

**Supplementary materials for the manuscript:**

**Simultaneous voltammetric determination of aspartame and  
acesulfame-K in food products using an anodically pretreated  
boron-doped diamond electrode**

Patrícia B. Deroco<sup>a</sup>, Roberta A. Medeiros<sup>a,b</sup>, Romeu C. Rocha-Filho<sup>a</sup>, and Orlando  
Fatibello-Filho<sup>a\*</sup>

<sup>a</sup> Departamento de Química, Universidade Federal de São Carlos, C.P. 676, 13560-970  
São Carlos – SP, Brazil

<sup>b</sup> Departamento de Engenharias e Ciências Exatas, Universidade Estadual do Oeste do  
Paraná, Rua da Faculdade, 645, 85903-000 Toledo – PR, Brazil

**Submitted to**

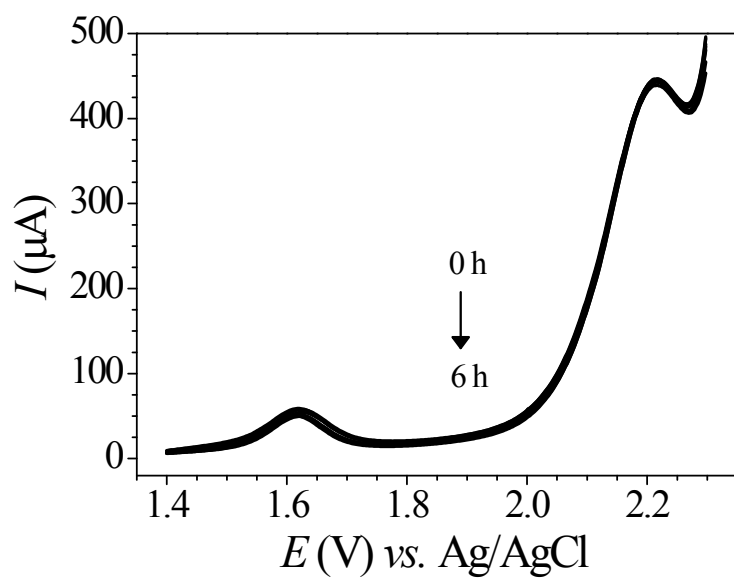
***Analytical Methods***

\* Corresponding author: Tel: +55 16 33518098; Fax: +55 16 33518350, E-mail:

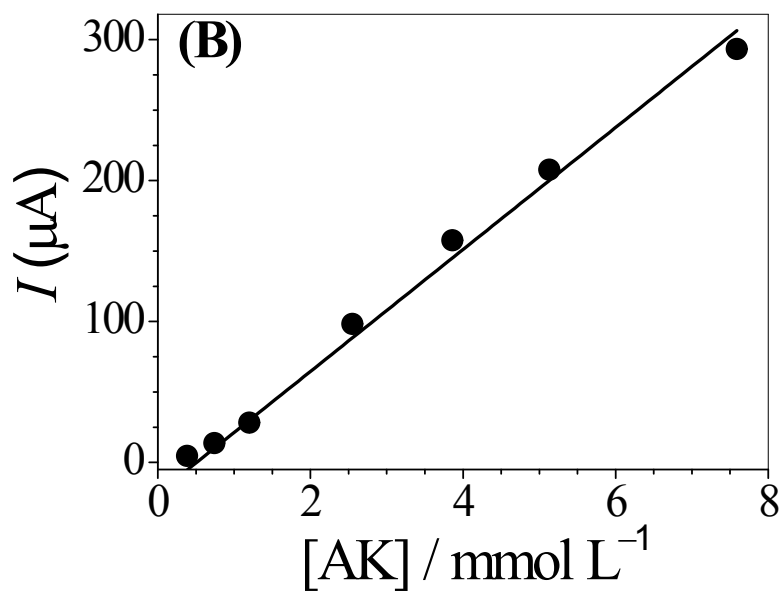
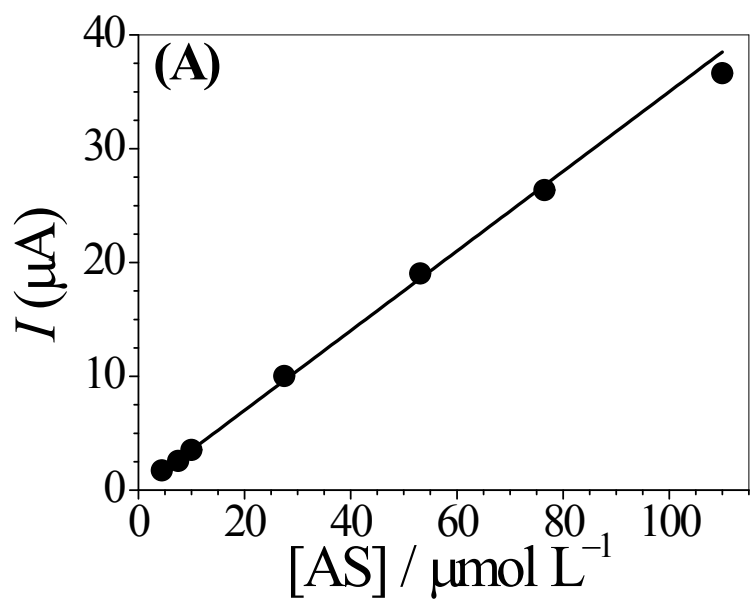
bello@ufscar.br (Orlando Fatibello-Filho)

**Table S1** Figures of merit for the simultaneous determination of the AS and AK sweeteners using DPV or SWV coupled with an anodically pretreated BDD electrode. Supporting electrolyte: 0.30 mol L<sup>-1</sup> H<sub>2</sub>SO<sub>4</sub>

	AS		AK	
	DPV	SWV	DPV	SWV
<b>Linearity range</b> (mol L <sup>-1</sup> )	4.4 × 10 <sup>-6</sup> – 1.1 × 10 <sup>-4</sup>	5.3 × 10 <sup>-6</sup> – 1.1 × 10 <sup>-4</sup>	3.8 × 10 <sup>-4</sup> – 7.6 × 10 <sup>-3</sup>	5.2 × 10 <sup>-4</sup> – 7.6 × 10 <sup>-3</sup>
<b>Sensitivity</b> (μA mol <sup>-1</sup> L)	3.5 × 10 <sup>5</sup>	3.3 × 10 <sup>5</sup>	4.3 × 10 <sup>4</sup>	4.4 × 10 <sup>4</sup>
<b>Intercept</b> (μA)	0.019	0.541	-22.0	-26.4
<b>Correlation coefficient – R<sup>2</sup></b>	0.998	0.999	0.997	0.996
<b>LOD</b> (mol L <sup>-1</sup> )	1.60 × 10 <sup>-6</sup>	1.90 × 10 <sup>-6</sup>	2.80 × 10 <sup>-4</sup>	3.50 × 10 <sup>-4</sup>



**Fig. S1** SW voltammograms obtained every hour during a 6-hour period ( $n = 7$ ) for a  $46 \mu\text{mol L}^{-1}$  AS and  $3.7 \text{ mmol L}^{-1}$  AK solution in  $0.30 \text{ mol L}^{-1} \text{ H}_2\text{SO}_4$  using an anodically pretreated BDD electrode. SWV conditions:  $f = 30 \text{ Hz}$ ,  $a = 70 \text{ mV}$ , and  $E_s = 4 \text{ ms}$ .



**Fig. S2** Analytical curves for AS (A) and AK (B), obtained from the data shown in Fig. 4 in the paper.