Composition of Tea *Camellia sinensis* Extracts and its Antioxidant Activity

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Today's world is looking for new sources of substances that would help people staying healthy and young as long as it is possible. Therefore science reveals an increasing interest in the biological effects of plant kingdom on living organisms. Tea leaves (*Camellia sinensis L.*) is well known for its biological effects, and on free radicals formation prevention of carcinogenesis and atherogenesis. Tea extracts composition is based on antioxidative agents - polyphenols, mainly catechins: EGC (epigallocatechin), C (catechin), EC (epicatechin), EGCG (epigallocatechin gallate) and ECG (epicatechin gallate).

Aim of the study was to qualify tea extracts components and evaluate its antioxidant potential in bulk oil. Present study examined the composition of different tea extracts and its antioxidative activity in lipids. Research involved white, green, yellow, oolong, black (*Camellia sinensis L.*) and yerba mate (*Ilex paraguainensis*) tea leaves aqueous and ethanol extracts. The oxidation was conducted in 110°C in Rancimat and Oxidograph test. Tea extracts composition involved the evaluation of polyphenols and caffeine content.

Results showed that particular extracts differ with polyphenol content. Highest catechin content was evaluated in nonfermented and slightly fermented tea leaves extracts. Ethanol extraction allowed obtaining higher levels of polyphenols. According to antioxidant activity it was evaluated that lower fermentation degree resulted in higher antioxidant potential in examined lipids.

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