**Use of Simultaneous Dual-Probe Microdialysis for the Determination of Pesticide Residues in a Jade Plant (*Crassula ovata)***

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Supplementary Information

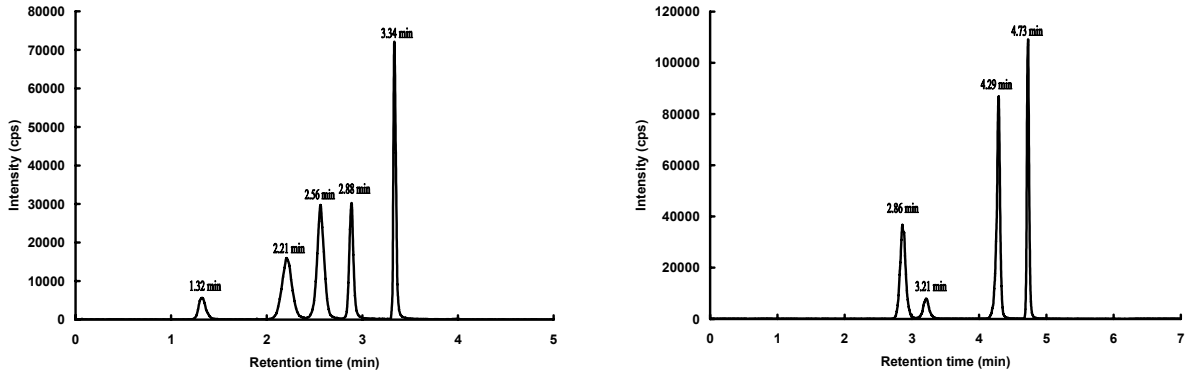
Table S1. Optimization parameters for the MRM detection of sample compounds during LC-ESI-MS/MS analysis.

| Compound | m/z for MRM detection | | Ionization and collision parameters (V) | | | |
|---|---|---|---|---|---|---|
| | Q1[a] | Q3[b] | DP[c] | EP[d] | CE[e] | CXP[f] |
| Aldicarb | 116.2 | 89.0 | 47.3 | 9.0 | 13.9 | 2.2 |
| Carbofuran | 222.2 | 123.1 | 36.1 | 8.0 | 29.9 | 1.9 |
| Propoxur | 210.1 | 111.2 | 31.4 | 8.0 | 19.3 | 2.0 |
| Carbaryl | 202.2 | 145.0 | 32.0 | 9.0 | 21.9 | 2.0 |
| Promecarb | 208.2 | 109.2 | 49.0 | 3.0 | 21.4 | 2.3 |
| Diazepam | 285.1 | 154.1 | 60.0 | 5.0 | 37.0 | 3.0 |
| Oxazepam | 287.2 | 241.2 | 50.0 | 5.0 | 30.0 | 3.0 |
| Nordiazepam | 271.1 | 140.0 | 60.0 | 5.0 | 40.0 | 2.0 |
| Lorazepam | 321.1 | 275.1 | 69.7 | 5.9 | 27.0 | 4.8 |

[a]Q1, quadrupole 1; [b]Q3, quadrupole 3; [c]DP, declustering potential; [d]EP, entrance potential; [e]CE, collision energy; [f]CXP, collision cell exit potential

Table S2. Correlations between calculated and real (or spiked) carbamate pesticide or benzodiazepine drug concentrations within an *in vitro* agarose gel model (1%, *w/v*). Flow rates used to generate this data were 2 and 4 uL/min, and four data points were used to produce each curve and slope, with the y-intercept forced through the origin.

| | Correlation | Correlation coefficient, $R^2$ |
|---|---|---|
| Aldicarb | y = 1.129x | 0.998 |
| Carbofuran | y = 1.002x | 0.998 |
| Propoxur | y = 1.009x | 0.998 |
| Carbaryl | y = 1.005x | 0.998 |
| Oxazepam | y = 0.972x | 0.999 |
| Diazepam | y = 1.058x | 0.999 |
| Nordiazepam | y = 1.025x | 0.999 |




(A) (B)

Figure S1. LC-MS/MS total ion chromatograms from pesticides (A) and benzodiazepine drugs (B). Peak identifications are as follows: (A) aldicarb (1.32 min), propoxur (2.21 min), carbofuran (2.56 min), carbaryl (2.88 min), and promecarb (3.34 min), and (B) oxazepam (2.86 min), lorazepam (3.21 min), nordiazepam (4.29 min), and diazepam (4.73 min). The injected amount for each compound was 0.25 ng.

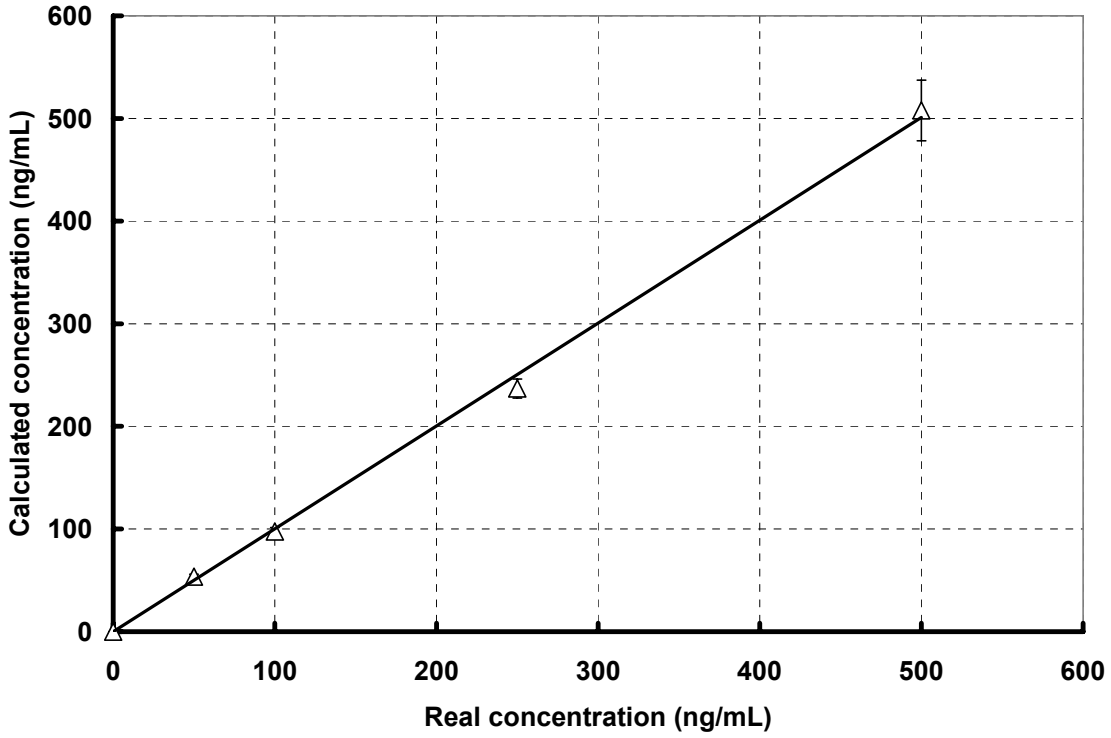



Figure S2. Correlation between calculated and real (or spiked) concentrations of carbofuran. Spiked concentrations were known through sample preparation while calculated concentrations were obtained by Eq. 2. Experiments were performed in agarose gel (1%, *w/v*) with paired dialysate flow rates of 2 and 4 μL/min. The carbofuran concentration in the dialysates was measured by LC-MS/MS (n = 3).