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Voltammetric determination of curcumin in spices

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Abstract

Curcumin is oxidized on a glassy carbon electrode in 0.1 M LiClO₄ in ethanol at the potential 0.74 V. The calibration graph is linear in the range 9.9×10^{-6} - 1.07×10^{-4} M curcumin; the detection limit is 4.1×10^{-6} M. Curcumin is determined in model solutions. The relative standard deviation does not exceed 0.05. A procedure is proposed for the voltammetric determination of curcumin in spices. It was shown that single extraction by ethanol quantitatively recovers curcumin from spices. © 2012 Pleiades Publishing, Inc.

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Keywords

Analysis of spices, Curcumin, Cyclic voltammetry, Extraction