

عنوان مقاله:

.Extraction, identification and anti-inflammatory activity of carotenoids out of Capsicum Anuum L

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خلاصه مقاله:

Introduction: Carotenoids extracted from dried peppers were evaluated for their anti-inflammatory activities. Methods: Determining the concentration of carotenoids was carried out by spectrophotometry. Anti-inflammatory activity was studied on the model adjuvant-induced inflammation. In addition, the total number of white blood cells was studied by microscopic method in Gorjaev's chamber. The biochemical parameters of blood - cholinesterase activity and total number of seromuroids in blood plasma were determined by the commercial test kits for rapid analysis Results: Peppers had a substantial carotenoid content: Ukrainian bitter 2076 ± 10 $\mu\text{g/g}$ of sample in dry weight basis. The yellow fraction was 69.3%, the red fraction was 30.7%. The linear decrease of inflammatory edema in the course of therapeutic use of carotenoid extract ranged from 20% to 50%. The application of carotenoid extract reduced levels of activity acetylcholinesterase and concentration of seromuroids in serum of rats with adjuvant-induced inflammation. The use of carotenoid extract in rats with adjuvant-induced inflammation resulted in reduction of serum cholinesterase activity by 1.3 times and double decrease in the serum seromuroid concentration. Conclusion: Ukrainian bitter pepper carotenoid extract exhibited good anti-inflammatory activity, with inhibited adjuvant-induced oedema formation and progression. The results suggest that the carotenoids in dried Ukrainian bitter peppers have significant anti-inflammatory benefits and could be useful for pain and inflammation relief. The results of this study allow to recommend carotenoid extract for further investigation as active part of anti-inflammatory drugs

کلمات کلیدی:

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