

## COMPARATION BETWEEN TOTAL ANTIOXIDANT LEVELS IN HERBAL INFUSIONS AND DIFFERENT TYPES OF COFFIES, REGULARLY CONSUMED IN MACEDONIA

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It is often assumed that antioxidants can lower the risk for many chronic diseases. Some medicinal plants might be potential sources of potent natural antioxidants and beneficial chemopreventive agents. Antioxidants are compounds that have potential to contribute in decreasing the free radical production and improvement of oxidative status in the body. The aim of this study is to compare the total antioxidant activity of different types of coffee against some herbal infusions regularly used by young and middle age population in the region of Macedonia.

Total antioxidant capacity of different kinds of coffee and teas, prepared as infusions from selected medicinal plants, was evaluated using the FRAP method (Ferric reducing/antioxidant power) by Benzie and Strain. Results were expressed as mmol Fe<sup>2+</sup>/L. The values of total antioxidant capacity into soluble kinds of coffee that were analyzed, Nescafe Classic (17.17) and Nescafe Jacobs Monarch (15.95), were higher than values obtained from other traditional drink in our country, Turkish coffee (6.97). Soluble kinds of coffies are extracted from *Coffea canephora* L., while Turkish coffee is prepared from *Coffea arabica* L. Different types of teas frequently used were also analyzed. The highest TAC value was obtained from green tea (*Camelia sinensis folium*), 25.7, which is the highest value for antioxidants level comparing different types of coffee and tea in this study. Mountain tea (*Origanum vulgare herba*), is next in the line showing the value of 17.66. Antioxidant capacity of Mint tea (*Menthae piperitae folium*), 8.64 and St Johns wort (*Hyperici herba*) 8.48 is relatively close to the antioxidant level of Turkish coffee. Other two kinds of infusions have almost same levels of antioxidants, such as: Linden (*Tilia flos*) 6.05 and wild thyme (*Serpylli herba*) 6.87. Fruit teas analyzed, show lower antioxidant levels, as blueberry fruit tea (*Vaccinium myrtilli fructus*) 5.3 and cranberry fruit tea (*Vaccinium macrocarpi fructus*) 5.5, respectively.

It is of particular importance that plants, regularly used in our country as herbal infusions, have not only general health effects, but they also have high antioxidant potential. Their TACs are higher than Turkish coffee, which is in the moment one of the most popular drink in Macedonia.

As a conclusion we can say that intake of large doses of antioxidants depends on the answer of the question: "coffee or tea?"

**Keywords:** antioxidant, coffee, tea, medicinal plants, infusions.