**Supplementary Information**

*Methods for Food Analysis*

Food samples were analyzed using methods briefly described here. Pesticide-grade solvents (Burdick and Jackson), high purity reference standards (ChemService) and high purity bulk chemicals (Fisher Scientific) were used for the analyses. The entire food sample was chopped with dry ice to the size of rice grains using a stainless steel industrial grade food chopper (Hobart Model 84186 Food Cutter). After sublimation, a 10 g food sample was weighed out and fortified with 5 ng each of the two pesticide surrogate recovery standards (SRSs; fenchlorphos for the organophosphates and $^{13}C_6$-cis-permethrin for the pyrethroids) and 1000 ng of the phthalate ester SRS ($d_4$-butylbenzyl phthalate). The food was extracted with 130 mL of acetonitrile using a homogenizer wand (IKA-Ultra-Turrax); after centrifuging the sample, saturated aqueous sodium chloride was added and the phases were allowed to separate. The resulting acetonitrile extract was dried with sodium sulfate, and concentrated using a nitrogen blow down technique (Zymark TurboVap II) to exactly 10 mL. A 1 mL aliquot was removed for phthalate ester analysis with no further cleanup, fortified with dibromobiphenyl as the internal standard (100 ng) and analyzed using GC/MS (Agilent Technologies 6890 GC/5973) with a ZB-35 ms column (30 M, 0.25 mm id, 0.25 µm film thickness; Phenomenex) and a temperature program of 130-340°C @ 6°C/min. The remaining 9 mL extract was concentrated using the TurboVap and cleaned up using, in sequence, 1 g $C_{18}$ (BakerBond), 1 g neutral alumina (BakerBond), 1 g carbon (Supelco), and 1 g aminopropyl (Supelco) solid phase extraction (SPE) cartridges. After addition of nonane, the final extract was concentrated to 0.2 mL using nitrogen evaporation (N-Evap; Organomation), fortified with 20 ng of dibromobiphenyl as the internal standard , and analyzed using GC/MS in the selected ion monitoring (SIM) mode with

instrument, GC column and GC temperature conditions as described above for the phthalate ester analyses. The 7-point phthalate ester calibration curve spanned the range of 20-10,000 ng/mL; the 7-point pesticide calibration curve spanned the range of 1-50 ng/mL. Calibration curves were generated using linear regression analysis; quantification was performed using the internal standard method. Quality Assurance/Quality Control (QA/QC) samples including solvent method blank, matrix duplicate, and matrix fortified sample were processed concurrently with each batch of five field samples. A full calibration curve was analyzed with each sample batch. The GC/MS results were transferred electronically into Microsoft Excel spreadsheets for further data reduction.

The QC samples were analyzed with each set of food samples. The matrix fortified level was alternated between the method detection limit (MDL) and 5X MDL levels in succeeding sample sets. Matrix fortified samples were made using food that was collected in the field. Because there was sufficient food in a given sample, the same sample was used for both the matrix duplicate and the matrix fortified samples. The fortified samples were a 10 g aliquot of the food. These foods were extracted and analyzed in the same manner as the field samples. The QA/QC results are summarized in Table S1.

For the pesticides, average 1X MDL fortified recoveries were 130 ± 108%, while average 5X MDL recoveries were 100 ± 25%. For the phthalates, average 1X MDL fortified recoveries were 89 ± 45%, while average 5X MDL recoveries were 65 ± 13%. The relative percent difference (RPD) of duplicate samples was 31% on average for all pesticides and phthalates. The number of pairs of samples with detectible levels of the analyte are given in parentheses behind the RPD (in Table S1), as not all of the pairs (n = 9) had measurable levels. The solvent method blank contained low levels of some of the analytes with reasonable detection of the SRS.

SRS recoveries for fortified matrix samples, as shown in Table S1, were as follows: fenchlorphos (SRS for OPs) 97±37% for 1X MDL and 88±30% for 5X MDL; $^{13}C_6$-cis-permethrin (SRS for pyrethroids) 126 ± 14% for 1X MDL and 124±31% for 5X MDL; $d_4$-butylbenzyl phthalate (SRS for phthalate esters) 117±32% for 1X MDL and 97±17% for 5X MDL.

The sequence for each analysis type included, initially, all the calibration solutions: the sample extracts were then analyzed with interspersed calibration check solutions; the sequence ended with an analysis of the lowest level standard to verify instrument performance throughout the run sequence. The calibration curve for each analyte and SRS was generated by linear least squares regression analysis; the correlation coefficient ($r^2$) for each curve was >0.99, and the relative error for recalculation of each point against the curve was <25% (<35% for the lowest point). The area of the internal standard (IS) in each run was within ±15% of the average area measured in each of the standard analyses. If the concentration of an analyte exceeded the top calibration point concentration by more than 15%, then the sample was diluted appropriately, fortified again with IS and reanalyzed with the next sample set.

**Table S1. Quality Assurance/Quality Control Measurements**

| Analyte | Solvent method blank, effective ng/g or % recovery for SRS, (n=9) | Recovery for samples fortified at ~5X MDL, % (ng/g spike level) (n=5) | Recovery for samples fortified at ~1X MDL, % (ng/g spike level) (n=4) | Average RPD for duplicate samples, % (no. duplicate pairs with analyte detected) (n=9 sample pairs) | Estimated MDL, ng/g |
|---|---|---|---|---|---|
| Diazinon | Not detected | 60 ± 14 (0.5) | 94 ± 107 (0.1) | 2 (1) | 0.1 |
| Chlorpyrifos methyl | One detect @0.03 | 85 ± 23 (0.5) | 104 ± 32 (0.1) | 0 (0) | 0.05 |
| Chlorpyrifos | One detect @0.05 | 87 ± 19 (0.5) | 97 ± 60 (0.1) | 17 (8) | 0.1 |
| Fenchlorphos (SRS for OPs) | 32 ± 13% | 88 ± 30 (0.5) | 97 ± 37 (0.5) | 14 (9) | NA[d] |
| Bifenthrin | 0.68 ± 0.12 (int)[b] | 102 ± 12 (0.5) | 169 ± 127 (0.1) | 39 (5) | 0.1 |
| Cis-Permethrin | 0.25 ± 0.07 (int)[b] | 101 ± 10 (0.5) | 132 ± 284 (0.1) | 64 (4) | 0.1 |
| Trans-Permethrin | 0.22 ± 0.13 (int)[b] | 105 ± 27 (0.5) | 217 ± 266 (0.1) | 83 (7) | 0.1 |
| Cyfluthrin[a] | Not detected | 115 ± 33 (0.75) | 115 ± 33 (0.15) | 4 (3) | 0.2 |
| Cypermethrin[a] | Not detected | 148 ± 24 (0.75) | 148 ± 24 (0.15) | 33 (3) | 0.4 |
| Esfenvalerate | Not detected | 98 ± 54 (2.5) | 117 ± 76 (0.5) | 18 (2) | 0.8 |
| Piperonyl butoxide | 2 detects @ ave 0.31 | 101 ± 30 (0.5) | 108 ± 72 (0.1) | 32 (8) | 0.05 |
| $^{13}C_6$-Cis-Permethrin (SRS for Py) | 113 ± 10% | 124 ± 31 (0.5) | 126 ± 14 (0.5) | 9 (9) | NA[d] |
| Diethyl phthalate | 1.4 ± 1.8 | 61 ± 13 (5000)[c] | 59 ± 7 (1000) | 20 (9) | 1 |
| Di-n-butyl phthalate | 12.5 ± 12.0 | 63 ± 10 (5000) | 113 ± 105 (1000) | 61 (9) | 1 |
| Butylbenzyl phthalate | 3.7 ± 3.7 | 65 ± 12 (5000) | 102 ± 78 (1000) | 76 (9) | 1 |
| Di-2-ethylhexyl phthalate | 1.9 ± 1.4 | 59 ± 15 (5000) | 65 ± 5 (1000) | 40 (8; 1 int) | 1 |
| Diisononyl phthalate | Not detected | 77 ± 12 (5000) | 107 ± 36 (1000) | 3 (2) | 50 |
| Diisodecyl phthalate | Not detected | 66 ± 17 (5000) | 86 ± 40 (1000) | 6 (1) | 50 |
| $d_4$-Butylbenzyl phth. (SRS for phth) | 74 ± 20% | 97 ± 17 (100) | 117 ± 32 (100) | 9 (9) | NA[d] |

a - Data presented for the first chromatographic isomer of the compound
b - Int= interference; interference that nearly co-elutes with analyte and is integrated and then subtracted
c - Phthalates spiked at higher than 5X MDL; spiked to be about 5X higher than anticipated native matrix levels
d - NA= not applicable; SRSs spiked at ~5X MDL