



Comparison of lycopene, β -carotene and phenolic contents in fresh, boiled and stored tomatoes

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Abstract : *The present investigation aimed at comparison of lycopene, β -carotene and phenolic contents in fresh, boiled and stored tomatoes showed that maximum lycopene was found in the tomato powder (5.9 $\mu\text{g/ml}$) followed by tomato ketchup (5.8 $\mu\text{g/ml}$), fresh tomato (5.6 $\mu\text{g/ml}$), boiled tomato (5.4 $\mu\text{g/ml}$) and stored tomato (5.2 $\mu\text{g/ml}$), respectively. It was found that maximum β -carotene was found in fresh tomato (3.2 $\mu\text{g/ml}$) followed by tomato ketchup (3.1 $\mu\text{g/ml}$), boiled tomato (2.5 $\mu\text{g/ml}$), tomato powder (2.1 $\mu\text{g/ml}$) and stored tomato (0.1 $\mu\text{g/ml}$), respectively. Phenolic content was found to be more or less same in all the samples of tomato (348 $\mu\text{g/ml}$) except boiled tomato which contained*

264 $\mu\text{g/ml}$. It was concluded that all the forms of tomatoes can be consumed, as the specified nutrients are not much affected by boiling or storing.

Keywords: *Tomato, lycopene, β -carotene and phenolic contents.*

Introduction :

Tomato (*Lycopersium esculentum*), belonging to Solanaceae family, is the vegetable crop which is very healthy to eat as it contains few calories and has high nutritional value. 100 grams of tomatoes can give us an average of 81KJ of energy. Our body gets this energy from the proteins and carbohydrates present in tomatoes. Tomatoes do not have saturated fats, making them low in calories (Bergougnoux, 2014). Lycopene, one of the nutrient content present in tomatoes, is a fat soluble carotenoid and a precursor of β -carotene (Sandmann, 1994); has at least twice the antioxidant capacity of β -carotene (Di Mascio et al, 1989). Epidemiological studies have indicated positive health benefits in consumption of diets in lycopene. Those benefits include anti-carcinogenic and anti-atherogenic (heart related

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