8.88	11.38
Fensulfothion-sulfone	5	10	4-60	0.9989	-64.57	117.73	9.82	118.90	3.25	107.51	16.68	5.69	5.02
Fenthion	10	10	4-60	0.9970	-41.58	107.65	2.71	109.62	3.47	113.47	2.11	2.31	9.16
Fenthion-oxon	1	5	2-40	0.9991	-15.22	104.39	1.46	108.20	1.37	101.97	0.85	2.46	4.71
Fenthion-oxon-sulfone	1	5	2-40	0.9997	-16.77	118.65	3.86	113.26	1.03	104.39	1.58	3.79	6.54
Fenthion-oxon-sulfoxide	1	5	2-40	0.9995	-15.69	116.52	4.35	117.09	0.95	106.28	1.55	2.87	8.06
Fenthion-sulfone	1	5	2-40	0.9994	-18.33	115.22	4.97	112.47	2.69	108.05	1.89	2.84	11.94
Fenthion-sulfoxide	1	5	2-40	0.9992	-3.67	118.48	3.09	117.72	0.91	110.71	1.37	2.95	4.68
Flonicamid	5	10	4-60	0.9982	8.12	105.54	10.01	100.67	4.76	118.55	11.96	4.83	6.06
Fluacrypyrim	10	20	8-100	0.9977	-65.69	109.21	2.58	101.52	13.36	96.26	5.83	3.82	15.37
Flucythrinate	10	10	4-60	0.9974	-58.41	78.68	17.55	115.73	9.10	86.77	11.45	4.74	6.65
Flufenacet	5	10	4-60	0.9995	-41.74	106.63	2.36	109.66	2.93	118.49	4.06	4.26	7.11
Flufenoxuron	5	10	4-60	0.9990	-75.19	91.59	6.94	112.61	8.19	117.98	1.83	6.83	10.94
Flumioxazin	20	20	8-100	0.9978	-10.25	100.68	4.55	116.11	7.29	98.55	1.61	6.19	17.46
Flumorph	5	10	4-60	0.9993	5.84	104.89	3.86	112.25	2.77	119.31	13.80	3.30	8.86
Fluroxypyr	20	20	8-100	0.9998	-27.51	100.91	10.08	83.46	10.99	101.35	10.39	8.86	17.76
Flusilazole	1	5	2-40	0.9997	-22.16	106.33	5.99	112.70	2.32	93.26	2.76	3.36	7.46
Flutriafol	5	10	4-60	0.9958	-26.92	102.90	1.65	106.95	3.85	101.26	1.99	5.00	16.39
Fonofos	20	20	8-100	0.9979	-22.63	90.72	4.33	112.67	3.05	77.26	5.31	4.65	7.02

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Fosthiazate	10	10	4-60	0.9971	-18.67	109.52	9.70	107.60	3.84	97.00	7.93	5.74	16.63
Heptenophos	1	5	2-40	0.9992	-18.81	110.48	6.40	111.05	2.24	93.37	1.45	5.79	6.28
Hexaconazole	10	10	4-60	0.9989	-29.71	90.12	13.81	100.01	8.03	85.21	14.07	5.44	13.96
Hexythiazox	5	10	4-60	0.9968	-78.99	80.40	9.08	109.10	9.41	117.35	9.43	6.70	17.50
Imazalil	5	10	4-60	0.9988	-14.98	112.08	1.56	113.65	2.19	107.91	13.86	3.29	9.95
Imidacloprid	5	10	4-60	0.9992	13.21	111.92	10.25	118.51	4.12	108.06	7.13	7.14	11.68
Imidaclothiz	10	10	4-60	0.9956	65.53	109.01	4.34	118.66	2.72	103.35	10.32	4.34	8.41
Indanofan	20	20	8-100	0.9995	-50.81	94.66	4.48	88.58	6.18	90.46	4.11	5.88	18.41
Indoxacarb	1	5	2-40	0.9986	-59.00	109.26	10.48	99.52	3.81	114.63	2.87	5.57	5.99
Ipconazole	10	10	4-60	0.9996	-59.79	95.85	3.78	116.83	7.55	116.89	6.06	3.97	9.46
Isazofos	1	5	2-40	0.9986	-17.77	102.79	5.83	108.74	2.98	92.68	1.73	4.85	9.62
Isocarbophos	5	10	4-60	0.9989	-43.42	105.36	1.75	114.29	2.19	113.91	5.25	4.71	18.20
Isoprothiolane	10	10	4-60	0.9982	-44.31	80.08	4.81	103.26	3.18	103.11	4.49	6.71	13.66
Kresoxim-methyl	20	20	8-100	0.9971	-58.79	64.66	4.49	67.68	3.59	73.70	5.17	7.65	16.13
Linuron	1	5	2-40	0.9977	-5.91	114.84	5.86	108.31	3.00	92.04	1.83	4.99	7.05
Malaoxon	5	5	2-40	0.9979	-39.19	105.21	11.29	118.70	2.25	94.00	1.58	6.24	15.54
Malathion	2	5	2-40	0.9963	-19.69	97.30	7.95	115.15	2.51	117.74	2.94	5.59	8.47
Mandipropamid	5	5	2-40	0.9985	-17.42	114.19	8.71	88.21	11.33	99.99	5.15	4.41	14.06
Matrine	1	5	2-40	0.9993	-30.67	99.18	2.16	104.25	3.13	111.24	1.38	2.87	14.78
Mecarbam	10	10	4-60	0.9972	-8.43	108.63	11.06	117.01	3.98	118.66	9.18	4.40	7.73
Mepronil	5	5	2-40	0.9963	-39.87	91.75	13.30	114.57	6.73	119.20	5.05	2.84	5.29
Metalaxyl	1	5	2-40	0.9971	-16.65	86.08	9.17	115.37	5.95	118.04	2.23	5.55	6.82
Metconazole	2	5	2-40	0.9976	-46.69	105.90	11.26	90.49	9.84	119.15	2.50	4.40	13.71
Methamidophos	10	20	8-100	0.9994	23.82	105.41	5.33	119.43	2.66	109.35	5.14	4.51	5.90
Methidathion	20	20	8-100	0.9997	-20.75	115.07	11.36	106.85	4.31	100.78	7.30	7.13	10.97
Methiocarb	20	20	8-100	0.9990	-35.29	97.75	3.13	90.12	8.69	77.46	6.60	4.00	10.60

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Methoxyfenozide	20	20	8-100	0.9967	-17.00	89.64	17.65	87.39	10.39	107.77	8.48	3.34	14.89
Metribuzin	10	10	4-60	0.9958	-16.07	109.47	8.44	97.11	8.99	113.76	7.04	5.00	8.02
Metsulfuron-methyl	10	10	4-60	0.9957	66.42	116.74	8.26	116.62	7.46	115.43	12.79	7.83	8.69
Monocrotophos	5	10	4-60	0.9986	-17.67	88.67	5.52	115.61	6.23	114.41	3.58	6.03	10.08
Myclobutanil	5	5	2-40	0.9976	38.34	115.62	16.20	109.69	4.64	111.67	2.47	3.63	8.28
Napropamide	10	10	4-60	0.9988	-28.32	94.93	8.27	112.70	2.00	109.99	1.72	5.42	8.01
Nicosulfuron	10	10	4-60	0.9968	-5.15	115.18	6.69	107.71	7.59	102.44	14.72	7.00	13.96
Omethoate	1	5	2-40	0.9988	8.57	114.05	3.11	113.20	1.62	117.31	1.79	3.14	7.02
Oxadiazon	5	5	2-40	0.9952	-58.97	103.36	3.25	78.18	10.01	112.75	5.07	3.83	6.90
Oxadixyl	10	20	8-100	0.9977	-28.79	112.91	13.57	100.85	9.51	101.65	7.25	5.83	11.57
Paclobutrazol	5	5	2-40	0.9982	27.14	83.05	8.63	115.34	6.34	100.96	2.19	3.67	9.71
Paraoxon-ethyl	1	5	2-40	0.9995	-8.67	115.78	4.07	110.08	1.78	111.51	2.16	4.91	6.90
Paraoxon-methyl	1	5	2-40	0.9981	-12.50	113.51	7.09	112.86	2.88	104.50	2.03	3.41	7.71
Penconazole	10	10	4-60	0.9965	-6.50	100.84	4.64	107.02	5.34	87.98	7.73	3.08	10.48
Phenthoate	5	10	4-60	0.9977	-50.35	96.74	4.93	109.36	3.56	117.64	7.61	5.63	10.23
Phorate-Sulfone	5	10	4-60	0.9978	-13.61	114.43	4.04	114.36	5.64	107.50	4.69	8.16	8.54
Phorate-sulfoxide	5	10	4-60	0.9971	-4.56	112.20	3.28	117.59	7.44	111.71	4.81	7.78	8.70
Phosalone	1	5	2-40	0.9976	-54.78	112.85	1.55	102.59	5.43	117.31	2.12	5.74	8.07
Phosfolan	1	5	2-40	0.9973	-1.18	103.60	4.04	105.34	4.34	117.45	2.47	5.01	9.97
Phosfolan-Methyl	1	5	2-40	0.9967	-11.37	97.73	4.65	106.38	1.64	110.75	1.35	3.13	5.21
Phosmet	20	20	8-100	0.9971	-20.37	90.32	3.75	115.37	6.21	106.68	2.80	8.04	13.42
Phosphamidon	10	10	4-60	0.9989	-22.06	117.15	7.23	108.33	3.31	117.99	10.38	3.59	8.43
Phoxim	10	10	4-60	0.9984	-38.14	105.57	7.53	74.28	12.57	111.15	3.20	4.97	6.46
Picoxystrobin	10	10	4-60	0.9968	-29.75	91.41	10.60	108.47	6.53	116.21	4.37	7.73	10.59
Piperonyl Butoxide	10	10	4-60	0.9972	-70.13	102.87	12.74	114.45	14.50	115.17	6.65	3.78	14.00
Pirimicarb	5	10	4-60	0.9992	-37.29	100.99	4.22	94.71	9.20	111.38	1.64	4.92	7.23

https://doi.org/10.3390/xxxxx

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Pirimiphos-ethyl	1	5	2-40	0.9984	-21.53	114.35	6.16	100.76	6.22	116.95	2.67	4.27	12.37
Pirimiphos-methyl	5	10	4-60	0.9974	-64.46	99.55	1.66	106.91	1.75	106.41	2.88	4.58	13.96
Pretilachlor	1	5	2-40	0.9970	-60.32	107.22	10.56	110.94	8.74	116.95	2.35	4.60	11.77
Prochloraz	1	5	2-40	0.9978	-32.54	106.58	9.43	103.65	4.11	104.29	1.51	3.66	14.36
Profenofos	1	5	2-40	0.9955	-67.73	107.87	4.49	105.47	3.52	117.22	2.64	5.85	6.37
Promecarb	20	20	8-100	0.9996	-33.96	87.84	4.48	97.70	17.59	93.71	4.89	5.86	10.20
Prometryn	1	5	2-40	0.9997	-18.01	95.90	6.32	116.75	6.64	118.37	1.44	2.73	10.49
Propachlor	1	5	2-40	0.9988	-49.95	103.96	3.61	106.06	2.82	109.77	3.94	3.71	8.62
Propamocarb	1	5	2-40	0.9961	-9.96	103.06	4.35	110.70	0.95	101.97	2.14	2.59	5.74
Propiconazole	1	5	2-40	0.9973	-23.82	113.62	6.44	115.33	5.14	104.06	3.09	4.27	10.51
Pymetrozine	20	20	8-100	0.9978	-8.66	101.94	2.46	114.39	1.73	112.38	8.37	3.79	10.24
Pyraclostrobin	2	5	2-40	0.9961	-58.16	74.23	4.06	99.55	10.14	113.26	3.23	4.98	12.26
Pyridaben	10	10	4-60	0.9957	-75.42	90.67	13.08	97.49	13.68	116.34	6.70	5.61	18.48
Pyrimethanil	10	10	4-60	0.9997	-17.68	103.47	4.97	100.54	2.85	118.48	4.76	2.78	6.82
Pyriproxyfen	5	10	4-60	0.9973	-85.84	103.62	6.53	110.78	4.94	110.98	8.73	2.97	10.85
Quinalphos	5	10	4-60	0.9980	-38.96	102.35	7.32	104.88	7.11	109.89	3.56	9.23	16.32
Quinoxyfen	1	5	2-40	0.9972	-83.19	92.34	7.12	101.07	3.93	107.35	3.49	3.84	8.92
Quizalofop-ethyl	5	10	4-60	0.9973	-74.07	99.99	4.42	102.14	4.38	118.59	4.34	4.31	9.37
Simazine	5	5	2-40	0.9957	-7.20	111.41	11.56	94.61	9.96	98.37	3.07	5.15	12.69
Simeconazole	5	5	2-40	0.9996	5.08	86.41	9.17	98.52	4.16	118.02	2.85	3.30	10.78
Spirodiclofen	5	10	4-60	0.9971	-75.06	85.03	4.90	119.01	10.19	108.35	7.26	7.96	8.43
Spirotetramat	5	10	4-60	0.9967	25.80	111.56	3.38	113.50	7.70	109.91	10.09	2.03	18.22
Spirotetramat-enol	2	5	2-40	0.9996	-33.30	90.81	6.08	81.29	5.83	100.33	8.56	7.03	6.86
Spirotetramat-enol-glucoside	5	10	4-60	0.9975	-11.31	98.99	5.55	93.39	7.33	99.53	7.27	5.94	13.27

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Spirotetramat-keto-hydroxy	20	20	8-100	0.9978	-59.13	91.44	5.28	106.38	8.39	94.69	5.41	6.41	10.71
Spirotetramat-mono-hydroxy	5	5	2-40	0.9996	23.32	96.22	6.10	98.10	8.39	110.75	4.97	9.31	15.00
Spiroxamine	1	5	2-40	0.9968	-17.78	99.42	2.41	105.72	1.25	112.63	7.60	2.83	12.90
Sulfentrazone	5	10	4-60	0.9983	45.40	113.15	3.54	118.62	5.11	116.91	15.04	2.49	5.19
Sulfotep	1	5	2-40	0.9975	-48.25	98.05	4.19	101.51	3.19	110.95	3.90	4.88	8.60
Tebuconazole	5	10	4-60	0.9992	-9.04	117.88	5.15	106.35	6.19	117.33	5.31	2.78	9.40
Tebufenpyrad	10	20	8-100	0.9997	-62.30	98.88	4.96	105.53	7.28	119.01	3.15	5.66	10.45
Terbufos	10	20	8-100	0.9983	-9.33	103.24	9.74	111.53	10.86	92.37	3.15	5.73	13.51
Terbufos-Sulfone	10	10	4-60	0.9975	-6.41	79.92	7.87	109.27	7.97	112.61	6.46	4.18	10.89
Terbufos-Sulfoxide	10	20	8-100	0.9969	-7.59	117.88	9.61	98.46	3.01	74.13	2.19	5.87	14.85
Tetrachlorvinphos	1	5	2-40	0.9991	-45.86	113.53	3.51	115.40	3.94	101.10	4.12	4.84	7.29
Tetraconazole	1	5	2-40	0.9957	-10.39	118.82	2.37	115.19	1.90	97.24	2.13	2.82	11.75
Thiabendazole	5	10	4-60	0.9990	-39.91	90.06	0.84	93.42	3.73	97.49	6.32	3.44	14.14
Thiacloprid	1	5	2-40	0.9994	-16.36	94.99	9.08	109.33	6.51	110.11	1.42	3.98	4.43
Thiamethoxam	1	5	2-40	0.9979	2.93	118.91	5.59	109.72	3.11	111.85	2.21	5.42	8.17
Thidiazuron	20	20	8-100	0.9981	-38.36	114.24	11.08	103.73	7.56	111.51	5.61	4.34	17.50
Thifluzamide	1	5	2-40	0.9960	-34.81	96.14	15.17	113.27	6.21	95.02	1.82	1.74	15.87
Thiobencarb	5	10	4-60	0.9954	-61.75	89.22	4.23	112.83	2.72	117.69	8.93	2.87	10.78
Thiocyclam	20	20	8-100	0.9953	-42.63	81.71	9.18	109.80	7.10	91.41	9.22	4.75	8.29
Thiophanate-methyl	5	10	4-60	0.9954	-38.65	67.94	6.11	72.54	4.42	76.07	7.51	6.08	16.89
Tralkoxydim	10	10	4-60	0.9980	-61.87	99.69	4.72	73.25	16.10	114.75	3.14	9.95	12.36
Triadimefon	5	5	2-40	0.9985	27.76	105.82	14.23	112.17	3.33	91.68	2.66	5.23	8.14
Triadimenol	10	20	8-100	0.9989	53.66	101.84	17.15	105.54	14.77	88.85	7.57	8.38	13.36
Triazophos	2	5	2-40	0.9999	-4.57	118.90	7.01	108.15	2.70	92.55	1.58	4.62	8.41

compound	SDL (μg/kg)	LOQ (μg/kg)	linear ranges (μg/L)	R^2	ME	Recovery ± RSD (%)						Intra-RSD (%)	Inter-RSD (%)
						1×LOQ	RSD	2×LOQ	RSD	10×LOQ	RSD		
Trichlorfon	5	10	4-60	0.9978	-15.62	116.41	2.27	117.45	9.79	116.14	11.43	3.61	11.83
Tricyclazole	1	5	2-40	0.9958	-37.02	97.11	3.93	95.06	0.78	105.92	0.83	3.87	7.13
Trifloxystrobin	1	5	2-40	0.9997	-77.15	113.85	6.48	103.42	5.91	113.80	2.91	8.37	12.82
Triflumizole	10	10	4-60	0.9993	-65.01	96.40	13.00	89.60	11.85	75.29	6.91	8.74	14.69
Trifluralin	10	10	4-60	0.9952	-69.58	102.65	5.34	112.08	12.08	112.73	15.43	3.10	10.89
Triflusulfuron-methyl	5	10	4-60	0.9997	32.55	85.86	8.94	100.29	11.65	83.89	7.06	2.01	12.74
Uniconazole	2	5	2-40	0.9986	5.47	116.97	16.30	106.30	2.15	96.79	3.72	5.41	8.00
Zoxamide	1	5	2-40	0.9967	-54.46	94.26	7.11	96.16	3.09	90.42	2.62	5.71	9.50
Mycotoxins (10)													
Aflatoxin B_1	2	2	0.8-16	0.9989	-45.57	104.48	5.48	104.82	7.33	103.53	2.86	5.97	19.57
Aflatoxin B_2	1	2	0.8-16	0.9999	-30.54	118.49	3.53	112.57	8.21	107.89	3.24	4.41	8.39
Aflatoxin G_1	2	2	0.8-16	0.9983	-30.75	109.12	2.32	115.86	2.61	116.25	7.20	7.20	10.43
Aflatoxin G_2	1	2	0.8-16	0.9991	-52.40	110.24	3.54	119.12	4.11	109.19	2.29	2.90	9.37
Deoxynivalenol	20	20	8-100	0.9995	-12.94	109.46	10.03	98.14	7.58	96.36	1.04	7.62	6.94
Ochratoxin A	10	10	4-60	0.9966	17.40	92.00	11.65	115.47	12.08	107.84	11.76	1.84	11.81
Stachybotrylactam	5	10	4-60	0.9980	-21.83	102.57	4.62	105.28	10.86	110.85	15.54	5.00	12.71
T-2 toxin	20	20	8-100	0.9972	33.24	118.58	9.99	100.83	10.93	110.23	4.17	8.27	18.66
Tentoxin	5	10	4-60	0.9956	-16.73	99.31	4.44	106.75	11.56	114.03	7.01	5.47	9.89
Zearalenone	20	20	8-100	0.9988	-3.99	114.59	9.80	113.49	13.17	94.45	6.88	5.28	7.58