Electronic Supplementary Material (ESI) for Analytical Methods.

Rapid screening of agrochemicals by paper spray ionization and leaf spray mass spectrometry: which technique is more appropriate?

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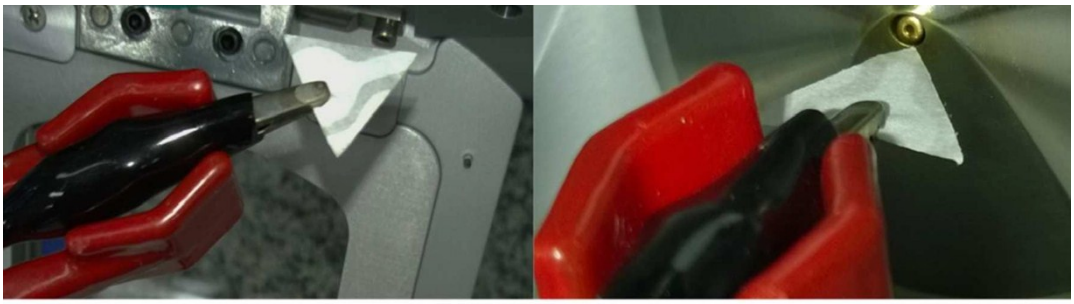
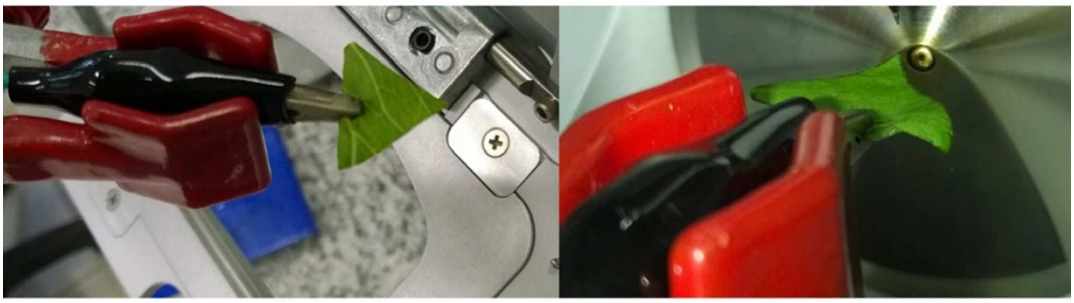
Support Information



(a)



(b)

Figure 1S. Schematic of homemade source: (a) Paper Spray Ionization; (b) Leaf Spray.

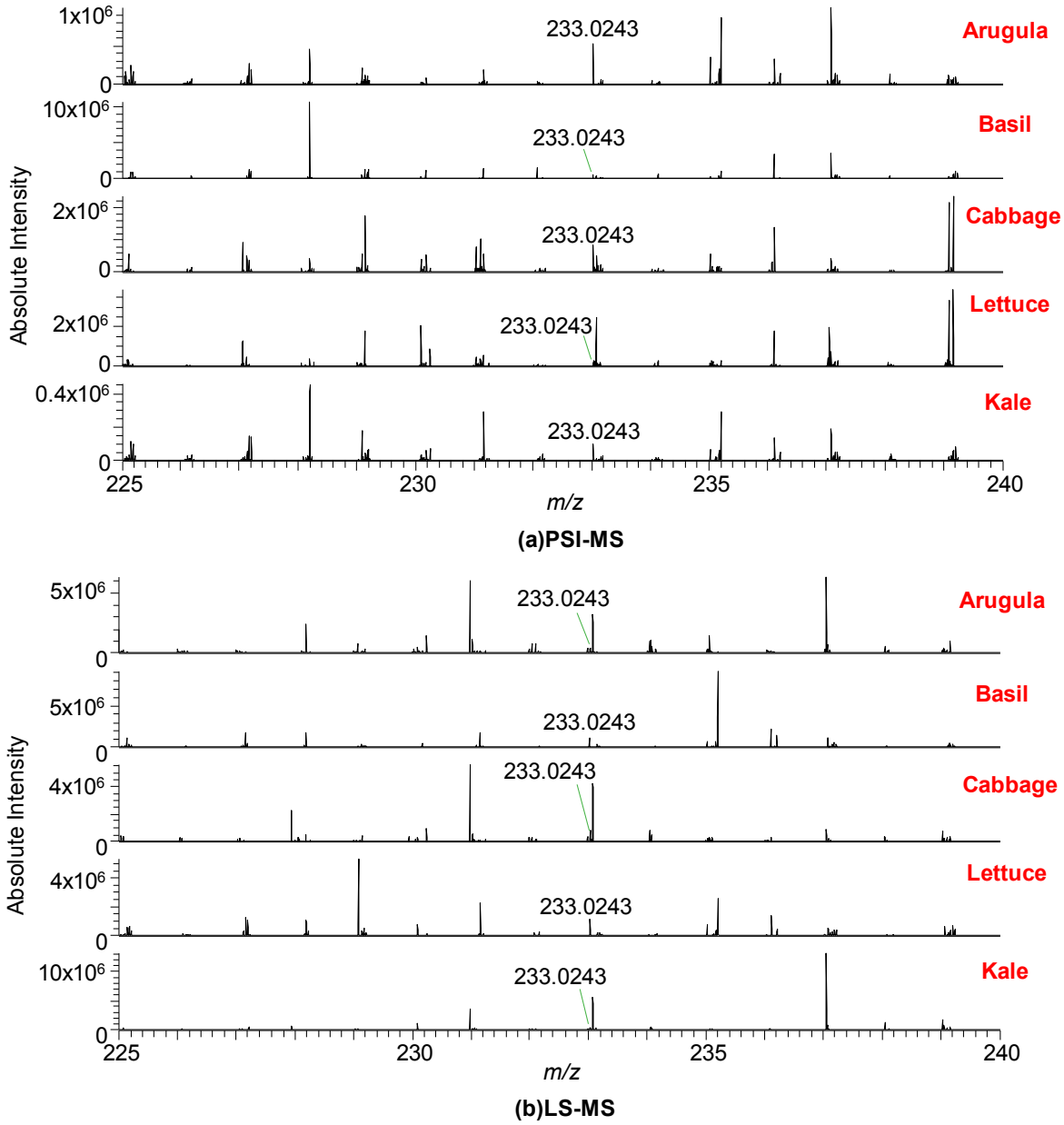


Figure 2S. (a) PSI(+) and (b) LS(+) mass spectra obtained with 10 ppb of diuron in arugula, basil, cabbage, lettuce and kale.

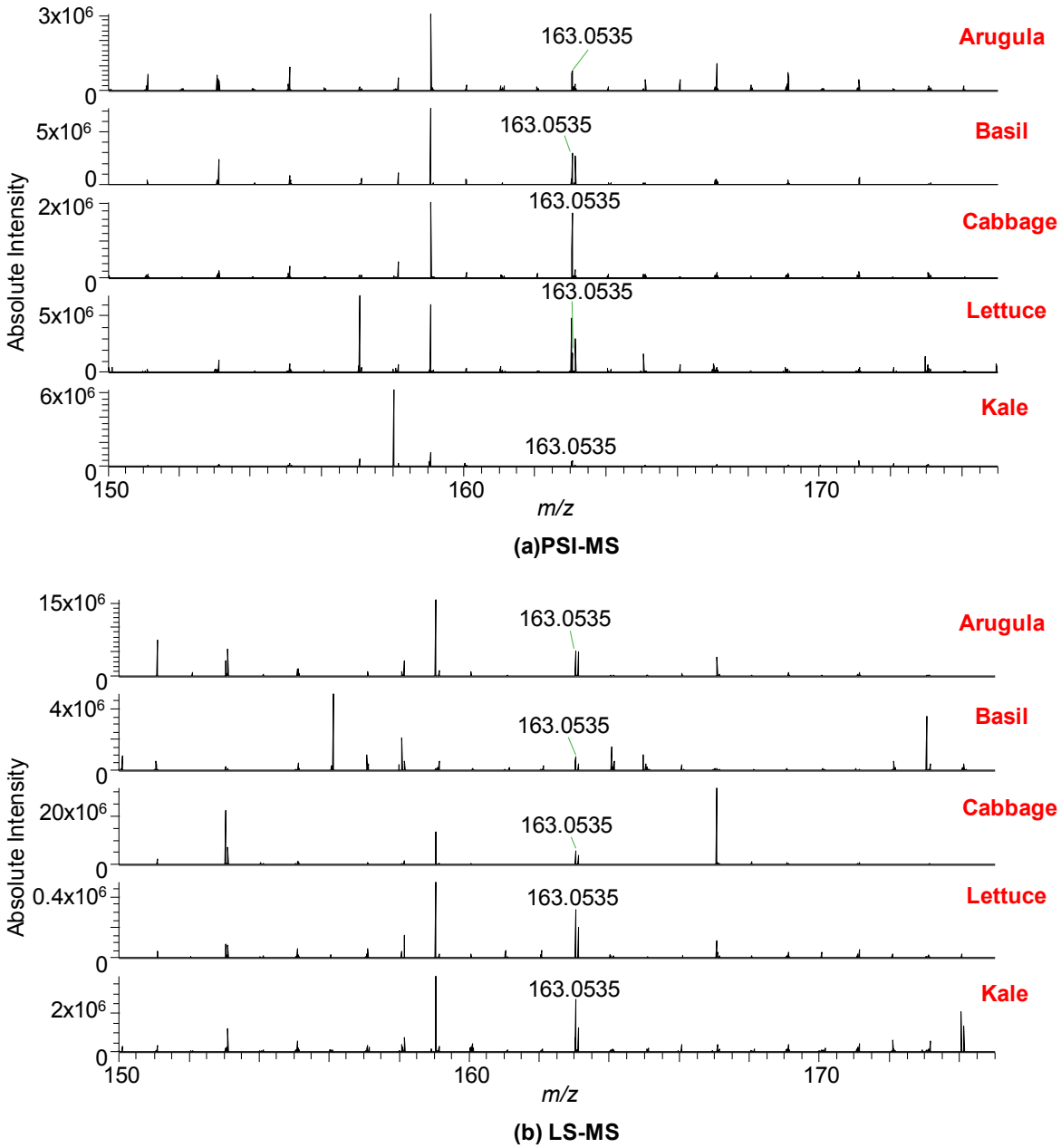
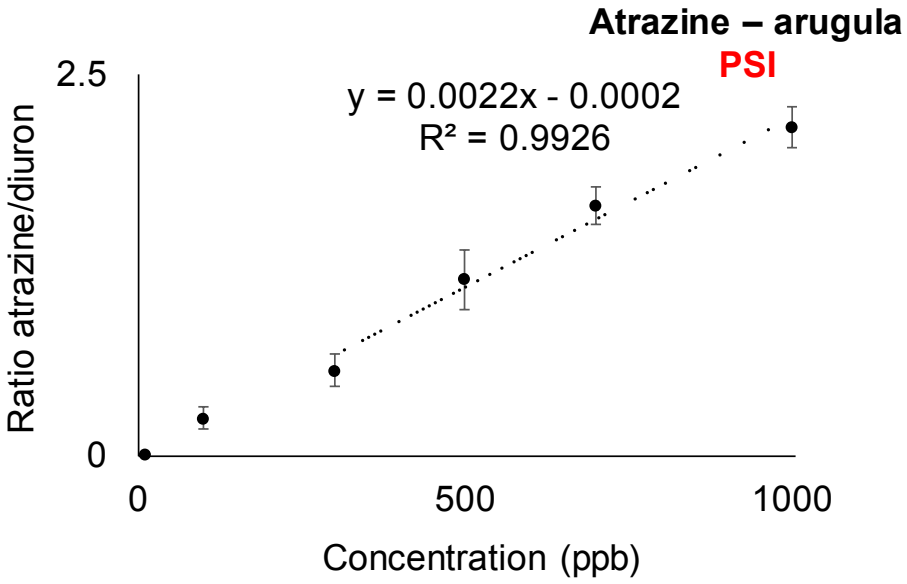
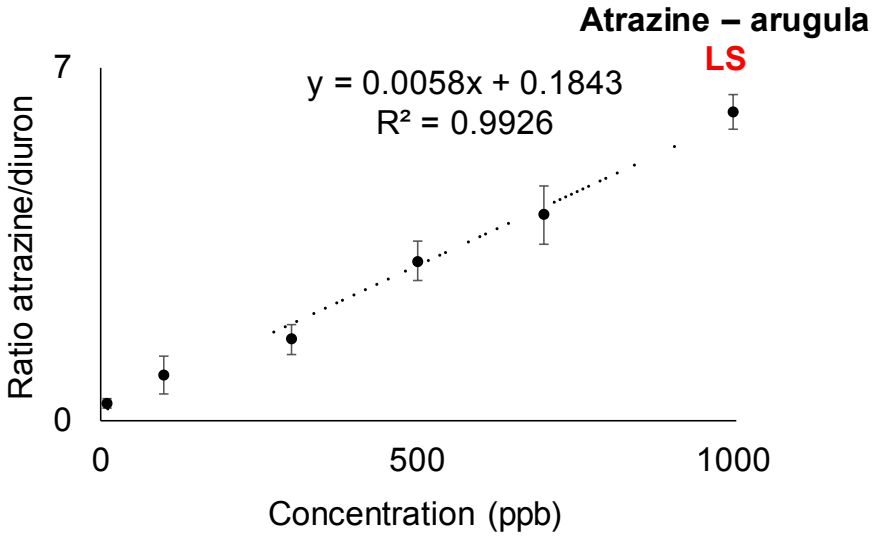
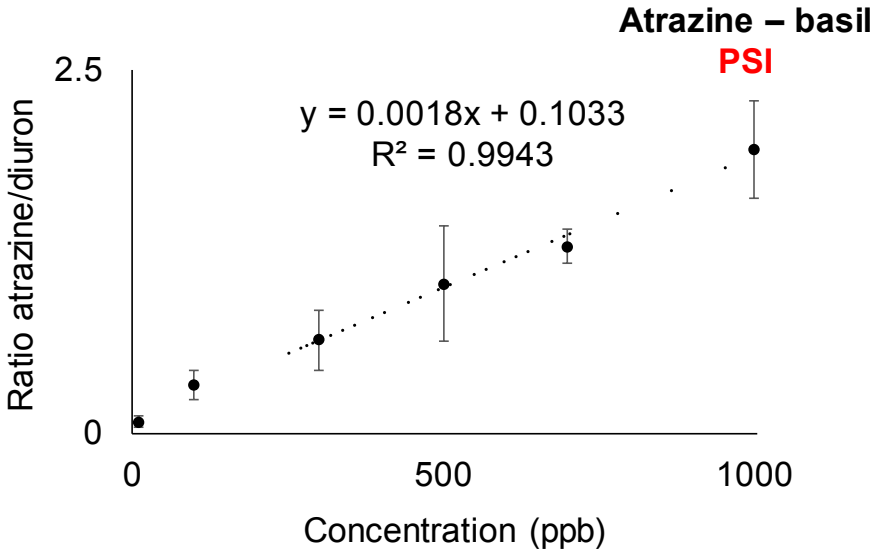
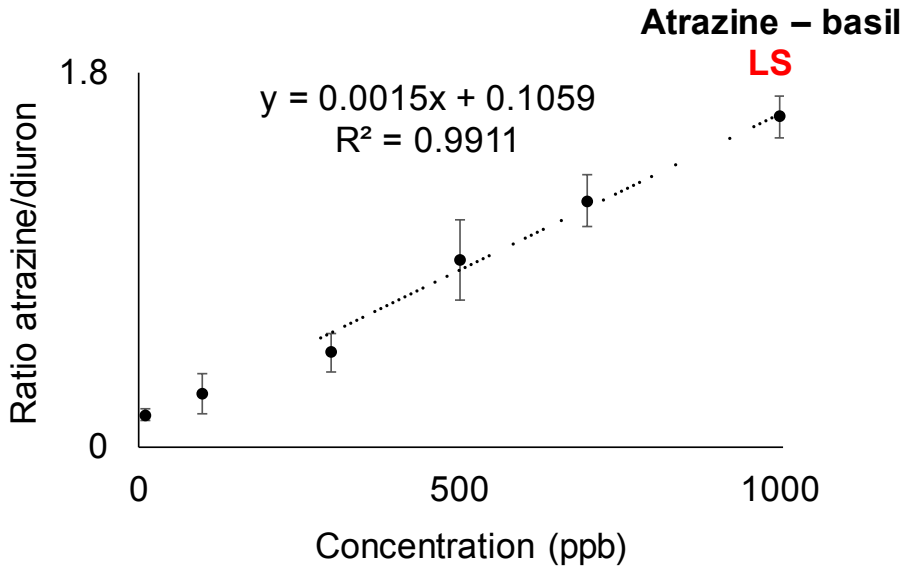


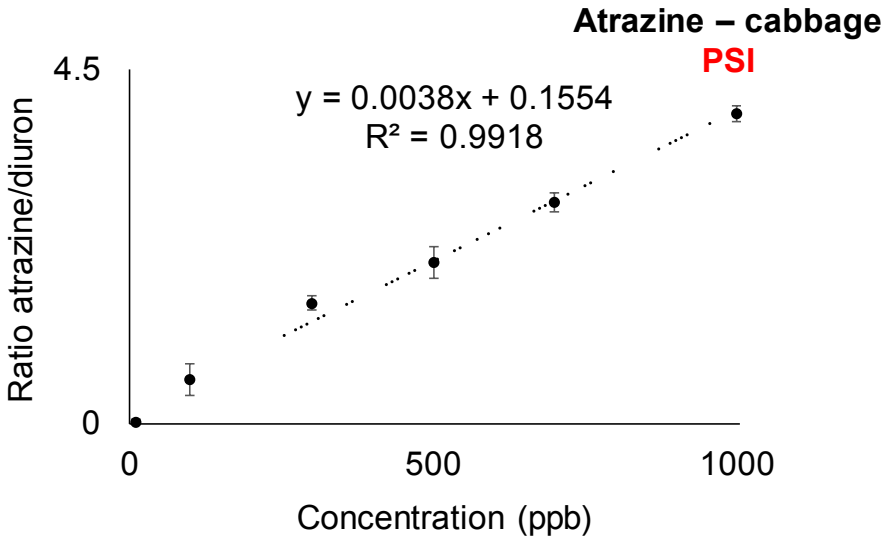
Figure 3S. (a) PSI(+) and (b) LS(+) mass spectra obtained with 10 ppb of methomyl in arugula, basil, cabbage, lettuce and kale.

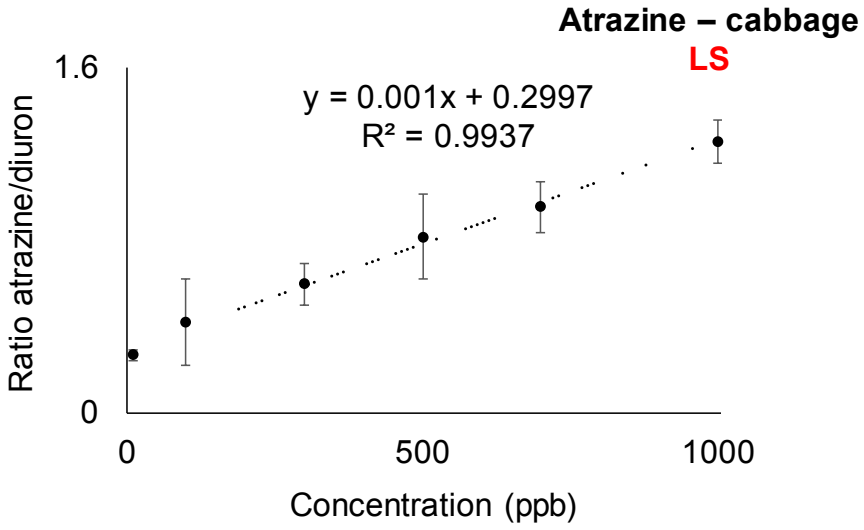

Atrazine – arugula
PSI
y = 0.0022x - 0.0002
R² = 0.9926
Ratio atrazine/diuron
2.5
0
0
500
1000
Concentration (ppb)

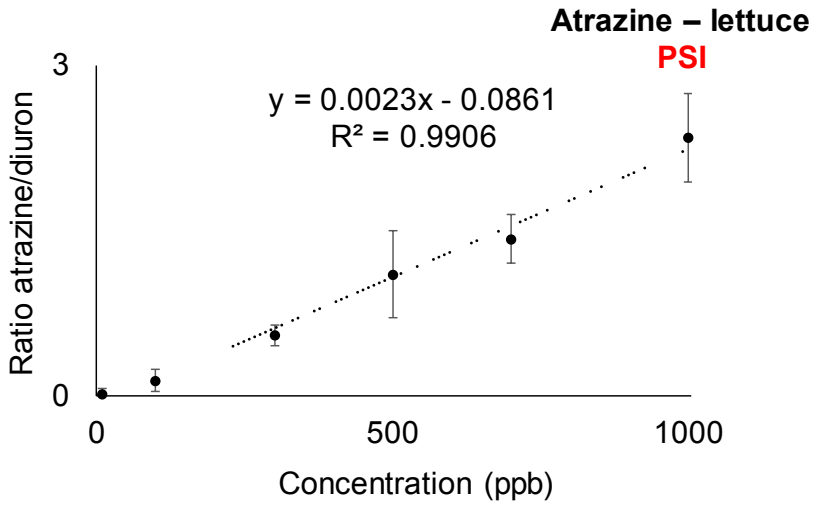

Atrazine – arugula
LS
y = 0.0058x + 0.1843
R² = 0.9926
Ratio atrazine/diuron
7
0
0
500
1000
Concentration (ppb)

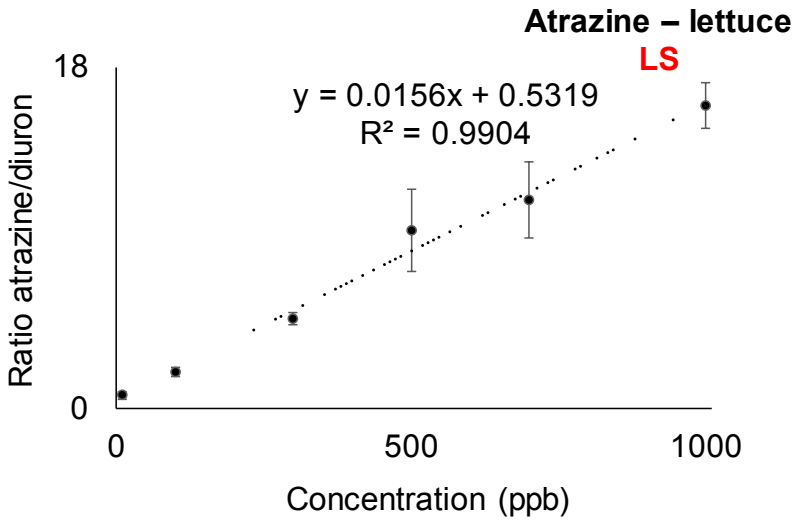

Atrazine – basil
PSI
y = 0.0018x + 0.1033
R² = 0.9943
Ratio atrazine/diuron
2.5
0
0
500
1000
Concentration (ppb)

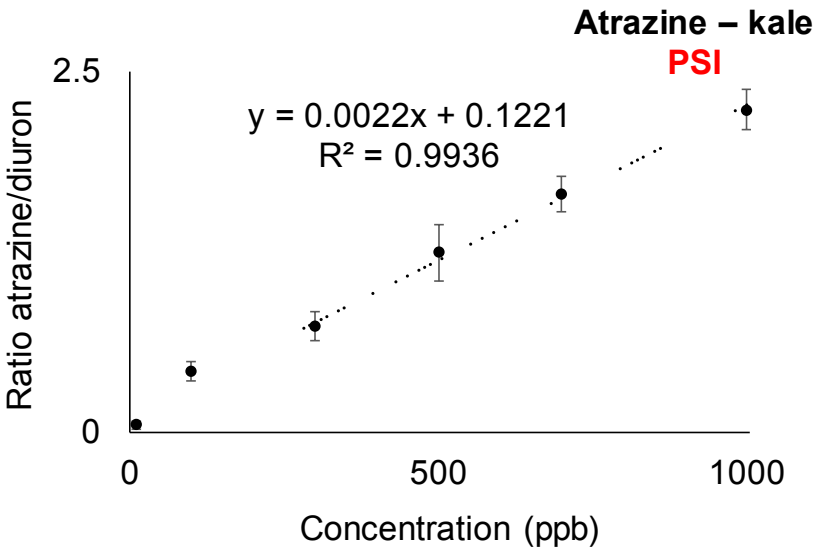

Atrazine – basil
LS
y = 0.0015x + 0.1059
R² = 0.9911
Ratio atrazine/diuron
1.8
0
0
500
1000
Concentration (ppb)

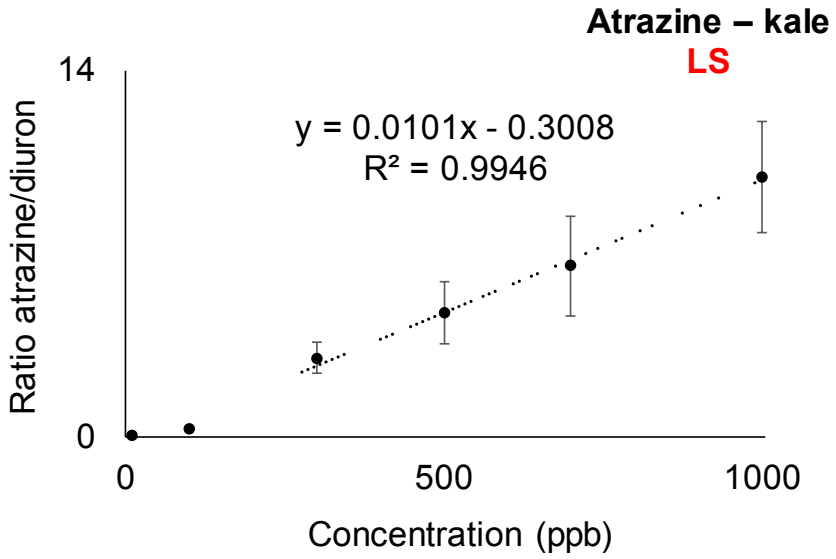

Atrazine – cabbage
PSI
y = 0.0038x + 0.1554
R² = 0.9918
Ratio atrazine/diuron
4.5
0
0
500
1000
Concentration (ppb)

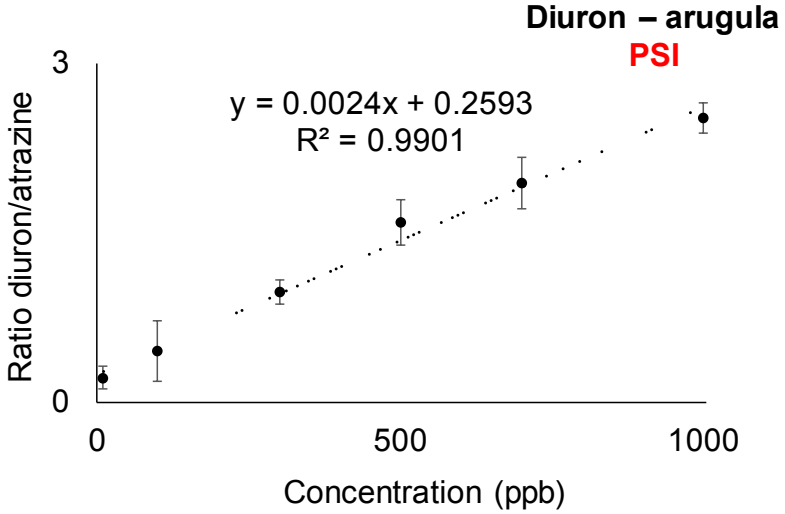

Atrazine – cabbage
LS
y = 0.001x + 0.2997
R² = 0.9937
Ratio atrazine/diuron
1.6
0
0
500
1000
Concentration (ppb)

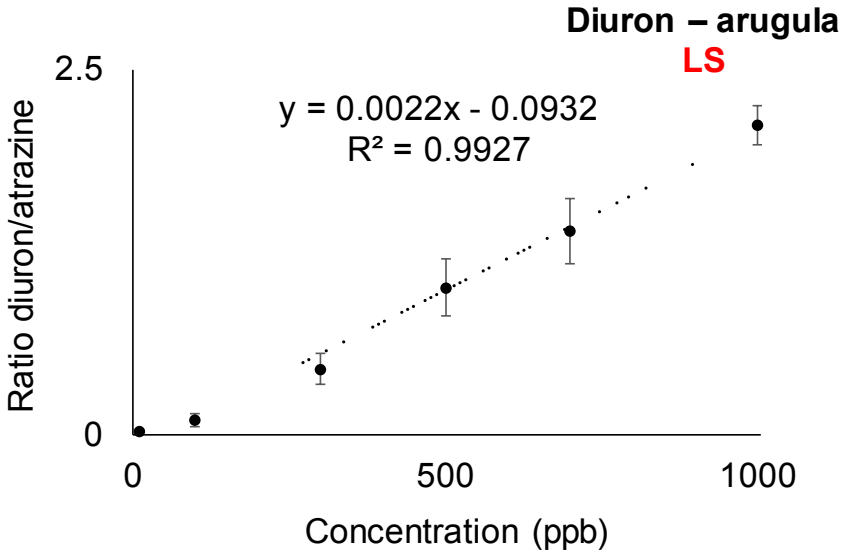

Atrazine – lettuce
PSI
y = 0.0023x - 0.0861
R² = 0.9906
Ratio atrazine/diuron
3
0
0
500
1000
Concentration (ppb)

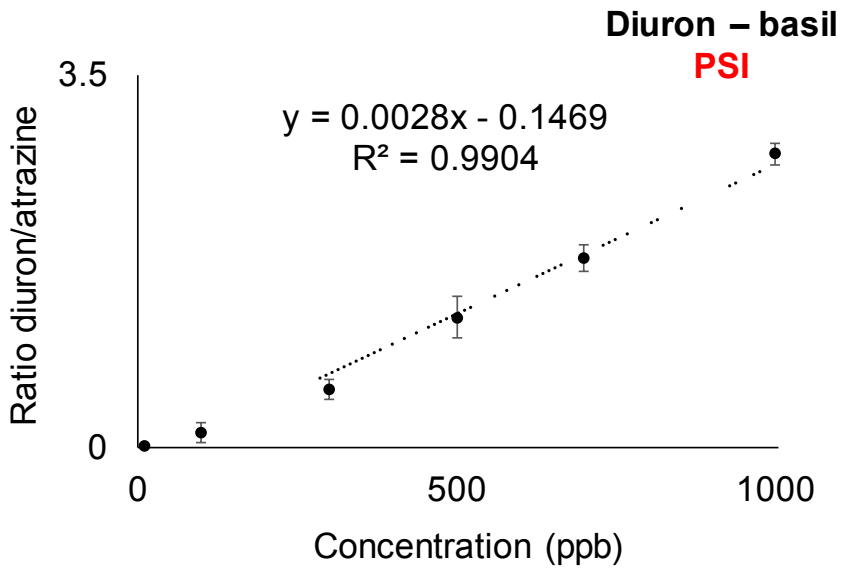

Atrazine – lettuce
LS
y = 0.0156x + 0.5319
R² = 0.9904
Ratio atrazine/diuron
18
0
0
500
1000
Concentration (ppb)

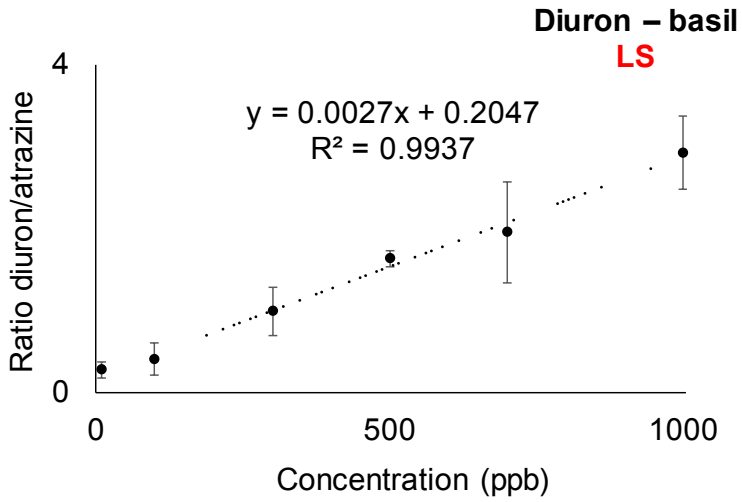

Atrazine – kale
PSI
y = 0.0022x + 0.1221
R² = 0.9936
Ratio atrazine/diuron
2.5
0
0
500
1000
Concentration (ppb)

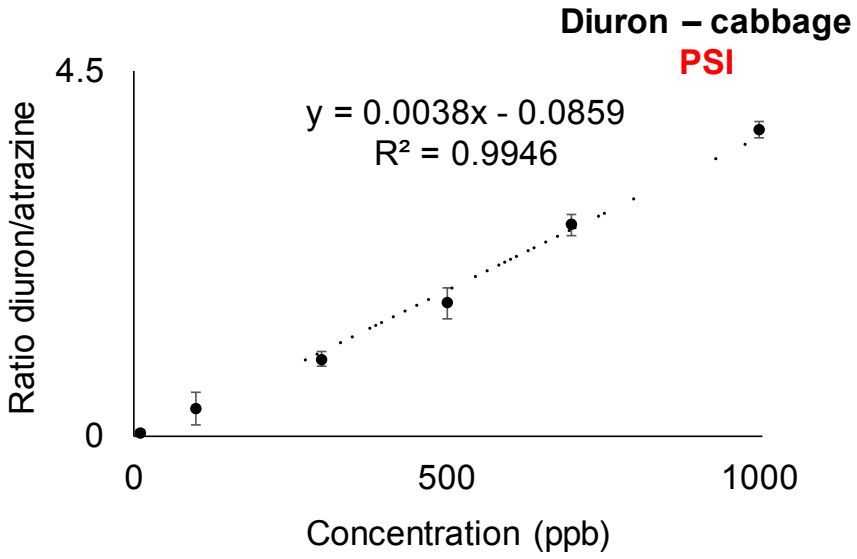

Atrazine – kale
LS
y = 0.0101x - 0.3008
R² = 0.9946
Ratio atrazine/diuron
14
0
0
500
1000
Concentration (ppb)

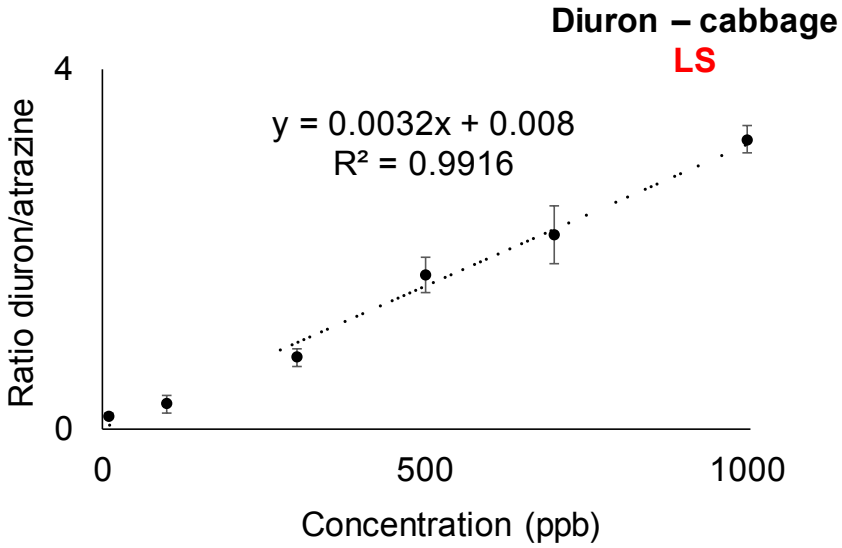

Diuron – arugula
PSI
y = 0.0024x + 0.2593
R² = 0.9901
Ratio diuron/atrazine
3
0
0
500
1000
Concentration (ppb)

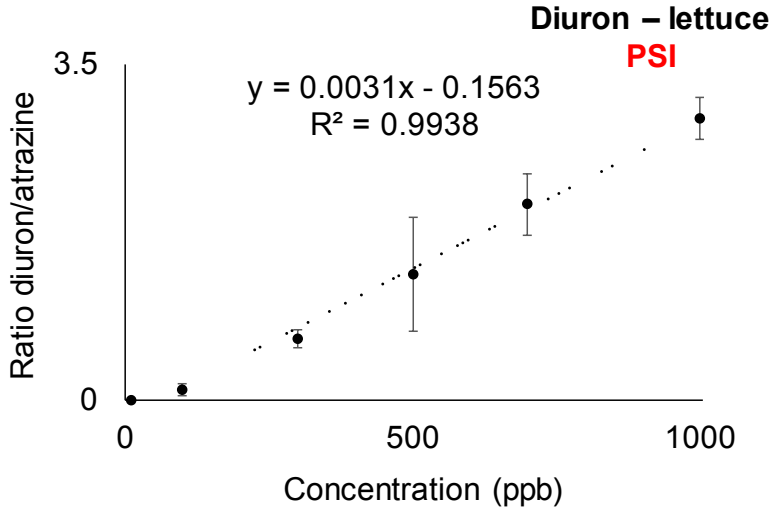

Diuron – arugula
LS
y = 0.0022x - 0.0932
R² = 0.9927
Ratio diuron/atrazine
2.5
0
0
500
1000
Concentration (ppb)

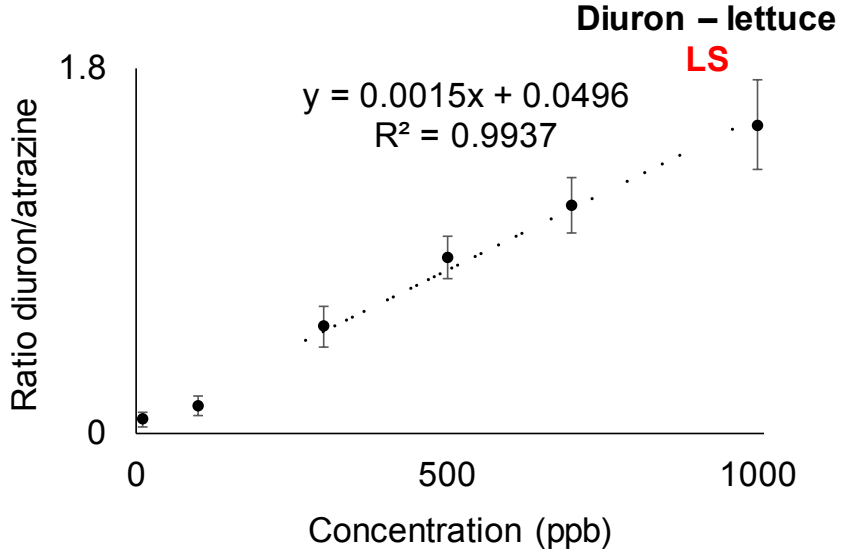

Diuron – basil
PSI
y = 0.0028x - 0.1469
R² = 0.9904
Ratio diuron/atrazine
3.5
0
0
500
1000
Concentration (ppb)

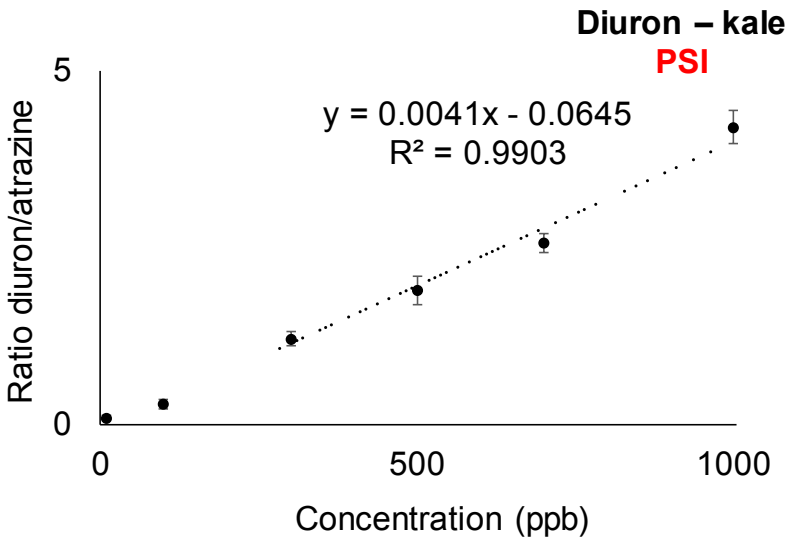

Diuron – basil
LS
y = 0.0027x + 0.2047
R² = 0.9937
Ratio diuron/atrazine
4
0
0
500
1000
Concentration (ppb)

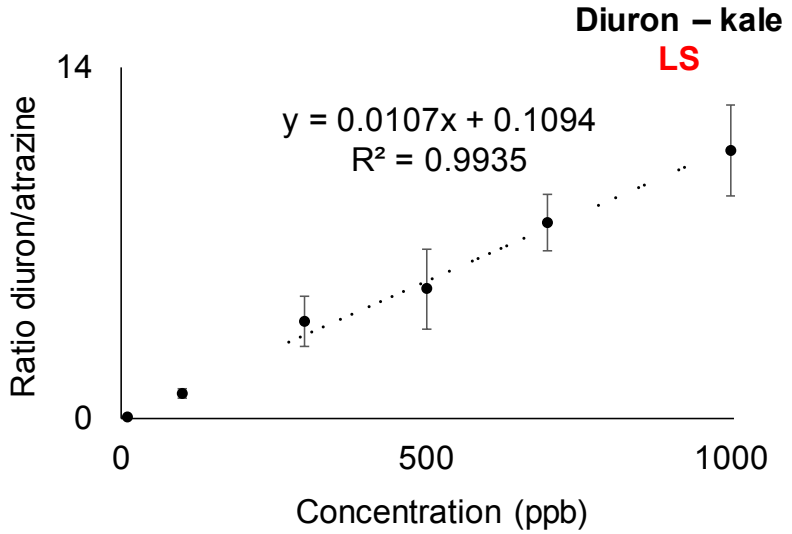

Diuron – cabbage
PSI
y = 0.0038x - 0.0859
R² = 0.9946
Ratio diuron/atrazine
4.5
0
0
500
1000
Concentration (ppb)

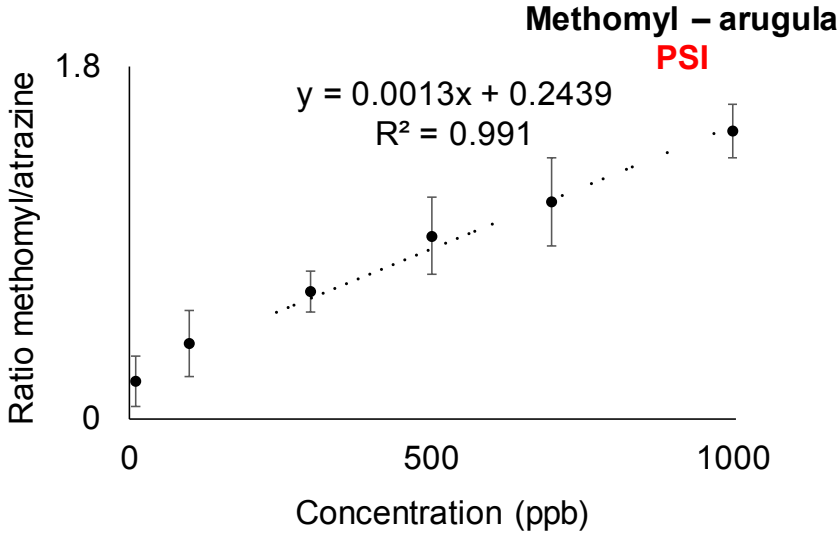

Diuron – cabbage
LS
y = 0.0032x + 0.008
R² = 0.9916
Ratio diuron/atrazine
4
0
0
500
1000
Concentration (ppb)

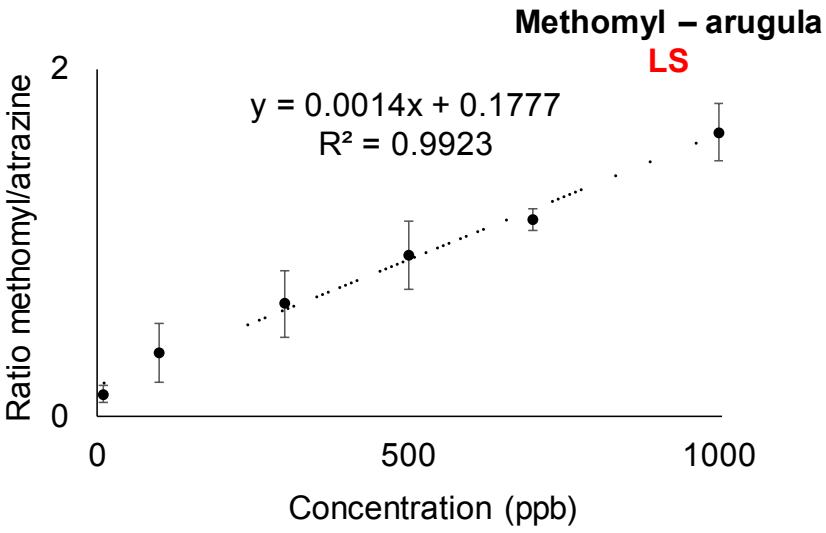

Diuron – lettuce
PSI
y = 0.0031x - 0.1563
R² = 0.9938
Ratio diuron/atrazine
3.5
0
0
500
1000
Concentration (ppb)

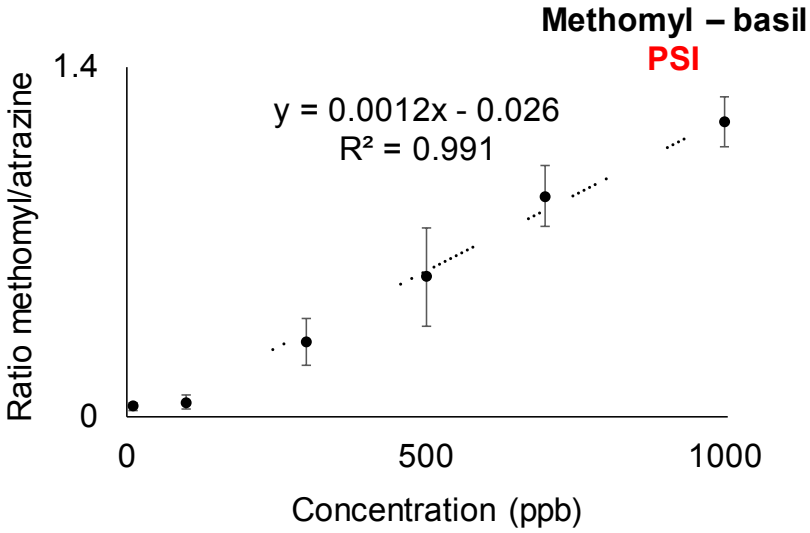

Diuron – lettuce
LS
y = 0.0015x + 0.0496
R² = 0.9937
Ratio diuron/atrazine
1.8
0
0
500
1000
Concentration (ppb)

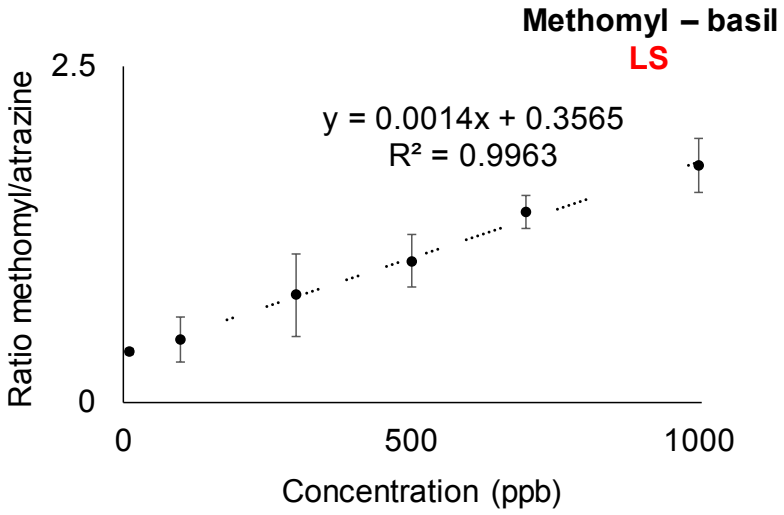

Diuron – kale
PSI
y = 0.0041x - 0.0645
R² = 0.9903
Ratio diuron/atrazine
5
0
0
500
1000
Concentration (ppb)

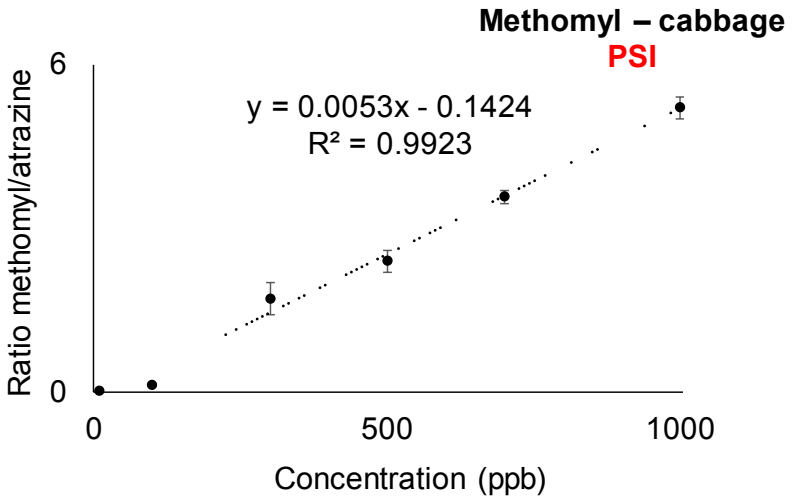

Diuron – kale
LS
y = 0.0107x + 0.1094
R² = 0.9935
Ratio diuron/atrazine
14
0
0
500
1000
Concentration (ppb)

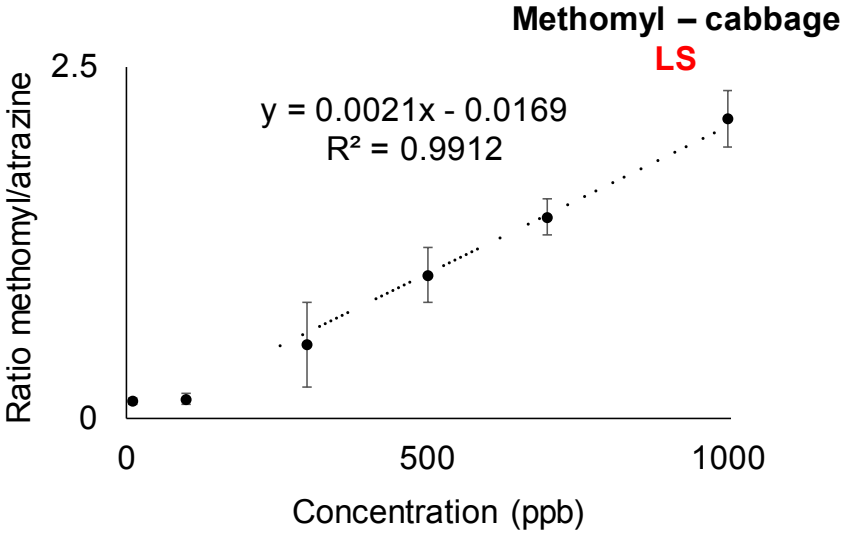

Methomyl – arugula
PSI
y = 0.0013x + 0.2439
R² = 0.991
Ratio methomyl/atrazine
1.8
0
0
500
1000
Concentration (ppb)

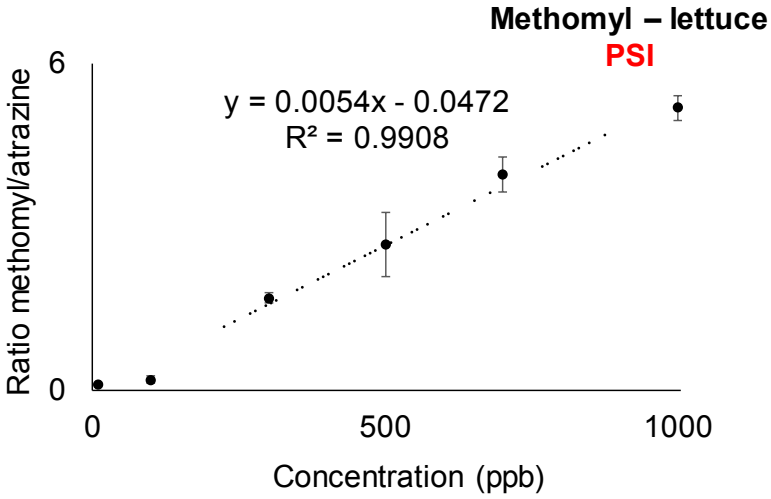

Methomyl – arugula
LS
y = 0.0014x + 0.1777
R² = 0.9923
Ratio methomyl/atrazine
2
0
0
500
1000
Concentration (ppb)

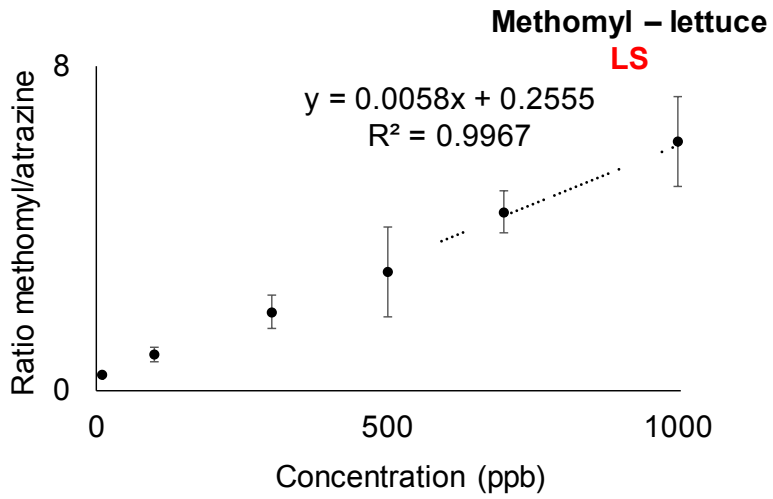

Methomyl – basil
PSI
y = 0.0012x - 0.026
R² = 0.991
Ratio methomyl/atrazine
1.4
0
0
500
1000
Concentration (ppb)

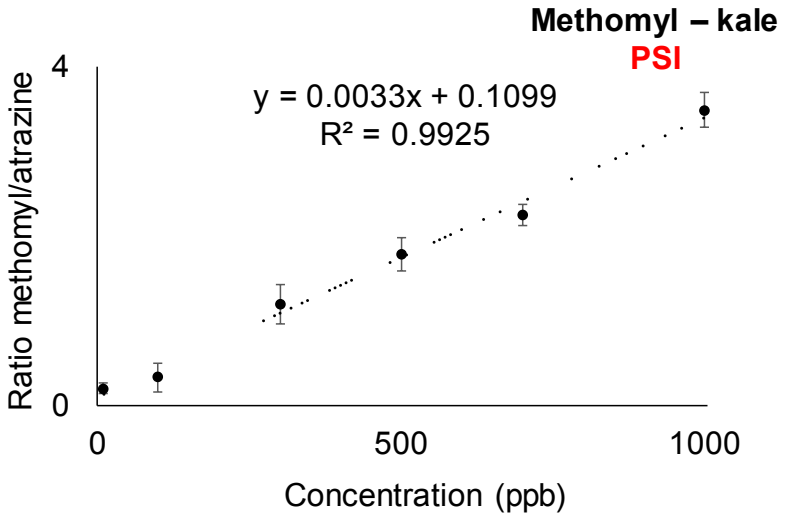

Methomyl – basil
LS
y = 0.0014x + 0.3565
R² = 0.9963
Ratio methomyl/atrazine
2.5
0
0
500
1000
Concentration (ppb)

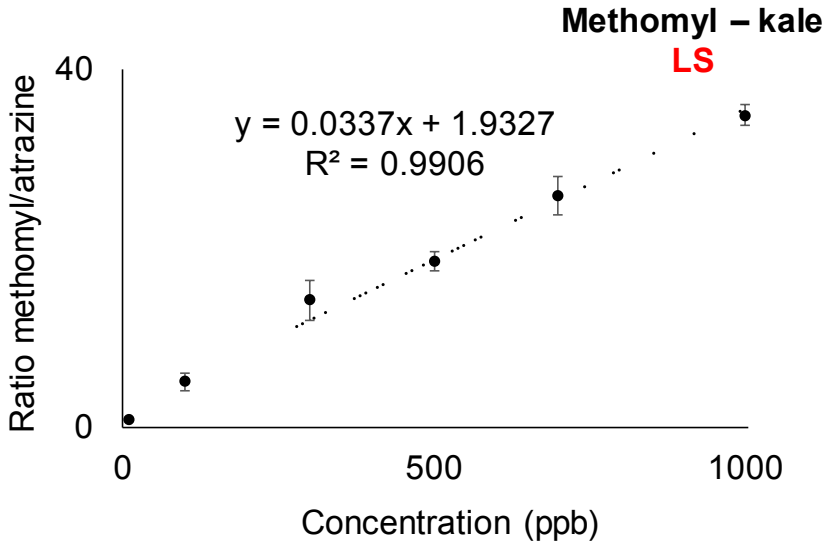

Methomyl – cabbage
PSI
y = 0.0053x - 0.1424
R² = 0.9923
Ratio methomyl/atrazine
6
0
0
500
1000
Concentration (ppb)


Methomyl – cabbage
LS
y = 0.0021x - 0.0169
R² = 0.9912
Ratio methomyl/atrazine
2.5
0
0
500
1000
Concentration (ppb)


Methomyl – lettuce
PSI
y = 0.0054x - 0.0472
R² = 0.9908
Ratio methomyl/atrazine
6
0
0
500
1000
Concentration (ppb)


Methomyl – lettuce
LS
y = 0.0058x + 0.2555
R² = 0.9967
Ratio methomyl/atrazine
8
0
0
500
1000
Concentration (ppb)


Methomyl – kale
PSI
y = 0.0033x + 0.1099
R² = 0.9925
Ratio methomyl/atrazine
4
0
0
500
1000
Concentration (ppb)


Methomyl – kale
LS
y = 0.0337x + 1.9327
R² = 0.9906
Ratio methomyl/atrazine
40
0
0
500
1000
Concentration (ppb)