

Supplementary data

HPTLC screening of saccharin in beverage by densitometry quantification and SERS confirmation

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Table S1 The comparison of detection performance between the previously reported method and the proposed method in this work.

Analytical tools	LOD (mg/kg)	Spike- recovery (%)	Efficiency (min/sample)	Molecular fingerprint	Reference
HPTLC-FLD-SERS	6.0	87.55-98.14	2<*	Yes	This work
HPLC-Fluorescence	4.4	98.5-101.4	>8	N/A	[1]
CE-conductivity detection	1.5	94-108	>6	N/A	[2]
Polypyrrole-doped membrane	65.9	101.5-102.0	<3	N/A	[3]

*Calculated as 20 bands were simultaneously separated and evaluated on a plate.

[1] Bruno SNF, Cardoso CR, Maciel MMA, Vokac L, da Silva Junior AI. Selective identification and quantification of saccharin by liquid chromatography and fluorescence detection. *Food Chem* 2014;159:309-15.

[2] Bergamo AB, Fracassi da Silva JA, de Jesus DP. Simultaneous determination of aspartame, cyclamate, saccharin and acesulfame-K in soft drinks and tabletop sweetener formulations by capillary electrophoresis with capacitively coupled contactless conductivity detection. *Food Chem* 2011;124:1714-7.

[3] Álvarez-Romero GA, Lozada-Ascencio SM, Rodríguez-Ávila JA, Galán-Vidal CA, Páez-Hernández ME. Potentiometric quantification of saccharin by using a selective membrane formed by pyrrole electropolymerization. *Food Chem* 2010;120:1250-4.