

Supplementary Information

An Alternative Spectrophotometric Determination of Carbaryl Insecticide Residues in Water Samples Using the Cerium-Catalyzed Belousov-Zhabotinsky Oscillating Reaction

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Study on matrix effect of samples

The matrix effect of different water samples was studied. The oscillation periods under addition of various concentration of carbaryl (0.5-3.0 mg L⁻¹) in different water samples was investigated. The experimental results were summarized in Table S1. It was noted that parameter y was the oscillation after perturbation (T_p) value in the unit of second and x was the concentration of carbaryl in the unit of mg L⁻¹.

Table S1. The linear equation characterized from different water samples

Water source	Linear equation	R ²
DI	$y = 0.21x + 82.04$	0.9989
Tap	$y = 0.22x + 82.00$	0.9990
Swamp	$y = 0.20x + 82.09$	0.9995
River	$y = 0.21x + 82.07$	0.9989

DI: deionized water; R²: correlation coefficient.

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