Lycopene analysis for marketing high quality tomato

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Tomato has served as an important crop in the US fresh vegetable market. Recently it has also been considered as a nutrient rich food containing vitamins and effective phytochemicals (antioxidants). Tomato is ranked in the top 10 foods that are considered as 'healthy' by public perception (IFIC 2002). This reflects the recent public interest in tomato as a principal dietary source of lycopene, a red pigment in a group of carotenoids.

Lycopene is a major carotenoid present in the human diet. It is an effective antioxidant associated with reducing risk of cancer and cardiovascular disease. Lycopene is contained in fruits such as tomatoes, guava, watermelon and pink/red grapefruit, and it cannot be synthesized de novo in the human body and must be acquired from the diet. Greenhouse technology made fresh tomato produce available throughout the year. Tomato consumption contributes significantly to overall lycopene in the U.S. diet.

The objective of the study was to determine lycopene levels of fresh tomatoes produced at EuroFresh Farms and produces available in local retail supermarket to provide information needed for marketing of high quality tomatoes. The fruits tested included beefsteak, TOV (tomato on vine), cherry, roma, and grape types of red, orange, yellow tomatoes. In addition to lycopene, %Brix was also determined to evaluate the sweetness of the fruits.

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