

Supplemental Information

Photoelectrochemical Lab-on-Paper Device Based on Molecularly Imprinted Polymer and Porous Au-paper Electrode

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The stability of the μ -MPECOD

Table S1 The data of the experiments for 50 analysis repetitions.

$C_{\text{heptachlor}}$ (nmol·L ⁻¹)	Photocurrent (μ A)
0.5	33.55, 33.55, 33.54, 33.56, 33.56, 33.52, 33.51, 33.54, 33.54, 33.51,
	33.55, 33.54, 33.52, 33.52, 33.53, 33.54, 33.53, 33.54, 33.51, 33.52,
	33.47, 33.49, 33.46, 33.49, 33.47, 33.46, 33.45, 33.45, 33.46, 33.48,
	33.46, 33.42, 33.40, 33.41, 33.43, 33.42, 33.41, 33.39, 33.37, 33.38,
	33.37, 33.36, 33.32, 33.34, 33.33, 33.32, 33.31, 33.30, 33.29, 33.28

Furthermore, to adequately validate and confirm the applicability and sensitivity of this μ -MPECOD from 0.03 nmol·L⁻¹ to 10.0 nmol·L⁻¹, spiked milk samples were prepared through adding different amounts of heptachlor (0.03 to 10 nmol·L⁻¹) into the milk sample. The results are

shown in Table S2, and acceptable recovery (96.4-104%) and RSD (less than 5.0%) data were obtained. Hence, the developed μ -MPECOD provided a possible application for the detection of heptachlor in real samples.

Table S2. Recovery of Heptachlor in milk Samples

sample	$C_{\text{heptachlor}}$ ($\text{nmol}\cdot\text{L}^{-1}$)	added ($\text{nmol}\cdot\text{L}^{-1}$)	detected ($\text{nmol}\cdot\text{L}^{-1}$)	found ($\text{nmol}\cdot\text{L}^{-1}$) ^a	RSD (%, n = 11)	recovery (%)
1	1	0.03	1.032	0.031	4.8	103.3
2		0.5	1.54	0.53	4.2	104
3		1	1.97	0.97	3.1	97
4		2.5	3.47	2.41	3.8	96.4
5		5	6.09	5.12	4.6	102.4
6		7.5	8.37	7.31	3.6	97.5
7		9	9.85	8.74	4.4	97.1

^a[found] means the values obtained by subtracting the intrinsic value of [heptachlor] in the milk sample (here 1 $\text{nmol}\cdot\text{L}^{-1}$) from the [detected] value in the spiked milk sample.