

## Supplementary Information

**Table 1.** Recovery of five pesticides in curry leaf

Fortification level (mg/kg)	Ethion		Chlorpyriphos		Profenophos		Carbendazim		Cypermethrin	
	Recovery %	RSD	Recovery %	RSD	Recovery %	RSD	Recovery %	RSD	Recovery %	RSD
0.05	99.09	6.92	107.76	1.35	104.17	5.65	101.65	15.07	-	-
0.25	106.81	5.98	113.17	2.01	100.44	6.35	119.48	7.48	-	-
0.5	117.62	0.57	116.37	1.00	102.97	6.73	103.51	2.03	-	-
0.1	-	-	-	-	-	-	-	-	106.85	4.77
0.5	-	-	-	-	-	-	-	-	117.01	1.55
1.0	-	-	-	-	-	-	-	-	111.03	3.22

**Table 2.** Dissipation pattern of selected pesticides in curry leaf

DAT (Days after Treatment)	Ethion at 500 g. a.i. ha <sup>-1</sup>				Chlorpyrifos at 300 g. a.i. ha <sup>-1</sup>			
	Season I		Season II		Season I		Season II	
	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %
0 (1 hr spraying)	42.52	0.00	93.92	0.00	13.86	0.00	14.95	0.00
1	37.73	11.27	31.28	66.70	9.78	29.44	1.98	86.76
3	30.14	29.12	11.39	87.87	2.68	80.66	1.49	90.03
5	11.38	73.24	6.09	93.52	1.63	88.24	0.99	93.38
7	7.88	81.47	4.38	95.34	1.52	89.03	0.78	94.78
10	3.35	92.12	4.01	95.73	1.27	90.84	0.61	95.92
15	0.21	99.51	1.71	98.18	1.16	91.63	0.37	97.53
20	BQL	-	0.53	99.44	1.09	92.14	0.13	99.13
25	-	-	0.11	99.88	0.90	93.51	BQL	-
30	-	-	BQL	-	BQL	-	-	-
Half-life	2.01		3.07		7.92		3.96	
Regression equation	Y=4.81-0.15X		Y= 4.55-0.09X		Y=3.71-0.04X		Y=3.58-0.08X	
MRL (mg/kg)	0.01				0.01			
Safe waiting period (Days)	24.19		49.66		78.54		39.68	

DAT (Days after Treatment)	Profenophos at 500 g. a.i. ha <sup>-1</sup>				Cypermethrin at 50 g. a.i. ha <sup>-1</sup>				Carbendazim at 500 g. a.i. ha <sup>-1</sup>			
	Season I		Season II		Season I		Season II		Season I		Season II	
	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %	Residue mg/kg	Dissipation %
0 (1 hr spraying)	35.95	0.00	39.47	0.00	13.75	0.00	9.53	0.00	58.55	0.00	28.12	0.00
1	13.22	63.23	16.60	61.04	9.49	30.98	5.96	37.46	53.86	7.99	22.89	18.59
3	9.95	72.22	9.35	76.31	4.54	66.98	5.52	42.08	30.49	47.80	21.19	24.64
5	4.51	87.45	6.58	83.33	1.34	90.25	3.61	62.11	9.86	82.95	20.95	25.50
7	2.11	94.13	4.52	88.55	0.25	98.18	2.86	69.99	6.43	88.79	18.72	33.43
10	0.25	99.30	0.37	99.06	0.13	99.05	2.39	74.92	4.12	92.73	17.27	38.58
15	0.09	99.75	0.10	99.75	BQL	-	1.83	80.80	1.80	96.68	7.77	72.37
20	BQL	-	BQL	-	-	-	1.02	89.30	0.70	98.55	2.68	90.47
25	-	-	-	-	-	-	0.52	94.54	0.13	99.52	1.44	94.88
30	-	-	-	-	-	-	0.17	98.22	BQL	100.00	0.72	97.44
35	-	-	-	-	-	-	BQL	-	-	-	0.17	99.39
40	-	-	-	-	-	-	-	-	-	-	BQL	-
Half-life	1.71		1.75		1.37		6.02		3.01		5.02	
Regression equation	Y=4.46-0.18X		Y=4.55-0.17X		Y=4.19-0.22X		Y=3.95-0.05X		Y=4.70-0.1X		Y=4.60-0.06X	
MRL (mg/kg)	0.05				2.00				0.1			
Safe waiting period	15.87		16.10		3.81		13.56		27.70		40.82	

**Table 3.** Weather data for the field experiment

Months	Temperature ( <sup>o</sup> C)		Relative Humidity I (%)	Relative humidity II (%)	Total Rainfall (mm)
	Maximum	Minimum			
2nd Feb to 28th March 2017	33.3	21.2	82.5	42.5	1.1
16th Oct to 10th Dec, 2017	30.42	22.15	88.50	58.16	96

**Table 4.** Effect of different processing methods on the removal of pesticide residues in curry leaves

Treatments	Ethion			Chlorpyrifos			Profenophos			Cypermethrin		
	Residue in $\mu\text{g g}^{-1}$	% Reduction	Processing Factor*	Residue in $\mu\text{g g}^{-1}$	% Reduction	Processing factor*	Residue in $\mu\text{g g}^{-1}$	% Reduction	Processing factor*	Residue in $\mu\text{g g}^{-1}$	% Reduction	Processing factor*
Initial deposit	63.79	-	-	12.63	-	-	99.20	-	-	2.99	-	-
Washing with water	37.70	40.89	-	9.40	25.56	-	59.90	39.48	-	2.45	18.06	-
KMS, Sodium bicarbonate and MgO	22.30	40.85	-	7.40	21.28	-	32.60	45.58	-	1.90	22.45	-
Surface drying under shade	15.10	32.29	0.21	1.89	74.46	0.15	8.90	72.70	0.08	0.53	72.11	0.17
Cabinet drying	4.35	7.11	0.06	1.04	44.97	0.08	3.80	57.30	0.03	0.11	79.25	0.03

\*Processing factor was calculated based on the formula (Residues in processed commodity (mg/kg) / Initial residues in raw commodity (mg/kg)).

**Table 5.** Dietary risk assessment of pesticide residues in curry leaves

Pesticide	Age group	MPI (mg/person /day)	TMRC (mg/person)		EDI (mg/kg/day)		Hazard Index (HI)	
			Season		Season		Season	
			I	II	I	II	I	II
Ethion	Men	0.13	0.09	0.19	0.001	0.003	0.654	1.445
	Women	0.11			0.002	0.003	0.773	1.708
	Children (7–9 yrs)	0.05			0.003	0.007	1.681	3.712
Chlorpyriphos	Men	0.65	0.03	0.03	0.000	0.000	0.043	0.046
	Women	0.55			0.001	0.001	0.050	0.054
	Children (7–9 yrs)	0.25			0.001	0.001	0.118	0.118
Triazophos	Men	0.07	0.12	0.14	0.002	0.002	1.806	2.091
	Women	0.06			0.002	0.002	2.135	2.472
	Children (7–9 yrs)	0.03			0.005	0.005	4.640	5.373
Profenophos	Men	0.65	0.07	0.08	0.001	0.001	0.111	0.121
	Women	0.55			0.001	0.001	0.131	0.144
	Children (7–9 yrs)	0.25			0.003	0.003	0.284	0.312
Cypermethrin	Men	3.25	0.03	0.02	0.000	0.000	0.008	0.006
	Women	2.75			0.001	0.000	0.010	0.007
	Children (7–9 yrs)	1.27			0.001	0.001	0.022	0.015
Carbendazim	Men	1.95	0.12	0.06	0.002	0.001	0.060	0.029
	Women	1.65			0.002	0.001	0.071	0.034
	Children (7–9 yrs)	0.76			0.005	0.002	0.154	0.074

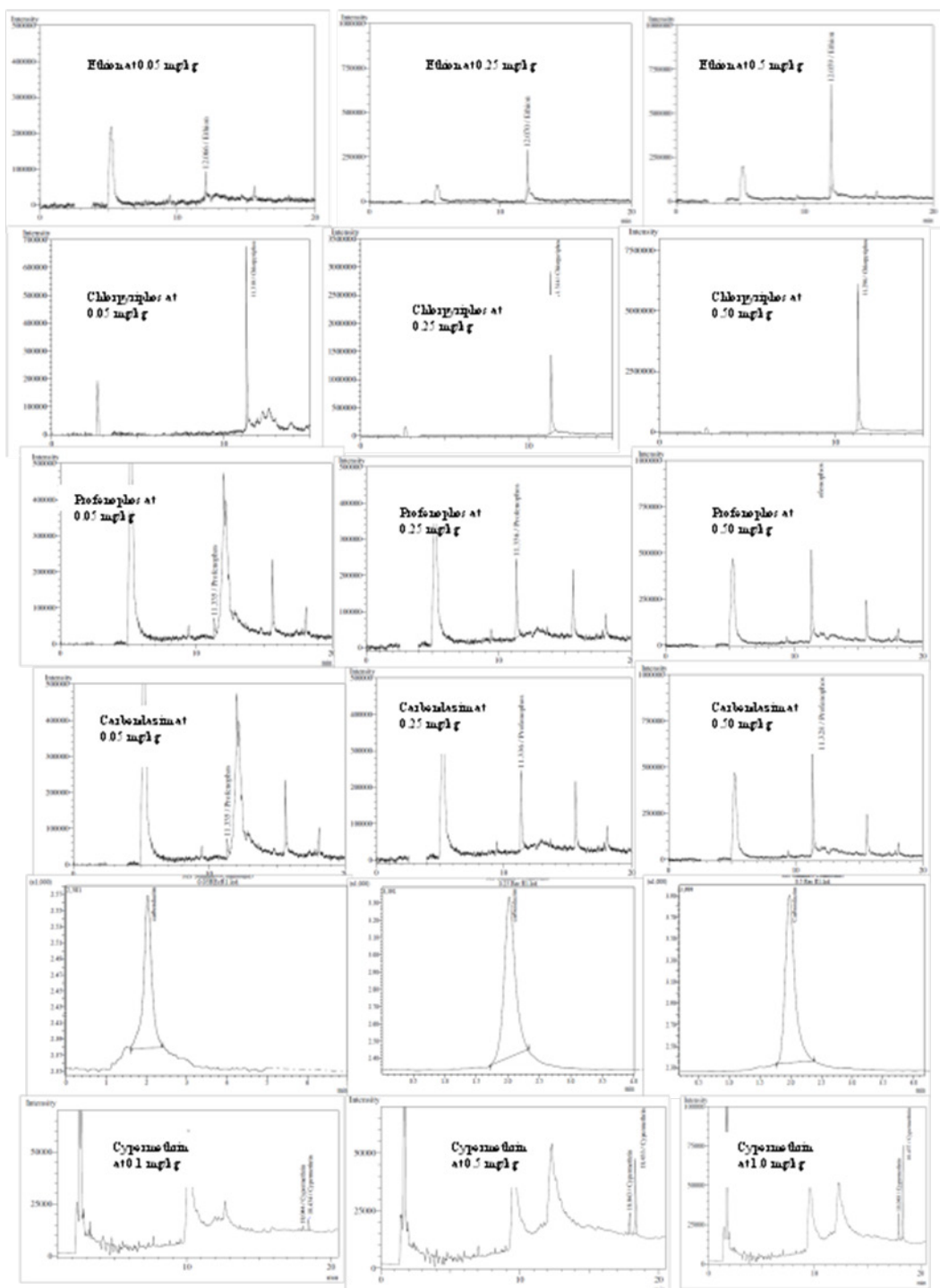
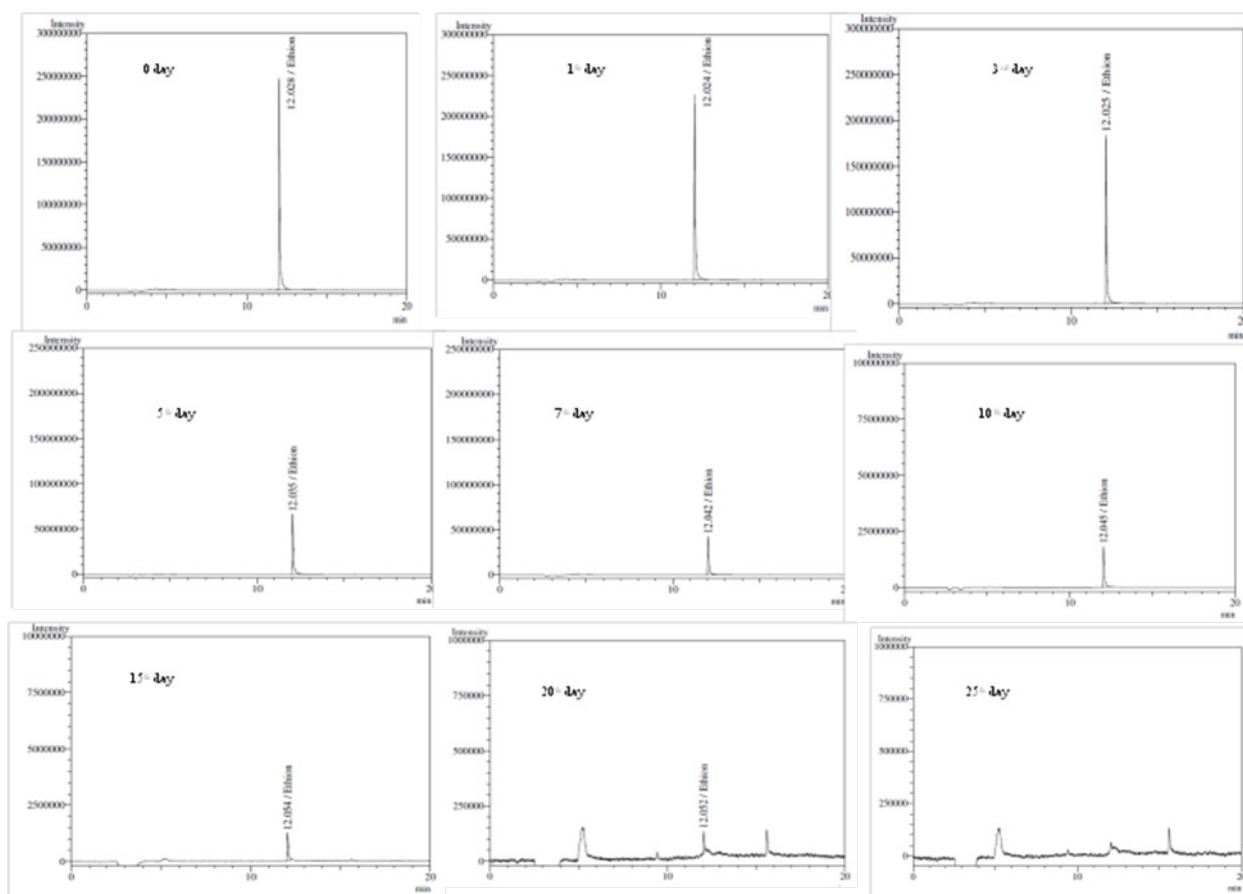


Figure 1. Recovery of five pesticides in curry leaf



**Figure 2.** Dissipation of ethion in curry leaf from 0 to 25 days after spraying.

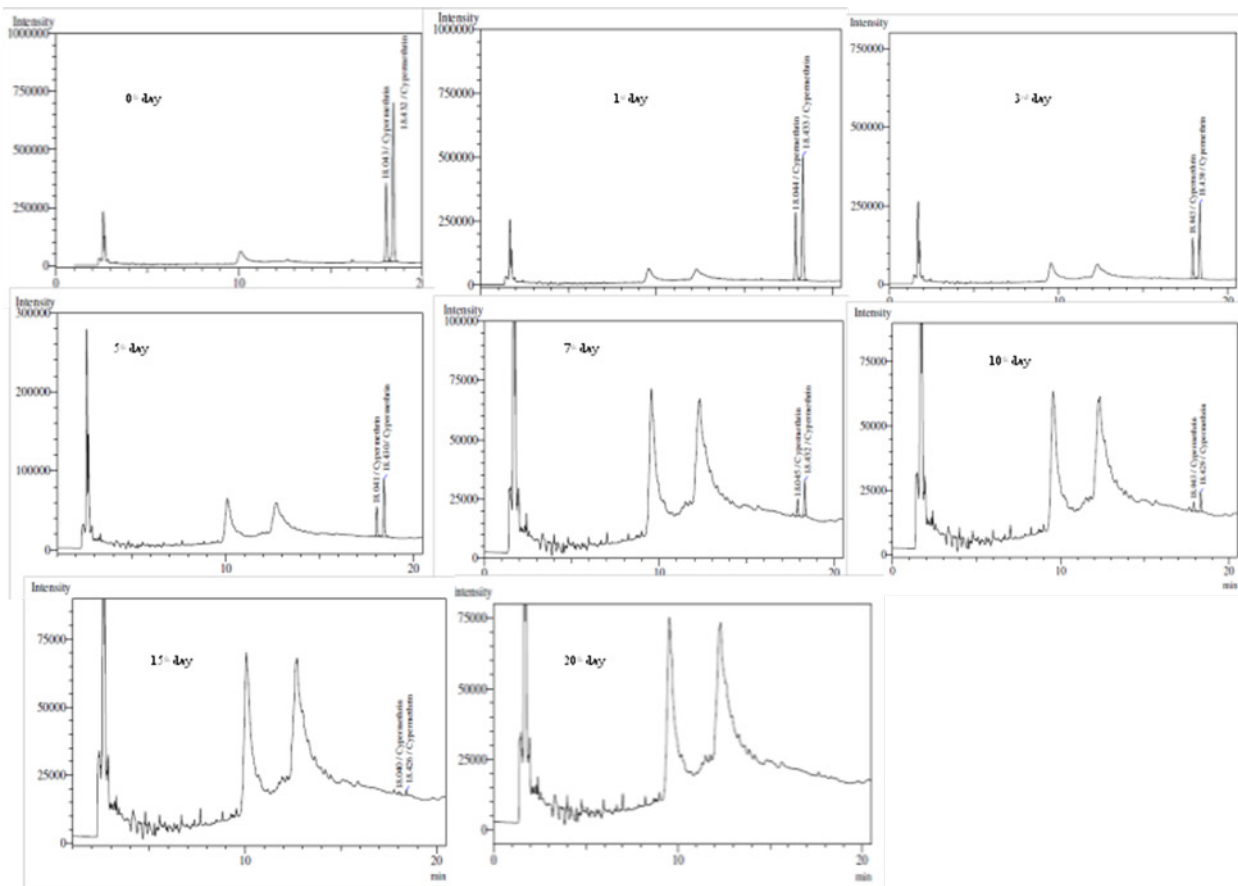


Figure 3. Dissipation of cypermethrin in curry leaf from 0 to 20 days after spraying