

SUPPORTING INFORMATION

Analytical method used for stability and homogeneity assessment

The analyses were carried out by Japan Food Research Laboratories and The General Environmental Technos (short term stability assessment: $n=6$ (three sub-samples taken from two bottles) at each temperature condition; long term stability assessment: $n=4$ in each of assessments; homogeneity assessment: $n=20$ (two sub-samples taken from ten bottles)). Acetone, hexane (for pesticide residue and PCB analysis grade), anhydrous sodium sulfate (for PCB analysis grade), polyethylene glycol (PEG 400), and sodium chloride (reagent grade) were purchased from Kanto Chemical. Purified water (Milli-Q Elix UV system; Millipore) was used for water-soaking process.

The green onion or cabbage sample (0.2 g) was weighed in a glass vial, and the surrogate solution (prepared by dissolving in acetone from isotope-labeled pesticides: chlorpyrifos- d_{10} (Kanto Chemical), diazinon- d_{10} , fenitrothion- d_6 , cypermethrin- d_6 , *trans*-permethrin- d_6 (Dr. Ehrenstorfer GmbH, Augsburg, Germany), and etofenprox- d_5 (Hayashi Pure Chemical)) and purified water (20 mL) were added. After 15 min, this sample was shaken for 30 min with acetone (100 mL) and filtered with Celite (Kanto Chemical). The residues on Celite were washed with acetone (50 mL). The crude extract was concentrated to less than 20 mL with a rotary evaporator. This concentrate was shaken with hexane (100 mL) and 5 % sodium chloride aqueous solution (200 mL) in a separatory funnel for 5 min after concentration to about 30 mL by a rotary evaporator. The upper (hexane) layer was collected, and the lower (water) layer was re-extracted with 50 mL of hexane by shaking for 5 min. The hexane layer was combined and dried by a rotary evaporator after dehydration by an anhydrous sodium sulfate and filtration,

then, 10.0 mL of hexane was added. The 2.0 mL taken from this extract was cleaned up by using a SPE cartridge (Florisil cartridge (910 mg; Sep-Pak Plus; Waters, Milford, MA) + graphite carbon cartridge (250 mg; InertSep GC; GL Sciences); conditioned with 10 mL of hexane/acetone (19:1, v/v)). Pesticides were eluted with hexane/acetone (19:1, v/v; 20 mL), and adsorbed pesticides onto graphite carbon were further eluted with hexane/acetone (19:1, v/v; 10 mL). This cleaned up extract was concentrated and dried by a rotary evaporator and nitrogen gas stream, then, 2.0 mL of acetone containing PEG 400 (0.05 %) was added. An Agilent Technologies 6890 GC equipped with a DB-5MS column (Agilent Technologies), and a 5973N MSD was used for the instrumental analysis of chlorpyrifos, diazinon, fenitrothion, and etofenprox (MS with electron impact (EI) ionization mode; 70 eV). For cypermethrin and permethrin, an Agilent Technologies 6890 GC equipped with a HP-5MS column (30 m × 0.25 mm i.d.; Agilent Technologies), and a 5975 MSD was used (MS with negative chemical ionization (NCI) mode with methane as the reagent gas (2.0 mL/min)). The analysis was performed by using the splitless injection mode, and the injection volume was 2.0 µL. Helium was used as the carrier gas (1.0 mL/min) and the injector temperature was 250 °C. The GC oven was programmed to remain at 80 °C for the initial 1 min, ramped at 20 °C/min to 280 °C, and hold for 10 min. Quantitative analysis was conducted by SIM mode and the ions for quantification were as follows: chlorpyrifos, 314; chlorpyrifos-d₁₀, 324; diazinon, 304; diazinon-d₁₀, 314; fenitrothion, 260; fenitrothion-d₆, 266; cypermethrin, 207; cypermethrin-d₆, 213; etofenprox, 163; etofenprox-d₅, 168; permethrin, 207; *trans*-permethrin-d₆, 213 (permethrin was quantified as the sum of *cis*- and *trans*-permethrin).