

## LYCOPENE EXTRACTION FROM TOMATO AND TOMATO WASTES

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Tomatoes and tomato-derived products are the most well-known natural sources of lycopene. High lycopene content of tomato wastes also elevated amounts of processed tomatoes in our country enable these products to be preferred for lycopene extraction. In this study, waste utilization of tomato pulp containing peel, seed and fiber is aimed. Tomato and tomato wastes dried to 6-10% moisture content and obtained from different factories of the same company were evaluated for their lycopene content with conventional solvent extraction method and spectrophotometry. Statistical significance was carried out by analysis of variance using ANOVA. Results revealed no significant statistical difference in lycopene content. Lycopene content of tomato, tomato peel and tomato pulp were determined to be 130 mg/100 g; 90 mg/100 g and 20 mg/100 g on dry basis respectively. Lycopene values obtained from tomatoes were higher than the values reported in the literature, while values of the tomato pulp failed to reach the expected levels. Higher lycopene values attained from tomato peels indicate that tomato peels are the natural lycopene sources rather than be invaluable by-products. Any process efficiency increments during the conventional solvent extraction method and/or the use of alternative methods are expected to enhance the lycopene amounts deriving from tomato peels.

Keywords: Tomato, tomato peel, tomato pulp, waste, lycopene, extraction.

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