

### Adding different concentration of sweet red pepper (paprika) pigment

(*Capsicum annuum L*) to tomato paste and studying the qualitative and storage characteristics

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#### Abstract:

Although sweet red pepper (*Capsicum annuum L*) is a source of carotenoids renowned for their anti-microbial and antioxidant properties, research into natural preservatives to replace industrial preservatives is growing nowadays. Thus, the impact of red pepper carotenoids as natural preservatives on the quality of tomato paste was investigated. The chemical composition of red pepper, including moisture, protein, fat, ash, and carbohydrate, as well as the Physicochemical analyses pH, total dissolved solids (TSS), Titration Acidity (T.A.) and Ascorbic acid (vitamin C) (A.A.) were estimated after being stored in the refrigerator for 10 weeks and at ambient temperature for 7 weeks compared to the control treatment. Tomato paste made in the lab had pigment extracted from paprika using acetone and identified using HPLC technology added in amounts of 0.05, 0.25 and 0.5%. Tests for pH, Titration acidity (T.A.), total dissolved solids (TSS), and ascorbic acid (A.A.) were performed using physicochemical and sensory methods. When tomato paste was stored at refrigerator temperature 4 C°, it was found that all samples displayed a significant decrease of ( $p \leq 0.05$ ) in pH, TSS, Ascorbic Acid (A.A.), sensory evaluation, and an increase in T.A. The effect was also evident for samples stored at laboratory temperature, suggesting that tomato paste could be kept for longer and have better qualities. Physical, chemical, and sensory effects, including color from the addition of red pepper pigments.