

Electrochemical Evaluation of the Synergistic Effect of the Antioxidant Activity of Capsaicin and Other Bioactive Compounds in *Capsicum* sp. Extracts

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The redox features of capsaicin and *Capsicum* sp. fruit extracts (hot peppers extracts) have been studied at glassy carbon electrode by means of cyclic (CV) and square-wave voltammetry (SWV). We also studied voltammetrically the interactions between capsaicin and some vitamins present in pepper extracts. Redox features of vitamin E, ascorbic acid, and quercetin have been taken for consideration in voltammetric experiments of capsaicin with CV and SWV. From the features of the voltammograms we could observe indications of interactions between capsaicin and co-extracted vitamins and quercetin. We proposed a simple voltammetric methodology for estimation of the antioxidative potential of these compounds. By using the features of the voltammetric responses of equimolar mixture containing all four compounds (capsaicin, vitamin E, quercetin and ascorbic acid) as a referent system, we could estimate the antioxidative potential of the hot peppers extracts.

Keywords: peppers, capsaicin, antioxidants, voltammetry, reactive oxygen species.

[FULLTEXT](#)

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