

APPENDIX

α -Naphthol Concentration	Optical Density + S . E
15.000	2.188 \pm 0.081
7.500	1.113 \pm 0.008
3.750	0.597 \pm 0.002
1.876	0.328 \pm 0.006
0.937	0.193 \pm 0.001
0.468	0.128 \pm 0.011
0.234	0.106 \pm 0.012

Appendix 1 Standard curves for α -Naphthol .

Concentration BSA Protein (g / ml)	Optical Density (660 nm)
0	0.0000 + 0.0000
10	0.1972 + 0.0042
20	0.3703 + 0.0038
30	0.5121 + 0.0054
40	0.6527 + 0.0041
50	0.7718 + 0.0076
60	0.8578 + 0.0148
70	0.9625 + 0.0065
80	1.0667 + 0.0082
90	1.1610 + 0.0068
100	1.2489 + 0.0021

Appendix 2 Data of protein standard curve using Lowry
Method (1951) measured at 660 nm .

Insecticide Exposure	Specific activity ($\mu\text{M} / \text{min} / \text{mg protein})$				
	days				
	1	3	7	14	21
Malathion	7.87×10^{-3}	-----	1.34×10^{-2}	-----	31.12×10^{-3}
DDVP	8.75×10^{-3}	1.10×10^{-2}	1.39×10^{-2}	1.21×10^{-3}	1.19×10^{-2}
Fenitrothion	1.43×10^{-2}	4.69×10^{-2}	-----	2.42×10^{-3}	1.76×10^{-2}

Appendix 3 Data below showing the specific activity value ($\mu\text{M} / \text{min} / \text{mg protein}$) of enzyme esterases after exposure to several types of inhibitor in certain period.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	82.35	79.45	61.98	35.96	15.83	10.67	8.64
DDVP	87.12	82.36	61.32	42.67	33.84	19.67	11.62
Fenitrothion	75.12	65.29	45.39	40.21	20.54	15.31	10.57

Appendix 4 Data showing percentage inhibition to insecticide concentration (log molar) after exposed to malathion within 1 day

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	83.65	30.72	28.22	21.65	17.63	8.11	0.95
DDVP	89.86	65.49	37.22	22.54	19.53	15.24	2.35
Fenitrothion	88.53	74.26	51.69	26.15	19.86	5.97	2.77

Appendix 5 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to malathion within 7 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	82.36	50.11	41.63	20.65	15.37	9.34	4.32
DDVP	87.25	74.39	55.31	20.69	14.12	10.54	4.39
Fenitrothion	80.39	60.54	39.49	19.65	7.32	6.54	6.42

Appendix 6 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to DDVP within 1 day.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	72.31	62.74	31.03	10.22	8.27	5.27	2.47
DDVP	91.55	84.32	65.30	15.63	14.12	8.52	2.30
Fenitrothion	87.39	70.24	49.09	21.61	17.30	8.04	1.41

Appendix 7 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to DDVP within 3 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	51.01	42.12	30.07	13.02	9.22	4.28	1.17
DDVP	60.15	54.12	45.20	35.23	11.02	7.12	3.31
Fenitrothion	57.32	47.21	39.29	22.01	13.70	5.54	2.51

Appendix 8 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to DDVP within 7 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	71.21	52.15	40.15	53.15	16.27	11.08	4.15
DDVP	90.12	84.42	75.30	55.21	41.21	17.16	5.01
Fenitrothion	87.30	77.31	38.49	32.51	23.90	15.50	9.31

Appendix 9 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to DDVP within 14 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	91.21	62.05	50.21	43.92	10.07	4.18	1.19
DDVP	97.42	82.02	55.10	31.11	16.42	7.36	2.02
Fenitrothion	95.34	57.71	30.79	11.81	9.12	4.57	1.01

Appendix 10 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposed to DDVP within 21 days

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	91.03	52.91	25.94	13.94	11.41	2.78	0.13
DDVP	98.12	42.22	25.50	15.01	10.12	2.06	0.12
Fenitrothion	95.34	27.01	15.71	7.11	5.02	2.07	0.41

Appendix 11 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to Fenitrothion within 1 day.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	78.63	15.19	12.01	11.05	9.37	7.37	1.19
DDVP	84.22	22.20	15.04	11.71	8.02	1.08	0.23
Fenitrothion	95.04	17.41	15.70	4.12	2.02	1.47	0.11

Appendix 12 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to Fenitrothion within 3 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	98.61	55.05	22.41	17.51	9.07	3.08	0.18
DDVP	86.23	42.23	18.06	12.11	3.12	2.07	0.12
Fenitrothion	91.06	37.01	25.74	14.14	8.04	0.41	0.13

Appendix 13 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to Fenitrothion within 7 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	88.62	75.62	32.21	14.11	2.04	0.08	0.02
DDVP	81.20	22.17	13.04	10.01	5.42	2.09	0.13
Fenitrothion	73.02	32.07	22.77	13.04	4.07	0.48	0.15

Appendix 14 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposure to Fenitrothion within 14 days.

Concentration Log / molar	Percentage of inhibition						
	-2	-3	-4	-5	-6	-7	-8
Malathion	98.12	65.12	42.71	12.01	7.09	0.28	0.12
DDVP	81.27	29.12	12.74	8.09	2.02	0.29	0.17
Fenitrothion	79.52	42.27	25.71	10.54	2.04	0.88	0.35

Appendix 15 Data percentage of insecticide inhibition to insecticide concentration (log / molar) after exposed to Fenitrothion within 21 days