Antioxidant and Antiradical Properties of Green Tea Extract Compounds

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Green tea is currently an area of intense scientific research because of its exceptional and effective actions in anticancer therapy. The aim of this research was to determine the antioxidant properties of polyphenols contained in green tea. Examined was the correlation between bioingredients of the product tested and the ability to scavenge free radicals and reduce them by chelating the variable metal ion. A range of innovative research technology combines HPLC with electrochemical (cyclic and differential pulse voltammetry) and spectrophotometric (ABTS, FRAP and DPPH assays) analysis to rate the potential oxidation-reduction components of green tea. Described is the dependence of the chemical structure on antioxidant properties. It was found that a high content of catechins and esters of the gallic-type had a powerful influence on the antiradical properties of the studied tea extract.

Keywords: Green tea; Electrochemical oxidation; UV–VIS; Antioxidant; ABTS, DPPH

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