

## **Antioxidant Properties, Ascorbic Acid and Total Carotenoids Values of Sweet and Hot Red Pepper Paste: A Traditional Food in Turkish Diet**

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**Abstract :** Red pepper (*Capsicum annum* L.) has long been recognized as a good source of antioxidants, being rich in ascorbic acid and other phytochemicals. In Turkish cuisine red pepper is sometimes consumed raw in salads and baked as a garnish, but its most wide consumption type is red pepper paste. The processing of red pepper into pepper paste includes various thermal treatment steps such as heating and pasteurizing. There are reports demonstrating an enhancement or reduction in antioxidant activity of vegetables after thermal treatment. So this study was conducted to investigate the total phenolics, ascorbic acid and total carotenoids as well as free radical scavenging activity of raw red pepper and various red pepper pastes obtainable on the market. The samples were analyzed for radical-scavenging activity (RSA) and total polyphenol (TP) content using 1,1-diphenyl-2-picrylhydrazyl (DPPH) and Folin-Ciocalteu methods, respectively. They were also evaluated for ascorbic acid content (AsA) by HPLC. Total carotenoids content was determined spectrophotometrically. Results suggest that there is no significant ( $P > 0.05$ ) difference in RSA, TP, AsA and total carotenoids content between various red pepper paste products. However, red pepper paste showed marked differences ( $P < 0.05$ ) in the RSA, TP and AsA contents compared with raw red pepper. It is concluded that the red pepper paste, that has a wide range of consumption in Turkish cuisine, presents a good dose of phenolic compounds and antioxidant capacity and it should be regarded as a functional food.

**Keywords :** red pepper paste, antioxidant properties, total carotenoids, total phenolics

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