CORRELATION BETWEEN ANTIOXIDATIVE POTENTIAL OF PURE CAPSAICIN AND *CAPSICUM OLEORESINS*

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Capsaicin is a biological active component which can be isolated from the fruit of hot peppers. It has been known for its analgesic, antireumatic, antiseptic, antidiabetic and few more pharmacological properties. Its antioxidative potential is also a subject of many experiments, in the last few years. Knowing the benefit of the antioxidants for the organism in general, these properties of capsaicin can be enhanced and improved, by its antioxidative ability.

Because of the very popular use of antioxidants we decided to examine the antioxidant potential of capsaicin and capsicum oleoresins produced from *Capsicum* sp. cultivated in R. of Macedonia.

This experiment comprises four different genotypes of *Capsicum annuum* L., which were used for obtaining ethanolic oleoresins. Their antioxidant potential was measured and compared to the antioxidative potential of the pure capsaicin standards. As a method for measuring the total antioxidant capacity was used FRAP (Ferric reducing antioxidant potential) method. This is a simple photometric method for estimation of in vitro antioxidative potential which is expressed as mmol/L Fe2+.

As expected from the previous findings of capsaicin, results from this study are also showing that it posses antioxidative potential that is not so high. But, there is a good correlation between antioxidant potential of capsaicin and capsicum oleoresins in addition of the capsaicin content measured in oleoresins.

The results are showing that antioxidative potential of hot peppers does not come only from the vitamins and phenolic compounds in them, but alkaloids (capsaicinoids) are also included. Because of their rich content of antioxidants they should be used more frequently as spices or functional food, as well as in pharmacological aims.

Keywords: capsaicin, antioxidants, hot peppers, fruit, FRAP